

College of the

Holy Cross

The College of the Holy Cross

Incorporated as "Trustees of the College of the Holy Cross" in the Commonwealth of Massachusetts in 1865.

Holy Cross College admits qualified students of any race, color, national and ethnic origin, sex, age or handicap to all the rights, privileges, programs and activities generally accorded or made available to its students. It does not discriminate on the basis of race, color, national and ethnic origin, sex, age or handicap in the administration of its educational policies, admissions policies, scholarship and loan programs, and athletic and other school-administered programs. Applicants seeking information on these matters should call or write to the Holy Cross Affirmative Action Officer, Holy Cross College, Worcester, Mass. 01610.

The College Catalog is a document of record issued in September 1988. The Catalog contains current information regarding the College calendar, admissions, degree requirements, fees, regulations and course offerings. It is not intended to be and should not be relied upon as a statement of the College's contractual undertakings.

The College reserves the right in its sole judgement to make changes of any nature in its program, calendar or academic schedule whenever it is deemed necessary or desirable, including changes in course content, the rescheduling of classes with or without extending the academic term, cancelling of scheduled courses and other academic activities, and requiring or affording alternatives for scheduled courses or other academic activities, in any such case giving such notice thereof as is reasonably practicable under the circumstances.

The College is accredited by the New England Association of Schools and Colleges, Inc., a non-governmental, nationally recognized organization whose affiliated institutions include elementary schools through collegiate institutions offering post-graduate instruction.

Accreditation of an institution by the New England Association indicates that it meets or exceeds criteria for the assessment of institutional quality periodically applied through a peer group review process. An accredited school or college is one which has available the necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so, and gives reasonable evidence that it will continue to do so in the foreseeable future. Institutional integrity is also addressed through accreditation.

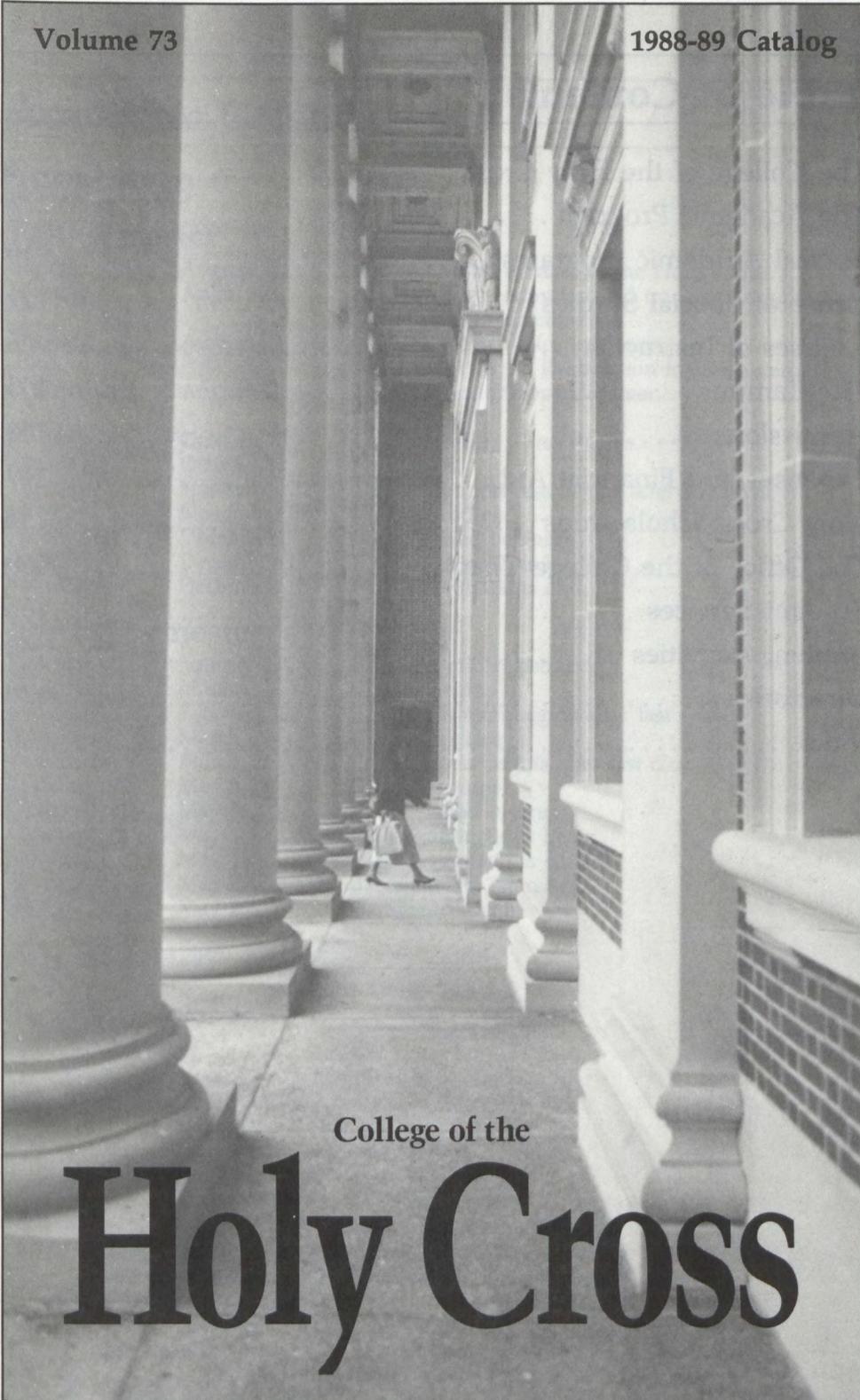
Accreditation by the New England Association is not partial but applies to the institution as a whole. As such, it is not a guarantee of the quality of every course or program offered, or the competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend the institution.

Inquiries regarding the status of an institution's accreditation by the New England Association should be directed to the administrative staff of the school or college. Individuals may also contact the Association at the Sanborn House, 15 High St., Winchester, MA 01890.

Holy Cross College, Worcester, Massachusetts 01610
Main telephone number: 508-793-2011

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1988-89 Catalog



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Holy Cross

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Academic Calendar

1988-1989

Fall Semester

Sunday	August 28	Freshmen arrive. Mass of the Holy Spirit.
Monday	August 29	Advising for readmitted and transfer students. Orientation for freshmen.
Tuesday	August 30	A.M. — Advising for freshmen. A.M. and P.M. — Registration for freshmen.
Wednesday	August 31	Registration for upperclassmen. Classes begin.
Monday	October 10	Columbus Day — no classes.
Tuesday	October 11	No classes.
Tuesday	November 22	Thanksgiving recess begins after last class.
Monday	November 28	Classes resume.
Wednesday	December 7	Study period begins.
Saturday	December 10	Final examinations begin.
Saturday	December 17	Final examinations end.

Spring Semester

Tuesday	January 17	Advising and registration.
Wednesday	January 18	Classes begin.
Friday	February 24	Spring vacation begins after last class.
Monday	March 6	Classes resume.
Wednesday	March 22	Easter recess begins after last class.
Tuesday	March 28	Classes resume.
Wednesday	May 3	Study period begins.
Saturday	May 6	Final examinations begin.
Saturday	May 13	Final examinations end.
Thursday	May 25	Baccalaureate Exercises.
Friday	May 26	Commencement.

The College of the Holy Cross

One of the best liberal arts colleges in the United States, Holy Cross is highly respected for its superior undergraduate academic programs, excellent faculty, and the intelligence, imagination and achievements of its students. It is also well-known for its strong, well-supported and enthusiastic commitment to the principle of educating men and women for others, in a community that generates a strong feeling of belonging and a vital sense of loyalty.

As a Jesuit College, Holy Cross takes its place in a 450-year tradition of Catholic education that has distinguished itself for intellectual rigor, high academic standards, and religious and moral sensitivity.

Academic life at Holy Cross is serious and challenging. The excitement of it is experienced by both students and members of the faculty. It is the excitement of discovery — students discovering new things in literature, science, the arts, mathematics, religion — professors discovering new things through their research, in their laboratories and in the libraries.

Student-professor exchanges in the classroom, as well as in countless informal settings, are at the center of academic life at Holy Cross. Because the student body is 100 percent undergraduate and relatively small, the opportunity for individual attention is readily available. Students know their professors. Professors know and take a genuine interest in their students.

The College recognizes that its able, professional and talented faculty members comprise the particular ingredient that ultimately shapes the educational experience. They are widely respected in their academic specialties. Many have national reputations for their research and publications. Almost all of the 232 full and part-time faculty members hold doctoral degrees from some of the finest universities here and abroad. They conduct research supported by grants from foundations, government agencies and private sources. In recent years, the results of their scholarship have appeared in 875 professional and scholarly journals and in more than 35 books.

Holy Cross faculty members also are dedicated to excellence in teaching and to service. They strike an appropriate balance between the transmission of knowledge and the investigation of new ideas. This insures that the classroom experience is vital and that scholarly research is meaningful. It is the faculty that leavens the whole and is largely responsible for the enviable reputation that Holy Cross has worked hard to achieve, as a place where strong, first-rate liberal arts education can be and is experienced.

Holy Cross is a leader among those institutions that aspire to excellence in undergraduate education. In recent years, its leadership has been demonstrated by:

- Its membership in the Oberlin Group of 48 — a select group of prestigious, undergraduate, liberal arts schools distinguished by their extremely strong and productive undergraduate science curricula.
- Its award of a National Endowment for the Humanities challenge grant of \$600,000, to be matched by the College on a four-to-one basis, in order to create a \$3 million fund for three endowed professorships in the humanities.
- Its inclusion in the New England Consortium for Undergraduate Science Education, a group of 16 of New England's most prestigious colleges and universities, which work together in efforts to strengthen undergraduate science instruction.
- Its award from the Henry R. Luce Foundation of a \$450,000 grant to establish a Luce Professorship in Religion, Social Justice and Economic Development, placing Holy Cross among only 24 institutions — most of them large research universities — so recognized.

Holy Cross is a place to learn how to learn, and not a place to seek job training. The fundamental purpose of the College is not to train accountants, nurses, teachers or engineers, but to inform the mind, to foster clear thought and expression as a goal achieved by a balanced study of the arts and the science.

A distinguishing and all-important characteristic of education at Holy Cross is the emphasis placed upon the service of faith and the promotion of justice. As a Jesuit college, the cultivation of intellectual, social, religious and ethical refinement is not an end in itself. Rather, it has as its purpose the advancement of the Kingdom of God in His people. In the concrete, this means educating young people to be truly concerned about human welfare, about making our economies more just, and about placing men and women in public office who are honest and honorable. It has as its purpose the education of men and women who in their family life will be examples of Catholic ideals and practice, leaders in their parishes and in their communities.

Founding

The oldest Catholic college in New England, Holy Cross was founded in 1843 by the second bishop of Boston, Benedict Joseph Fenwick, S.J., who gave it the name of his cathedral, the Cathedral of the Holy Cross, along with the seal and motto of the Diocese of Boston.

From the start, the bishop entrusted the direction of the College to the Fathers of the Society of Jesus. The beginnings were very modest: one wooden building, a half-finished brick structure, and 52 acres of land.

Today the College is a large educational complex, complete with chapel, libraries, a modern science center, classrooms, residence halls, football stadium, hockey rink and campus activity center, spread over 174 sloping acres. It is a community of 2,600 students, half of them men and half women. Few classes exceed an enrollment of 40, and most average around 20. The atmosphere this community of scholars creates, both collectively and separately, is frequently described as welcoming and friendly, where students receive encouragement and support from classmates and professors.

Coeducational since 1972, Holy Cross enrolls a student body of young men and women of proven accomplishment. Almost all of them have been graduated in the top 20 percent of their high school classes. Most live in nine residence halls on campus. These are run by the Dean of Students' Office with the help of students who organize the many activities through their House Councils. Students, elected by their peers, represent their classmates at faculty meetings, on major College committees, and in a consultative capacity on the appointment and promotion of faculty.

Affiliations

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

American Academy of Religion, American Academy in Rome, American Association of Collegiate Registrars and Admissions Officers, American Association of Higher Education, American Association of University Women, American Conference of Academic Deans, American Council of Learned Societies, American Film Federation Society, Association of Jesuit Colleges and Universities, American Council on Education, American Mathematical Society, American School of Classical Studies of Athens, American School for Oriental Research, Association of American Colleges, Association of Independent Colleges and Universities in Massachusetts, College Entrance Examination Board, College Placement Council, Consortium of Supporting Institutions of the Hebrew Union College Biblical and Archaeological School of Jerusalem, Council for Advancement and Support of Higher Education, Educational Testing Service, Institute of European Studies, Mathematical Association of America, National Association of Student Personnel Administrators, Catholic Education Association (National and New England), National Commission on Accrediting, New England Association of Schools and Colleges, Society for Scientific Study of Religion, Sigma Xi and Worcester Consortium for Higher Education.

The Academic Program

General Requirements

The College offers courses leading to the degree of Bachelor of Arts (B.A.). To earn the Bachelor of Arts degree, the student must successfully complete 32 semester courses, four in each semester, and each carrying four or more credits. All courses which carry four or more credits may be used to satisfy the 32-course requirement with the exception of certain laboratory courses noted in the course description section of the catalog.

Distribution Requirements

Students will be required to complete successfully courses in the six areas of the curriculum described below. A total of 10 distribution courses is required. No more than two courses in any one department may be counted toward the distribution requirements.

The Arts, Language and Literature

The arts, language and literature are concerned with the study and experience of aesthetic forms as expressions of meaning. Literature and the arts involve the study of both the aesthetic and creative aspects of human expression and an appreciation of the process involved. The study of languages provides a basis for close textual analysis which is indispensable for literary criticism.

Requirement: 1 course in the arts; 1 course in language or literature.

Religious and Philosophical Studies

The study of religious experience addresses the human quest for ultimate meaning as discovered in the relation of natural to supernatural, finite to infinite, temporal to eternal. The long-standing Jesuit tradition of Holy Cross gives it the freedom to advocate the educational importance of this area.

The distinctive function of philosophical studies is the rational interpretation (analysis, evaluation, synthesis) of meanings and values wherever they are found.

Requirement: 1 course each in religious and philosophical studies.

Historical Studies

Historical studies involve the description, ordering and interpretation of the past. Through the study of what people have done and what they have become, historical studies clarify the meaning of human experience.

Requirement: 1 course.

Cross-Cultural Studies

Cross-cultural studies examine contemporary societies and cultures other than one's own. Courses in this area are intended to expand one's frame of reference by providing an awareness of the similarities and differences among the peoples of the world, as well as to foster a sense of belonging to a larger community.

Requirement: 1 course.

Social Science

The social sciences systematically investigate human behavior, social institutions and society. Their objectives are to identify, through replicable and systematic observations, general patterns of human behavior, formulate explanations for these relationships, and develop predictive models. The social sciences traditionally include anthropology, economics, political science, psychology and sociology.

Requirement: 2 courses.

Natural and Mathematical Sciences

Natural science is concerned with the systematic investigation of that part of the physical universe which is not of human design or invention. The method of investigation involves the formulation of falsifiable hypotheses that generate predictions which can be tested empirically, with the result that a large array of natural phenomena can be explained by a small number of laws and/or theories. Fundamental to this activity is the treatment of the measurement, properties and relationships of quantities.

Mathematical science provides the tools for quantitative analysis. As an independent discipline it gives structure to abstractions of the human mind and very often provides natural science with models on which to build physical theories.

Computer science has been added to this area in response to its recent emergence as a separate field of mathematics and an indispensable tool of scientific experimentation.

Requirement: 2 courses, at least one of which is in a natural science.

Majors

Students must also fulfill the requirements of a major. In order to allow for both the breadth and depth of academic experience that should characterize each stage of a liberal arts education, the student must declare a major before the preregistration period preceding the junior year. A major normally consists of a minimum of 10 and a maximum of 14 courses selected from a group of courses within a department. Certain courses, however, may not count toward the minimum or maximum number of courses in a given department, and some departments require additional courses in allied fields. More details about the requirements of individual majors are found in later sections of this catalog under the corresponding departmental descriptions.

The following majors qualify for the Bachelor of Arts degree: biology, chemistry, classics, economics, economics-accounting, English, history, mathematics, modern languages and literatures (French, German, Russian, Spanish, Studies in European Literature), music, philosophy, physics, political science, psychology, religious studies, sociology, theatre and visual arts. Information on Multidisciplinary Majors appears in the section of the catalog on the Office of Special Studies. Students are expected to confirm their plans for the fulfillment of major and degree requirements with the designated faculty advisor.

A double major is one of the curriculum options available at the College. Students desiring double major status must receive the approval of the appropriate department chairs and assistant dean. An application for double major status must receive approval no later than the preregistration period for a student's sixth semester, except in those cases where a student spends the fifth semester away from campus. In those cases, approval must be obtained prior to the completion of registration during the semester the student returns to campus. Students with double major status are restricted to taking the minimum number of courses necessary to complete each major, or 10 courses in each major, whichever is higher.

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. Students are permitted, however, to participate in the Washington Semester and Semester-Away programs through the Office of Special Studies in the first semester of their senior year.

Granting College Credit

Holy Cross will grant college credit for courses taken in high school provided: (a) they are taken at an accredited college or university (i.e. on the campus); or (b) they are taught at the high school by a full-time faculty member of an accredited college or university.

Verification of either criterion must be submitted in writing to the class dean at Holy Cross by the secondary school principal or headmaster.

A final grade of "B" or better is required and the courses must be similar in rigor and content to those normally offered at Holy Cross. Complete descriptions of each course

for which the student is requesting credit must be forwarded to the class dean. Approval for credit rests with the appropriate department chair at Holy Cross.

Students may request acceptance of any or all of the college-level courses completed while in high school. This request should be made in writing to the class dean at Holy Cross prior to November 15 of the student's freshman year. The grades for courses accepted for credit will be calculated in the Quality Point Index at Holy Cross except for semester and graduation honors.

A maximum of eight semester courses will be accepted in transfer for the incoming freshman. They will apply toward graduation if the equivalent of either one or two full semesters is accepted, i.e. four or eight courses. Courses accepted for credit that do not constitute a full semester (four courses) will apply toward graduation only if they are used to remove a deficiency. Students with fewer than four courses (the equivalent of a full semester) accepted for credit may as freshmen have the opportunity to elect upper-division courses at the discretion of the department chair.

Incoming freshmen who have been given credit for fewer than four college-level courses but who have Advanced Placement Examination credits awarded by Holy Cross in several subjects may request early graduation on the following supportive grounds:

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

(b) 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 ordinarily will not be considered after the end of freshman year. Final approval will not be granted until sometime after the completion of freshman year. Students should submit requests through the office of the class dean. A final decision in the matter of early graduation rests with the dean of the College.

The Advisory Program

Holy Cross provides each freshman with a faculty advisor who assists the student with curriculum planning and course selection. The assignment of the advisor is made in the summer prior to enrollment. The advising relationship continues throughout the four years — although the advisor may change, depending on the student's needs and the needs of the major department.

Written Expression

The following statement was accepted at the regular faculty meeting of December 3, 1973:

1. All of us, students and teachers alike, share responsibility for promoting the effective and wise use of language. Language is central to education since it is the chief means by which the transmission and exchange of ideas take place. And nowhere are clarity and precision of language so important or so difficult to achieve as in writing. We ought therefore to take special care to encourage excellence in writing, both in our own work and in the work of our students. To achieve this end students should:

- a. recognize that they are expected to write well at all times;
- b. realize that the way they say something affects what they say;
- c. write, revise, and re-write each paper so that it represents the best work they are able to do.

2. Similarly, faculty members should:

- a. set high standards for their own use of language;
- b. provide appropriate occasions for students to exercise their writing skills;
- c. set minimum standards of written expression for all courses;
- d. acquaint the students with those standards and inform them of their responsibility to meet them and the consequences if they do not;
- e. evaluate written work in light of effectiveness of expression as well as by contents;

f. aid students in their development by carefully pointing out deficiencies in their written work and assist them with special writing problems arising from the demands of a particular field of study.

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. Preregistration for courses takes place in the preceding 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 10 weeks of the term with the grade of W. The W grade is not included in the calculation of the Q.P.I.

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

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 determining the composite grade). There is no official College translation of numerical scores into letter grades other than the quality point multiplier defined below.

Reports of academic grades are sent to students and to their parents or guardians at the end of each semester.

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

Quality Point Multiplier	Symbol	Description
4.0	A	Excellent
3.7	A-	
3.3	B+	
3.0	B	Good
2.7	B-	
2.3	C+	
2.0	C	Satisfactory
1.7	C-	
1.3	D+	
1.0	D	Low Pass
0.0	F	Failure
	IP	In Progress
	W	Withdrawal
	AU	Audit
	AB	Absence from Final Examination
	I	Incomplete
	P	Pass
	NP	No Pass (Failure)
	J	(Grade Not 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 to the registrar within one week of the last day of final examinations. Exceptions to these regulations will be granted only by the appropriate assistant dean, and only upon written petition by the faculty member, or after consultation with the faculty member if, as in the case of illness, the dean initiates the request.

Withdrawal from a course, with the approval of the assistant dean, after the add/drop period will be graded W. Withdrawal from any course after the tenth week leads automatically to an F, as does withdrawal without approval at any time.

A student who, during a given semester, has not earned passing letter grades (other than P) in four courses which count toward the 32-course graduation requirement incurs a "deficiency." The number of deficiencies incurred is equal to four minus the number of earned passing letter grades just mentioned.

Final Grade Review Policy: Every student has the right to a formal review of a disputed final grade. The student should first appeal to the teacher, and then, if necessary, to the assistant dean. (Consult the *Student Handbook* for the full procedure.)

Quality Points: Each of the grades from A to F 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 semester credits assigned to the course gives the quality points earned in it.

None of the other grades in the above list carries 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.

Honor Grades: 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, and *Second Honors*: a semester Q.P.I. of 3.500 to 3.699.

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 3.869; and *Cum Laude*: A cumulative Q.P.I. of 3.500 to 3.699.

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 or during an approved semester or year's leave spent at another accredited institution) may be counted.

Pass/Fail: The grades of P and NP are the "Pass/Fail" grades. The option of Pass/Fail grading is in effect only for those students taking five courses in a semester. The course taken on a Pass/Fail basis may be within the student's major field but may not be used to fulfill any of the requirements of the major.

Following are the qualifications for the Pass/Fail Option:

1. Students who wish to take a course on a Pass/Fail basis shall have one week beyond the termination of the designated registration period in which to decide which of the five courses chosen during the registration period is to be taken on the Pass/Fail basis. A special Pass/Fail form available in the Office of the Registrar must be filled out and filed with that office during the period designated for the declaration of the Pass/Fail option.

2. The teacher involved will know the names of all students who have registered for a course on a Pass/Fail basis. The grades P or NP 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 the first ten weeks of the semester, 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. 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.
2. A fifth course may be used by students for enrichment purposes or, after freshman year, for the removal of a course deficiency. In the latter case, the fifth course must be taken for a letter grade.
3. A fifth course may not be used for the removal of deficiencies incurred in subsequent semesters.
4. Students must have a cumulative Q.P.I. of at least 2.000 in order to 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.

Absence Due to Religious Belief

Students who are unable, because of religious beliefs, to attend classes or to participate in any examination, study or work requirement on a particular day shall be excused from any such examination, or study or work requirement, and shall be provided with an opportunity to make up such examination, study or work requirement which they may have missed because of such absence on any particular day; provided, however, that such makeup examination or work shall not create an unreasonable burden upon the College. No fees of any kind shall be charged for making available to students such opportunity. No adverse or prejudicial effects shall result to students because they availed themselves of these provisions.

Academic Honesty

The College of the Holy Cross is committed to creating an intellectual community in which both faculty and students participate in the free and uncompromising pursuit of truth. This is possible only in an atmosphere of mutual trust where the discovery and communication of truth are marked by scrupulous, unqualified honesty. Any violation of academic integrity wounds the whole community and undermines the trust upon which the communication of knowledge and truth depend. The principal violations of academic integrity are cheating, plagiarism, and collusion.

Cheating is the use or attempted use or improper possession of unauthorized aids in any examination or other academic exercise submitted for evaluation. This includes data falsification, the fabrication of data or deceitful alteration of collected data included in a report.

Plagiarism is the deliberate act of taking the words, ideas, data, illustrative material, or statements of someone else, without full and proper acknowledgement, and presenting them as one's own.

Collusion is assisting or attempting to assist another student in an act of academic dishonesty.

Faculty Responsibility. At the beginning of each course the teacher should address the students on academic integrity and how it applies to the assignments for the course. The teacher should also make every effort, through vigilance and through the nature of the assignments, to discourage and prevent dishonesty in any form.

Student Responsibility. It is the responsibility of the student, independent of the faculty member's responsibility, to familiarize himself/herself with the details of how plagiarism is to be avoided, and the proper forms for quoting, summarizing, and paraphrasing,

presented in standard handbooks, for example, "Avoiding Plagiarism," *The Little Brown Handbook*, pages 482-486, and *Harbrace College Handbook*, page 372.

Enforcement. The faculty member who observes or suspects academic dishonesty should first discuss the incident with the student.

The very nature of the faculty-student relationship requires both that the faculty member treat the student fairly and that the student respond to the teacher's questions concerning the integrity of his or her work. If the teacher is convinced that the student is guilty of academic dishonesty he or she shall report the incident in writing to the Chair of the department and the student's Class Dean within a week of the instance. The Class Dean will then inform the student in writing that such a charge has been made and of his or her right to have the charge reviewed.

This request for a formal review must be written and submitted to the Class Dean within one week of the notification of the charge by the Class Dean. The written statement must include a description of the student's position concerning the charge by the teacher. The Chair of the department of the faculty member involved shall receive a copy of the student's written statement from the Class Dean. By the end of two weeks the Chair of the department and the Class Dean will investigate the charge and review the student's statement, meeting separately with the student and the faculty member involved.

If, after this review, the faculty member remains convinced that the student is guilty of academic dishonesty, within one week of the review of the student's request, he or she shall administer a zero for that assignment and his or her initial written report to the Class Dean shall remain a part of the student's file until graduation, at which time it shall be removed and destroyed unless a second offense occurs. The Class Dean shall promptly inform the student of the decision made.

A second offense against academic honesty, which may be reviewed as described above, will result in automatic dismissal from the College. Students dismissed for academic reasons may appeal their dismissal to the Committee on Academic Standing, as described in the following section.

Requirements for Advancement

To be eligible for academic advancement a student must meet the minimum cumulative average and course 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.

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

Students who have been withdrawn 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 and 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 chair, 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 the cumulative average, for all purposes other than the award of graduation honors. A deficiency must be removed by a grade of C or better, earned in a summer session course approved in advance by the appropriate department chair or by enrollment in a fifth course for a letter grade, before the beginning of a student's senior year. No student will be permitted to begin a new academic year with more than one course deficiency.

Deficiencies may also be removed by the use of Advanced Placement credits except during a semester in which a student becomes liable to academic suspension or dismissal.

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 graduation honors.

Academic Dismissal: A student will be withdrawn from the College for any of the following reasons:

- a. two course failures (any combination of F or NP) in any single semester;
- b. three course failures (any combination of F or NP) in any single academic year;
- c. a total of six course failures (any combination of F or NP) on one's Holy Cross transcript;
- d. a cumulative QPI of less than 1.750 after the second semester (end of freshman year), of less than 1.850 after the third semester, and of less than 2.00 after the fourth semester (end of sophomore year) or any subsequent semester;
- e. a second instance of academic dishonesty.

Course failures will contribute to an academic withdrawal as outlined above, even though the deficiencies may have been removed by attendance at summer session or the use of Advanced Placement credits. Furthermore, Advanced Placement credits may not be used to remove a deficiency caused by course failure during a semester in which a student becomes liable to academic suspension or dismissal.

A first withdrawal results in academic suspension for one year. After the one-year suspension, readmission is automatic, contingent upon receipt of a written request for readmission by the Class Dean. Any course deficiencies incurred by the student must be removed prior to the student's return.

A second withdrawal results in academic dismissal, which is ordinarily considered final.

Appeals of suspensions or dismissals for academic reasons may be made to the Committee on Academic Standing. The letter of suspension or dismissal from the Class Dean will provide students and parents with the necessary details of appeal. The Class Deans are available for consultation regarding appeal procedures and will also inform the student of the final committee decision.

Voluntary Withdrawal from the 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 suspension or 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 dean 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 may be made during the semester prior to the proposed leave, but may only begin as of 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 thirty dollars (\$30) for each semester on leave.

8. A student will ordinarily not receive academic credit for courses taken at other institutions while on leave from the College.

Readmission To The College

Students who have either withdrawn in good standing or have been dismissed with the right to reapply and who wish to be readmitted to the College must apply to the office of the appropriate assistant dean. All materials for readmission (completed application form, letters of recommendation, transcripts of all intervening work, statements of good standing and other substantiating documents that the assistant dean may require) must be in the hands of the assistant dean by July 20 for fall readmissions and by December 1 for spring readmissions.

Even when a withdrawal from the College is voluntary, readmission is not automatic.

Concurrent Registration in the Worcester Consortium

The six four-year colleges, the three two-year colleges and the University of Massachusetts Medical Center in the metropolitan Worcester area form 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.

Normally, a Holy Cross student may enroll in one course per semester at a Consortium institution provided the course has been approved by the appropriate department chair and by the Registrar at Holy Cross. In special circumstances, a student may be permitted to enroll in two Consortium courses in one semester provided that approval has been granted by the dean of the College. Written application for this approval is filed in the office of the assistant dean.

Intersession courses taken at institutions belonging to the Worcester Consortium for Higher Education may be taken only for personal enrichment. They will not be entered on the Holy Cross transcript.

A course taken at a Consortium institution must grant a minimum of three semester credits in order to be counted as one of the 32 semester courses required for graduation. The College will record on the transcript the number of credits assigned to the course by the Consortium institution.

The College reserves the right to withhold permission to attend a Consortium institution if the calendar of the institution differs substantially from the calendar of Holy Cross, thus making it impossible for a student to complete graduation and/or course requirements by the date stipulated by the College.

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 chair.
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 chair, 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 graduation honors.

Transfer of Credit

Upon receipt of an official transcript, acceptance of work done at other institutions will be affirmed promptly in writing as closely as possible to 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 or as soon thereafter as possible, contingent upon the receipt of the official transcript from the other institution. No renegotiation of such acceptances will be made after academic work has begun at Holy Cross. 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

An official transcript of the College record will be issued by the Office of the Registrar only with the written consent of the student. A transcript is official when it bears the impression of the seal of the College and the signature of the Registrar of the College. The transcript fee is one dollar per copy.

An official transcript may be withheld by appropriate College officials in cases where some financial or other obligation remains unresolved.

Directory Information and Release of Information

The items listed below are designated as "Directory Information" and may be released at the discretion of the institution. Under the provisions of the Family Educational Rights and Privacy Act of 1974, as amended, students have the right to withhold the disclosure of any or all of the categories of "Directory Information." Written notification to withhold any or all of "Directory Information" must be received by the Registrar within one week of the fall registration of each academic year.

Categories: The student's name, address, telephone listing, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees, honors and awards received, and the most recent previous educational agency or institution attended by the student.

A request to withhold any or all of the above data in no way restricts internal use of the material by the College.

Unless a student notifies the College in writing to the contrary, the College considers all students to be dependents of their parents. In compliance with the Family Education Rights and Privacy Act of 1974, as amended, the College reserves the right to disclose information about dependent students to their parents without the students' written consent.

Privacy of Student Records

The Family Educational Rights and Privacy Act of 1974, as amended, gives students and former students certain rights, consistent with the privacy of others, to review records, files, and data about them held on an official basis by the College. The Act also gives students and former students a right to challenge the content of those records, files, and data which they believe are inaccurate, misleading, or otherwise in violation of their privacy

and other rights. Individuals may directly request review of the records maintained about them from the appropriate offices. Any challenges to the content of the records, files, and data that cannot be resolved directly should be made in writing to the office of the Vice President.

Information about students and former students assembled prior to January 1, 1975, under promises of confidentiality, explicit or implicit, will not be made available for review by the concerned students without the written consent of the authors.

The college will release academic information on students to those college committees charged with the selection of students for college and national honor societies. Written notification to withhold disclosure of such information must be received from the student by the Office of the Registrar within one week of the fall registration of each academic year.

Further information about this issue may be obtained by contacting the Office of the Vice President.

Honor Societies

(Consult the *Student Handbook* for fuller descriptions and academic requirements.)

Alpha Kappa Delta — the national honor society in sociology is an affiliate of the American Sociological Association and awards recognition to high scholarship in sociology.

Alpha Sigma Nu — an international honor society with chapters in Jesuit colleges and universities throughout the world, which honors students who distinguish themselves in scholarship, loyalty and service.

Omicron Delta Epsilon — the national society in economics that selects as members students who have distinguished themselves in the study of economics.

Phi Alpha Theta — the national honor society in history, devoted to the promotion of the study of history by the encouragement of research, good teaching, publication and the exchange of learning and thought among historians.

Phi Beta Kappa — the national honor society of liberal arts and sciences whose members are elected from the junior and senior classes primarily on the basis of broad cultural interests, scholarly achievement and good character.

Phi Sigma Iota — the national honor society that recognizes outstanding ability and attainment in Romance languages and literatures.

Phi Sigma Tau — the national honor society for philosophy that awards distinction to students having high scholarship and personal interest in philosophy.

Pi Mu Epsilon — the national honor society in mathematics that promotes scholarly activity in mathematics by electing members on an honorary basis according to their proficiency in mathematics.

Psi Chi — the national honor society in psychology and an affiliate of the American Psychological Association that seeks to nurture student involvement in psychology.

Sigma Delta Pi — the national honor society in Spanish that honors those who seek and attain excellence in the study of the Spanish language, literature and culture.

Sigma Pi Sigma — the national physics honor society that seeks to recognize high scholarship in physics.

Annual Awards

(Consult the *Student Handbook* and *Doing Your Best* for fuller descriptions.)

Senior Competition

The Beethoven Prize awarded to a senior for the best historical or analytical essay on music or for an original composition.

The Frank D. Comerford Medal for excellence in public speaking.

The Flatley Gold Medal for proficiency in philosophy.

The Rev. William F. Hartigan Medal for the best essay on a subject in religion.

The Holy Cross Club of Worcester Prize for outstanding scholastic achievement by a Worcester area senior.

The Edward V. Killeen Jr. Prize for general excellence in chemistry throughout the bachelor of arts premedical course.

The Rev. George A. King, S.J. — Richard J. Keenan Memorial Award for proficiency in political science.

The John C. Lawlor Athletic Scholarship Medal for the best student and athlete throughout the college course.

The Gertrude McBrien Mathematics Prize for proficiency in mathematics.

The George B. Moran Award for scholarship and leadership in school activities.

The Nugent Gold Medal for general excellence in physics.

Junior and Senior Competition

The Fallon Debating Purse.

The William E. Leahy Award for the outstanding debater in the B.J.F. Debating Society.

The Markham Memorial Prize for the best essay in a competition administered by the department of philosophy.

The Rev. John F. Redican Medal for a junior who may not have the highest grade but who makes an outstanding contribution to the quality of intellectual life.

The Freeman M. Saltus Prize for excellence in writing essays on labor or economics.

Sophomore Competition

The Mrs. Kate C. Power Medal for the highest ranking student in the sophomore class.

Freshman and Sophomore Competition

The Joseph J. O'Connor Purse for debating.

Competition for All Students

The Bellarmine Gold Medal for the best historical essay on Colonial America.

The Bourgeois French Prize for the best essay submitted during the academic year on a subject relating to the culture and history of the French and their descendants in the United States.

The Nellie M. Bransfield Award for excellence in elocution among the undergraduates.

The Phillip A. Conniff, S.J. Prize for the student attaining the highest mark in the study of any of the Latin classics.

The Crompton Gold Medal for the best scientific essay or research paper submitted during the school year. Awarded on a rotating basis among the departments of biology, chemistry and physics.

The John J. Crowley Purse for the best essay on a religious, literary, historical, economic or scientific subject.

The Patrick F. Crowley Purse for proficiency in oratory and debating.

The Devalera Purse for the best essay on a subject taken from Irish history.

The Flaherty Gold Medal for the best historical essay submitted during the academic year on a subject selected by the faculty.

The Edna Dwyer Grzebien Prize for a student proficient in modern languages.

The Walter Gordon Howe Award for excellence in percussion performance.

The Kavanaugh Medal for the best original essay on some phase of Catholic art or Christian archeology.

The Leonard Award for proficiency in oratory, debating or like competition.

The Leonard J. McCarthy, S.J. Memorial Prize for the best essay in the criticism of English or American Literature.

The McMahon Historical Prizes for the best essays on the history of the Catholic Church in New England.

The Purple Purse of \$25 for the student contributing the best short story to *The Purple*.

The James H. Reilly Memorial Purse for the student contributing the best poem or short story to *The Purple*.

The Strain Gold Medal for the best essay submitted during the academic year on a subject taken from the field of philosophy.

The Varsity Club Norton Purse or Medal for an athlete in the A.B. curriculum.

Prestigious Awards

The Graduate Studies Committee recommends students for the various prestigious awards (Fulbright-Hays, Marshall, Mellon, Rhodes, Rotary and Watson). Materials concerning these and other awards are available from the Office of the Senior class dean.

Students should begin planning for these competitions well before the beginning of senior year when nominations are made. Faculty should encourage students to develop the necessary projects, research initiatives, etc., which will serve as the underpinnings of a finished proposal. This should happen during the first three years. Interested students may meet with the class dean and use the resources of the dean's office to assist in determining the suitability of their proposals.

Interviews are held and nominations made in the first month of the academic year. Seniors interested will meet with the Committee on Graduate Studies for those awards which need an institutional recommendation. Faculty members are invited to recommend students to the attention of this Committee.

Special Academic Programs

For Students Interested in the Health Professions

The premedical and pre dental program at Holy Cross has maintained an excellent record in preparing students for entrance to professional schools. A premedical or pre dental student may enroll in any major program, except accounting, and fulfill all of the requirements for medical or dental school admission at the same time. A student should select a major which corresponds to his or her qualifications and interests and not assume that a science major is expected of premedical students. He or she is guaranteed admission to courses which fulfill the science and math requirements, which are listed below. Many science majors will find that these requirements are fulfilled as they complete their major course requirements.

- Chemistry — 4 semesters
- Biology — 2 semesters
- Mathematics — 2 semesters
- Physics — 2 semesters
- English — 2 semesters

All premedical and pre dental students must have successfully completed a secondary school course in chemistry. Admission to the program is very selective because of the large numbers of students who are interested.

The College has a premedical and pre dental advisor to assist all students planning careers in the health sciences.

For Students Interested in Law

In accordance with the current recommendations of law school faculties, Holy Cross encourages prelaw students to choose any major which suits their talents and interests. While there is no established prelaw program as such, students are urged to include in their four years courses which develop the following skills: comprehension and expression in words, critical understanding of the human institutions and values with which the law deals, and creative power in thinking.

Perhaps the most important skill for prelaw students is the effective control of oral and written English. To this end courses in language composition and rhetoric are strongly recommended. At the same time, any course which trains the student to observe accurately and think objectively is invaluable.

For the details of law school admission as well as advice on general questions, the prelaw advisor should be consulted.

For Students Interested in Graduate Schools of Business and Management

Experience has shown that an excellent preparation for graduate schools of business and management is a sound, rigorous liberal arts program. The student may major in virtually any field. Discussion with several graduate schools of business and management indicates that it is strongly advisable that a liberal arts student have, in addition to the major, one and preferably two years of economics, a course in accounting, one year in differential and integral calculus, plus a year, if at all possible, in applied mathematics. At least an introductory computing course is strongly recommended.

As with law, the student should have developed an in-depth ability to use the English language in its written and spoken forms. While business and management schools usually do not set down these courses as actual requirements, they recognize them as strongly desirable.

Preparation for Graduate Study

Most students continue their studies beyond college. Professional studies, various areas of academic graduate study, programs in business management and newer fields such as urban affairs attract more students each year. More than 50 percent of recent classes began some form of graduate or professional study after fulfilling other obligations.

There is a special library in the Counseling Center and Career Planning office to provide information about graduate and professional studies. Catalogs of many American graduate programs and many foreign institutions may be consulted there. There is also a selection of excellent guides to post-baccalaureate study.

Within each of the academic departments, one faculty member is designated as the advisor or resource person concerning graduate study in that area. Nominations for national competitive fellowships (Rhodes, Danforth, Marshall, Fulbright, Mellon, Watson) are made by the Committee on Graduate Studies working together with the Class Deans.

Junior Year Abroad

Sophomores are eligible to apply for the Junior Year Abroad program. A student's application is submitted to the Study Abroad Office and reviewed by the Study Abroad Committee. Permission is granted for study at a number of overseas programs.

Participation in this program normally is limited to students with at least a B average (3.0 QPI) or to students with equivalent qualifications. 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. Students should expect to be questioned in that language and to demonstrate a reasonable competence in understanding and speaking it at their interview by the Study Abroad Committee.

A background of courses that includes the selected country's history, literature, fine arts and philosophy will be a positive point toward approval of study abroad. Ordinarily, participation in the program begins in the fall semester and lasts for a full academic year. Although students may be allowed to study abroad for only one semester, the Study Abroad Committee reserves the right to decide the semester in which the student can study overseas.

Credits and quality points earned in the program are included in all calculations of academic averages, including those which determine semester or commencement honors.

Reserve Officers Training Program

All Holy Cross students are eligible to apply for and participate in the ROTC programs of the Air Force and Navy. The Air Force program leads to a commission as an officer in the Air Force Reserve and prepares students for specific duties in the Regular Air Force. The Naval ROTC program prepares students to become officers in the Navy and Marine Corps, the Naval Reserve, and the Marine Corps Reserve. Both Air Force and Navy ROTC programs provide financial emoluments, including full scholarships to qualified cadets and midshipmen. Detailed information regarding the ROTC programs can be found elsewhere in this catalog under Courses of Instruction and under Financial Aid.

Worcester Consortium for Higher Education, Inc.

Admission to Holy Cross means availability to the 10 institutions of the Worcester Consortium for Higher Education, Inc. 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, Becker Junior College, Central New England College, Clark University, College of the Holy Cross, Quinsigamond Community College, Worcester Polytechnic Institute, Worcester State College, and University of Massachusetts Medical Center.

In addition to the 10 colleges, a group of associate organizations participate with the Consortium in providing further enrichment to college curricula. These include the

American Antiquarian Society, Craft Center, International Center, New England Science Center, Old Sturbridge Village, Worcester Art Museum, Worcester Foundation for Experimental Biology, Worcester Historical Society, Worcester County Horticultural Society and the Worcester Science Center.

The 3-2 Program in Engineering

Holy Cross offers a cooperative, five-year, dual degree program for students who are interested in combining the liberal arts and sciences with engineering. Students enrolled in this program spend three years as full-time students at Holy Cross and two years as full-time students at either Columbia University in New York City or Washington University in St. Louis.

At the conclusion of this programs, students receive both a bachelor of arts degree from Holy Cross and a bachelor of science degree in engineering from the appropriate institution. Students may major in any field at Holy Cross, but they must complete at least one year of physics, chemistry and mathematics and demonstrate proficiency in one computer language in order to properly prepare for the engineering courses.

Any student who fulfills these requirements with a B average is guaranteed admission to Columbia or Washington universities. The student pays tuition to Holy Cross for the first three years of enrollment and to the second institution for the last two years. Students are eligible for financial aid in accordance with the financial aid policy of the institution at which the student is currently paying tuition.

Students who wish to enter this program are not required to apply until the beginning of their junior year. However, interested students are urged to consult with the 3-2 advisor as early as possible in their college career in order to properly plan their courses. Further information is available from the 3-2 advisor.

The Office of Special Studies

Martha A. Crunkleton, Ph.D., *Director*
Gary P. DeAngelis, Ph.D., *Associate Director*
John L. Esposito, Ph.D., *Director, International Studies*
Royce A. Singleton, Ph.D., *Director, Interdisciplinary Studies*
Helen M. Whall, Ph.D., *Director, Honors*

The Office of Special Studies promotes interdisciplinary study and offers a variety of non-traditional approaches to education that encourage the intellectual growth of Holy Cross students. This department constantly seeks to create new, exciting opportunities for students. Current programs include:

Interdisciplinary Courses

Each year Special Studies sponsors a number of interdisciplinary and experimental courses, which are primarily small seminars. These courses offer new methods of teaching and ways to define and organize subject matter, respond to students' special interests, and introduce new areas of study into the College curriculum.

Seminars offered recently have included Black Literature; Society and Culture in Depression America; Paris: Music, Painting, Poetry, 1899-1929; Islam and Politics; and Introduction to the Arts of Asia. New course listings are published twice a year, with new seminars developed based on student and faculty interest.

Interdisciplinary Studies Program

The Interdisciplinary Studies Program was created in 1975 with the assistance of two successive grants awarded to the College by the National Endowment for the Humanities. It provides faculty from two or more disciplines the opportunity to work together on common themes, periods or issues in a two-course sequence. It affords students an opportunity for in-depth investigation of a particular topic, while becoming self-conscious about the ways that various disciplines approach a common subject.

Through the Interdisciplinary Studies Program, students may work in a pair of linked courses. The courses are offered for both first-year and upperclass students each year. For details, refer to Interdisciplinary Studies in the academic department section of this catalog.

College Honors Program

Open to highly qualified students at the end of sophomore year, the Honors Program brings together students from all majors for two small seminars, with outstanding faculty members, on topics outside the students' major fields; two semesters of thesis writing in senior year; and the Junior Colloquium on interdisciplinary topics and Senior Research Seminar, in which thesis writers present their research.

Students design individual plans of study in consultation with the director of the program. Students must complete two advanced courses during their junior and senior years from among those designated by the director. These may be selected from among the following:

- a) Honors Seminars, open to Honors, non-majors only, with an enrollment limited to 10 students. Independent research, papers and oral presentations are emphasized.
- b) Specially designated Interdisciplinary Studies Program Sequences, open to Honors juniors and seniors and other upperclass students with permission of the instructor. Enrollment is limited to 15.

Junior Honors Colloquium: The colloquium provides an equivalent experience for juniors in the Program. It is interdisciplinary and involves the participation of both Holy Cross faculty and invited guests. (2 credits)

A Senior Honors Thesis: Each Honors student devotes one quarter of his or her time during two semesters to a directed research project, usually in his or her major field. The project may begin in the spring term of the junior year. The thesis is read by one or two faculty members in addition to the advisor and is defended by the student in an oral presentation. (4 credits each semester)

Senior Thesis Seminar: All seniors are required to take the thesis seminar which focuses on student research. The seminar is chaired by the Honors Program Director, with the participation of thesis advisors. (2 credits)

Center for International Studies

Asian Studies

Asia supports over a quarter of the world's population and is the locus of diverse cultures with rich traditions and rapidly changing modern societies. Holy Cross presents a wide range of course offerings in Asian Studies, including Chinese language. The Asian Studies faculty offers a broad base of expertise and first-hand experience in Asia. Students can develop a program in Asian Studies, with courses in history, economics, philosophy, music, literature, Chinese language, and linguistics, which are designed to introduce students to a wide range of topics and themes of importance for understanding both traditional and modern Asian cultures.

Students may supplement their curriculum with study abroad at one of many existing programs in Asia, including a new exchange program between Holy Cross and Sophia University in Tokyo.

Among the courses offered are: Perspectives on Asia; Introduction to the Arts of Asia; Religions of South Asia; Chinese Language; Indian Philosophy; Economic Development: China; Revolutionary China; and The Warrior Tradition in Japan.

Latin American Studies

Defined geographically, Latin American encompasses the entire Western Hemisphere south of the United States. Defined culturally, it also includes Latin American peoples within the United States, the nation's second largest minority. Latin America is a region whose growth and development are intimately bound to that of Western Europe and the United States. Within this region there exists a dynamic cultural mix of native American, African and European peoples. Throughout the twentieth century, Latin America has been undergoing profound transformations. Traditional institutions coexist with modern ones, while revolutionary movements seek to reorder societies in the face of severe economic crisis, a burgeoning population, and extreme inequality. From the point of view of the social sciences, Latin America is underdeveloped; yet, in arts and letters, Latin Americans are universally acclaimed for some of the most creative and self-conscious works produced in the world today.

The purpose of the Latin American Studies concentration at Holy Cross is to provide a framework, though interdisciplinary study in the humanities and social sciences, for systematic understanding of the Latin American cultural and historical experience and of the important role of Latin America in the world. Students are challenged by the study of a major Third World region, because it provides an alternative context for raising questions about rights, responsibilities, and values that are central to our educational purpose at Holy Cross. Through a Latin American Studies concentration, students develop broader perspectives on their own culture and society. These perspectives, combined with an expanded international world-view, increased sensitivity to inter-American relations, and extensive study of the Spanish language, all bring depth and understanding to liberal arts education. Course offerings draw from History, Modern Languages, Political Science, Religious Studies, and Sociology.

Middle East Studies

In keeping with the College's commitment to international studies, students are offered a variety of classes on Middle Eastern culture, religion, politics, and society, taught by faculty members who have extensive experience in the region.

Historically, the Middle East has been a crossroad between the civilizations of East and West, and a land bridge linking three continents. Through trade, the exchange of ideas, and military adventures, the peoples of the Middle East have influenced, and been influenced by, outsiders from Europe, Central Asia, North America and Africa.

The region is sacred to three of the most vibrant religions in the world today, Christianity, Islam and Judaism, and home to a variety of peoples, including Arabs, Israelis, Turks and Persians. Though geographically thousands of miles away from our continent, recent political developments and economic realities have moved the Middle East squarely into the American consciousness.

The importance of understanding the Middle East has been acknowledged by scholars, diplomats, travellers, journalists and religious officials alike. The Middle East curriculum at Holy Cross demonstrates the significance of the region, its diversity, and its complexity. Among the courses offered are: Religion and Politics in the Middle East; Government and Politics in the Middle East; Islam; Islam and Politics; Modernization and Development: Tradition and Change; and U.S. Foreign Policy in the Middle East.

Russian Studies

The Russian Studies Program is the oldest of the international studies concentrations offered at Holy Cross. Organized in 1975, it has provided an effective training in Russian Studies and the vehicle for a broad liberal arts education for many students who have entered many fields of work, both related and unrelated to the Russian specialization. The goal of the Russian Studies Concentration is to provide students the opportunity to gain thorough command of a subject by focus on one important area of the world and its characteristics, together with the skills of organization and expression that come with close study of a language and its literature. The concentration aims also at providing the breadth of a liberal arts program by approaching the area of focus from the stand-point of at least three different disciplines, thereby providing the student with the experience of a variety of ways of knowing and methodologies for disciplined inquiry.

The means to achieve these goals include both course work and co-curricular activities. In course work, the concentrator normally is expected to complete at least six, but no more than eight, semester courses from the designated lists, choosing at least two courses offered by the modern languages and literatures department and at least one each from history and political science. The co-curricular activities are a special strength of the Russian Studies Program, bringing to Holy Cross internationally recognized experts for lectures and symposia, as well as films, art exhibits, and concerts, and providing off-campus experience, including participation in the meetings of professional associations, such as the New England Slavic Association, and study trips to the Soviet Union.

International Studies Concentration

A student with an interest in international and comparative studies may construct a coherent program of elective courses outside the major. The International Studies Concentration comprises six courses on the international system, the nation-state, and the individual. Each concentrator is encouraged to select a particular focus for the program — an area, country or theme. Competence in a foreign language also is required.

Interdisciplinary Peace Studies Group

Organized in 1981, this group of students and faculty organizes extracurricular educational programs dealing with issues of warfare, arms control, conflict resolution and international order. In addition to presenting an annual series of public lectures, the IPSP sponsors films and debates, and encourages curricular development in peace studies. Courses in peace studies will be offered beginning in 1988-1989.

Multidisciplinary Majors

The Office of Special Studies approves and administers student-designed programs that combine studies in more than one academic discipline. These programs may focus on area

studies or cross-disciplinary topics. A multidisciplinary major must involve at least two disciplines and fall within the competence of the College faculty.

The following guidelines are offered to assist students in preparing multidisciplinary major proposals. 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 coherent progression of study.

The student should present a written proposal for the major no earlier than the beginning of the junior year. This proposal must include a statement of intellectual rationale, an outline of courses already taken, a plan of proposed courses, and an argument for the proposed course of study. Only students with strong academic records at the college may offer proposals.

The proposal should be written in consultation with the Director of Special Studies and two faculty members based in departments related to the proposed major. Letters of support should be secured from those faculty members who have been consulted on the plan and are willing to serve as program advisors.

Upon the unanimous recommendation of the advisors and the Director of Special Studies, the proposal will be considered by the Committee on Special Studies. If the plan is approved by that committee, the faculty sponsors and the Director will serve as a permanent advisory committee responsible for approving all changes in the major plan.

Academic Internships

Local Program — Off-campus field work provides an alternative to traditional instruction and the opportunity for students to demonstrate imagination and resourcefulness. Internships offer opportunities for educational growth, the development of special skills, the assessment of personal commitments and the exploration of potential careers. Internships are available in health and education, law and business, journalism, social service, state and local government, scientific research and cultural affairs. Students may design their own programs, in consultation with faculty and staff from the Office of Special Studies, and receive academic credit for these internships. Application deadlines are announced each semester.

Washington Semester — For advanced students, special internships are available in Washington, D.C. These are full-semester projects that offer qualified students an intensive program combining professional experience with academic research. Applicants must be well advanced in their major studies and be willing to commit extra time and effort to a demanding program. Admission to the Washington Internship Program is highly competitive. Washington interns have worked in Congressional offices, federal agencies, research groups, and public interest organizations. Application deadlines are announced each semester.

Fenwick Scholar Program

This is one of the highest academic honors the College bestows. The program, begun in 1966, is open to seniors upon nomination by the departments. From among those nominated, the Committee on Special Studies chooses the Fenwick Scholar. The Scholar is free to design, with an advisor, the academic program that will complete his or her undergraduate education in the most challenging and 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 selecting 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 must make a public presentation of his or her work as a demonstration of substantial intellectual accomplishment. The application deadline is late March of the junior year.

Gerontology Studies Program

The Gerontology Studies Program is a cooperative arrangement among Worcester colleges for students interested in the study of aging. The main elements of the program are courses,

internships and career planning; successful completion of the program entitles the student to a gerontology certificate. Established to encourage students with an interest in the aging process, the problems of older people, and the delivery of services to the elderly, the program draws on the strengths of the Consortium institutions. Students may elect a wide range of courses from a variety of disciplines in order to prepare for graduate study or for work in the field of aging. Information on all aspects of the program is available from the faculty Gerontology Studies advisor.

Student Grant Program

Funds are available through the Office of Special Studies to support student participation in academic programs and in research projects. Students may apply also for assistance in attending national, regional and state academic meetings.

Marshall Memorial Fund

Through a recent bequest to the College, the James J. Marshall and Ellen O'Connor Marshall Fund has been established to encourage creative intellectual involvement of students and faculty with the Worcester community.

A student might request financial support for research on any aspect of the city, historical, economic, cultural or religious. Service projects involving Holy Cross students directly with members of the community for mutual understanding also are encouraged. Funds are allocated, as well, to help faculty members to undertake research, offer programs, or to design courses related to the city of Worcester.

Semester-Away Program

Students who wish to engage in academic work not available at Holy Cross may submit proposals for a semester or a year of study at another institution in the U.S. or Canada. Students also may apply for special programs of limited duration at other colleges or universities when these programs are directly related to the student's major.

Aerospace Studies

Lt. Col. James R. Coakley, USAF, Ph.D., *Professor and Chair*
Maj. Thomas C. Mast, USAF, M.A., *Visiting Lecturer*
Capt. William B. Vlcek, USAF, M.A., *Visiting Lecturer*

The mission of the Air Force Reserve Officers Training Corps is to recruit, educate and commission officer candidates through a college campus program to provide new Air Force officers.

Requirements for enrollment: Enrollment is voluntary and open to young men and women who are U.S. citizens of good moral character and sound physical condition who seek the challenge of being an officer in the U.S. Air Force upon graduation from college. In addition to Holy Cross students, students at any of the Worcester Consortium for Higher Education institutions are also eligible to apply for AFROTC at Holy Cross.

Air Force ROTC Programs

There are two routes to an Air Force commission through Air Force ROTC. Entering students may enroll in the Air Force ROTC Four-Year Program. Students with at least two academic years remaining in college may apply for the Two-Year Program.

Four-Year AFROTC Program

1. The General Military Course (GMC) is required for freshmen and sophomores; one hour per semester.

2. The Professional Officer Course (POC) is required for juniors and seniors; four credits per semester.
3. Cadets attend Air Force ROTC field training for four weeks between their sophomore and junior years. Cadets are paid while at field training and will receive travel pay to and from the Air Force base hosting field training.
4. Air Force ROTC cadets participate in a one and one-half hour military training period each week.
5. By participating in AFROTC students may compete for scholarships ranging from two years to three and a half years in duration. These scholarships cover tuition, most fees and textbooks. A monthly tax-free subsistence allowance of \$100 is paid to all scholarship students, and to all non-scholarship cadets in the last two years of the AFROTC program.
6. Entering freshman may compete for an AFROTC Four-year Scholarship during their senior year in high school. Details of this program may be obtained through most high school counselling offices, or by writing AFROTC Detachment 340, P.O. Box 21A, Holy Cross College, Worcester, MA 01610.

Two-Year AFROTC Program

1. A student with two years of undergraduate or graduate study remaining must apply no later than the beginning of the semester preceding those two final years. The applicant will take the Air Force Officer Qualifying Test, will be given a physical exam at no expense, and will meet a selection board.
2. Students will attend AFROTC field training for six weeks at an Air Force base prior to their entry into the Professional Officer Course (POC). They are paid while at field training and will receive travel pay to and from the Air Force base hosting field training.
3. Students enrolled in the two-year program will take the Professional Officer Course, four credits per semester.
4. Scholarship opportunities and tax-free subsistence allowance are similar to those of the four-year program.

Other Aspects of the AFROTC Program

Leadership Laboratory: In addition to the formal academic classes, all students participate in this formal military training, largely cadet planned and directed. The freshman and sophomore cadets are involved in such initial leadership experiences as Air Force customs and courtesies; squadron and flight drill movements; Air Force educational benefits; Air Force career opportunities; and preparation for field training. The junior and senior cadets are involved in more advanced leadership experiences as they become more responsible for the planning and organizing of cadet corps activities, to include conducting Leadership Laboratory itself.

Arnold Air Society: A special group of cadets belongs to a national society sponsored by the Air Force Association. These Arnold Air Society members are involved in a myriad of community service projects to include charity works, service to the poor, works, swimming instruction, work with local orphanages, and similar activities. Twice a year, members participate in conventions/conclaves held in various cities and attended by members from all the schools in the country sponsoring AFROTC. Membership is by nomination and a semester pledge program which is strictly project-oriented.

Base Visits: Air Force ROTC cadets have the opportunity to visit Air Force bases for first-hand observation of the operating Air Force. These trips are frequently made on weekends or scheduled to coincide with school vacation periods. Cadets may be flown by military aircraft to an Air Force base where they spend the day, remain on base overnight, and return to campus the following day.

Cadet Pay and Other Benefits: All cadets enrolled in the Professional Officer Course receive a nontaxable allowance of \$100 each month during the school year. All scholarship cadets receive the nontaxable allowance in addition to full tuition, laboratory fees,

incidental expenses, and reimbursement for textbooks. Cadets in the Professional Officer Course may travel free on military aircraft on a space-available basis. The Air Force provides all Air Force ROTC uniforms and textbooks for on-campus and field training.

Additional Information: In addition to formal activities, the Cadet Corps plans and organizes a full schedule of social events throughout the academic year. These include a Dining-In, Military Ball, Dining-Out, a Field Day, and intramural sports activities. Airborne Training (parachute jumping instruction) is also available to selected volunteer cadets in the Professional Officer Course.

The General Military Course

This is a two-year course normally taken during the freshman and sophomore year.

Aerospace Studies 100 — The Air Force Today

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. The course describes the functions of military forces according to broad categories of strategic offensive and defensive forces. One hour per week — no credit.

Aerospace Studies 101 — The Air Force Today

A continuation of AS 100, this course describes United States general purpose forces and the aerospace support forces. Particular emphasis is given to cooperation and coordination with Army and Navy functions and organizations, and to other Air Force commands and agencies. One hour per week — no credit.

Aerospace Studies 200 — The Development of Air Power

A historical study of the development of air power from its earliest beginnings until the end of World War II. One credit.

Aerospace Studies 201 — The Development of Air Power

A continuation of the study begun in AS 200 of the development of air power from the end of World War II until the present. One credit.

The Professional Officer Course

This constitutes the final two years of the program, normally taken during junior and senior years.

Aerospace Studies 300 — Leadership and Management I

An introduction to leadership theory within the management spectrum. This course provides students with a systematic presentation of the principles, characteristics, and functions of leadership. Individual motivational and behavioral processes, communications, and group dynamics are covered to provide a foundation for the development of the junior officer's leadership skills. Four credits.

Aerospace Studies 301 — Leadership and Management II

A fundamental management course emphasizing the individual as a manager in the Air Force. The basic managerial processes involving decision-making, utilization of analytical aids in planning, organizing, and controlling are emphasized within the concept of organizational and personal values, management of forces in change, organizational power and politics, and managerial strategy and tactics. Four credits.

Aerospace Studies 400 — United States Military in Society/American National Security Policy

A review of the Armed Forces as an integral element of society. This course provides an examination of the broad range of U.S. civil-military relations, and the environmental context in which defense policy is developed and implemented. Special themes include: political, social, and economic constraints on the national defense structure and the impact of technological and international developments. Four credits.

Aerospace Studies 401 — United States Military in Society/American National Security Policy

A continuation of AS 400, this portion of the course focuses on the key issues of national security policy to include area studies, nuclear strategies, international peace-keeping, and arms control. Continued attention is given to developing the research, oral, and written communicative skills required by junior officers. Four credits.

Biology

William R. Healy, Ph.D., *Professor and Acting Chair*

Banadakoppa T. Lingappa, Ph.D., *Professor*

Susan L. Berman, Ph.D., *Associate Professor*

Robert I. Bertin, Ph.D., *Associate Professor*

George R. Hoffman, Ph.D., *Associate Professor and Chair*

Mary Lee S. Ledbetter, Ph.D., *Associate Professor*

Kornath Madhavan, Ph.D., *Associate Professor*

Peter Parsons, Ph.D., *Associate Professor*

Kenneth N. Prestwich, Ph.D., *Assistant Professor*

The biology curriculum is designed to acquaint students with the broad scope of the biological sciences at several levels of functional organization. Its courses therefore include molecular, cellular, organismal, ecological and evolutionary aspects of biology. Departmental course offerings are also intended to prepare biology majors for advanced study in graduate or professional schools or for other professional opportunities. The department believes that an informed understanding of biological principles is an important aspect of a liberal arts education, and it therefore offers diverse courses to introduce non-majors to basic biological concepts and to explore the implications of modern biology for various social and philosophical issues.

Biology majors are required to take Biology 31 and 32 (Introduction to Biology with laboratory) and at least six other courses (four with laboratory) from the department's total offerings. They also must complete Chemistry 11, 12, 17, 18, 23, 24, 25, 26; two semesters of mathematics; and Physics 21, 22 (both with laboratory). Biology students normally complete the chemistry sequence before the beginning of their junior year.

Since study beyond the undergraduate level is typically specialized, the department encourages a balanced approach to the discipline by requiring its majors to include among their six upper-division required biology courses one course from each of the following broadly defined areas: (1) molecular and cellular biology, (2) organismal biology, and (3) ecology and evolutionary biology.

In addition to formal course work, the department affords qualified students an opportunity to do research (Biology 201, 202) in association with faculty members in their research laboratories. Opportunities also exist for students to pursue individual interests in faculty-directed readings courses based on the biological literature (Biology 205, 206). Students in the college Honors Program must elect Biology 207, 208.

Biology 14, 15 — Topics in Biology

Consideration of diverse subjects in the biological sciences. Course format and subjects covered vary from year to year; the specific subject matter for each course is announced at preregistration. Intended for non-majors. Four credits. (Offered both semesters.)

Biology 16 — Laboratory Investigations in Biology

The diversity of life and life functions will be investigated using an experimental approach. Students will be exposed to descriptive as well as quantitative biology through the use of microscopy, spectrophotometry chromatography and other methods of modern

biology, and they will work on an interdisciplinary laboratory project. Not open to biology majors or premedical students. One lecture and one laboratory per week. Four credits. (Offered both semesters.)

Biology 17 — Perspectives in Biology

Selected topics on the level of biological organization ranging from macromolecules to populations. Emphasis is placed on the theme of animal behavior including examination of the physical basis of behavior, ecological implication of behavior and the evolution of social behavior. Four credits. (Offered in the second semester.)

Biology 20 — General Biology I

Fundamental principles of biology and the diversity of life studied at all levels of organization. Intended for junior premedical students majoring in subjects other than biology. Three lectures and one laboratory period. Prerequisites: introductory and organic chemistry. Five credits. (Offered first semester.)

Biology 21 — General Biology II

A continuation of Biology 20. Three lectures and one laboratory period. Prerequisite: Biology 20. Five credits. (Offered second semester.)

Biology 31 — Introduction to Biology I

Selected topics emphasizing basic biological organization from molecules to ecosystems. Three lectures and one laboratory period. Open to biology majors only. Five credits. (Offered first semester.)

Biology 32 — Introduction to Biology II

A study of the structure, function and diversity of plants and invertebrates. Three lectures and one laboratory period. Open to biology majors and prospective biology majors. Five credits. (Offered second semester.)

Biology 40 — Bioethics

The biological background of selected ethical and social issues arising from new advances in biology and a consideration of the morality and feasibility of public policy as they apply to these issues in a pluralistic society. Topics considered include such matters as environmental ethics, reproduction, population control and the evolution of moral systems. Four credits. (Offered second semester in alternate years.)

Biology 50 — Comparative Chordate Morphology

The comparative anatomy of the chordate body with reference to the structure and function of the skeletal, muscular, nervous, respiratory, circulatory, digestive, urogenital and reproductive systems. These systems will be compared among the various vertebrate groups in relation to biomechanics and evolution. Three lectures and one laboratory period. Five credits. (Offered second semester.)

Biology 61 — Genetics

The mechanisms of heredity and genetic analysis. Topics include Mendelian inheritance, chromosome structure and function, genetic mapping, molecular genetics, mutation, genetic regulation, and population genetics. Laboratory exercises emphasize genetic principles through experimental work with bacteria, fungi, vascular plants, and fruit flies, and interpretive studies in human genetics. Five credits. (Offered first semester; occasionally both semesters.)

Biology 66 — Cell Biology

The structure and function of cells of higher organisms, both animal and plant, are considered along with aspects of metabolism and enzyme action. If time permits, special topics such as growth regulation or function of the immune system may be discussed according to student interest. The critical evaluation of experimental evidence is emphasized. Prerequisites: Introductory biology, one semester of organic chemistry. Three lectures and one laboratory period. Five credits. (Offered second semester.)

Biology 70 — Histology

A study of the microscopic and sub-microscopic structure of vertebrate tissues and organs. Three lectures and one laboratory period. Five credits. (Offered second semester in alternate years.)

Biology 80 — General Ecology

An introduction to the science of ecology. The interactions among animals and plants and their environments are considered at the levels of the individual, the population, the community, and the ecosystem. Three lectures and one laboratory period. Five credits. (Offered first semester.)

Biology 83 — The Theory of Organic Evolution

Analysis of historical development of the modern synthetic theory of organic evolution emphasizing Darwin's theory of natural selection and the controversies that it has generated. The implications of the concept of evolution for other sciences and the humanities are also explored. Four credits. (Offered second semester.)

Biology 85 — Sociobiology

Analysis of animal social behavior in terms of evolutionary theory. Emphasis is placed on the contribution of natural selection theory and ecological principles in explaining the evolution of altruism, sex, reproductive strategies, mating systems and life history strategies. Four credits. (Offered first semester.)

Biology 90 — Animal Physiology

A comparative approach to the functioning of cells, organs, and organisms. Major themes are homeostasis, control mechanisms, and adaptation to the environment. Topics discussed include: excitable and contractile cell physiology, energy metabolism and temperature regulation, respiration and circulation, digestion, water balance, and coordination and control of these systems by neuro-endocrine mechanisms. Three lectures and one laboratory period. Prerequisite: Chemistry 11, 12; Pre/Co requisite Physics 21, 22. Five credits. (Offered second semester.)

Biology 101 — Biochemistry I

A detailed study of the chemistry of biological molecules, their structures, physical properties, and reactivity. Topics considered include: the structural chemistry of the major classes of biological compounds, enzymic and coenzymic catalysis together with bio-organic reaction mechanisms, bioenergetics and biochemical thermodynamics. Prerequisites: chemistry through organic. Four credits. (Offered first semester.)

Biology 102 — Biochemistry II

A study of the cellular process at the molecular level. An emphasis is placed upon intermediary metabolism — e.g., glycolysis, biological oxidation photosynthesis — and its regulation. Biochemical explanations for phenomena such as gene expression, membrane structure and function, muscle contraction, and the immune response also are given. This course should be taken in sequence after Biology 101. Prerequisite: Biology 101. Four credits. (Offered second semester.)

Biology 103 — Biochemistry I Laboratory*

This is the laboratory course to accompany Biology 101 and introduces experimental methods for the characterization of biological molecules, including electrophoresis, column chromatography, isoelectric focusing, and enzyme kinetics. The chemistry of proteins is emphasized. Prerequisite or concurrent course: Biology 101. Two credits. (Offered first semester.)

*This laboratory course is taken as a fifth course. The course, while figured into the QPI, does not count toward the 32 courses required for graduation.

Biology 123 — Microbiology

The origins and development of microbiology, the principles and practice of microbiological methods, the principal types of microbes, microbial metabolism and alternate pathways, and nutrition, growth, genetics, survival and ecology of microbes will be discussed. Laboratory activities focus on pure culture methods and classical and molecular diagnostic procedures. Three lectures and one laboratory period. Five credits. (Offered first semester.)

Biology 130 — Developmental Biology

The early development of eucaryotic organisms will be discussed from a molecular biological point of view. Particular emphasis will be on possible molecular explanations of the major events and processes of classical embryology. The emphasis in the laboratory is on the application of techniques for visualization of gene activity and elucidation of processes like gastrulation, regeneration and metamorphosis. Both plants and animals will be used for these studies. Three lectures and one laboratory period. Five credits. (Offered second semester in alternate years.)

Biology 141 — Vertebrate Endocrinology

A general course dealing with the anatomy and physiology of glands and internal secretion in representative vertebrates. Functional interrelationships of the endocrine organs and cellular effects of hormones and their mechanics of action (receptors, second messenger, etc.) will be emphasized. The functional morphology of the endocrine organs of vertebrates will be compared with that of invertebrates. Four credits. (Offered first semester in alternate years.)

Biology 201, 202 — Undergraduate Research

Individual experimental investigation and associated study of the scientific literature under the direct supervision of a member of the faculty. The number of positions is limited; students contemplating research should make inquiries early in the year preceding the term in which research is to be initiated. Five credits each semester.

Biology 203, 204 — Problems in Biology

Courses at an advanced level on selected subjects in the biological sciences, accompanied by intensive reading of original scientific literature. These courses are offered as student interest warrants. Prerequisite: permission of instructor. Four credits each semester.

Biology 205, 206 — Directed Reading

An in-depth literature study of an individual topic of interest to the student under the tutorial supervision of a member of the faculty. Prerequisite: permission of instructor. Four credits each semester.

Biology 207, 208 — Honors Research

Individual experimental investigation and associated study of the scientific literature under the direct supervision of a faculty member. Students contemplating research should make inquiries early in the year preceding the term in which research is to be initiated. Open to Honors Program students only. Five credits. (Offered both semesters.)

Chemistry

Paul D. McMaster, Ph.D., *Professor*
 Robert W. Ricci, Ph.D., *Professor*
 Mauri A. Ditzler, Ph.D., *Associate Professor and Chair*
 Michael G. McGrath, Ph.D., *Associate Professor*
 G. Earl Peace, Jr., Ph.D., *Associate Professor*
 George A. Vidulich, Ph.D., *Associate Professor*
 Frank Vellaccio, Ph.D., *Associate Professor*
 Richard S. Herrick, Ph.D., *Assistant Professor*
 Ronald M. Jarret, Ph.D., *Assistant Professor*
 Lisa P. Nestor, Cand. Ph.D., *Instructor*

The Department of Chemistry has traditionally been numbered among the nation's top producers of chemistry graduates certified by the American Chemical Society. The curriculum combines a solid background in fundamental principles and theories of chemistry with hands-on experience using state-of-the-art laboratory equipment. The department strives to improve the verbal and written communication skills of students by emphasizing the importance of clarity in laboratory reports and oral seminars (required of all research students). The required courses have been carefully chosen to reflect these goals while allowing considerable latitude in the choice of elective courses. Some flexibility is allowed for students electing the chemistry major during their sophomore year. Students may take the minimum of three chemistry electives in any semester(s) after their fifth. By arrangement with the chair of the department a student may substitute an upper division course in physics, biology or mathematics for one chemistry elective. A student must obtain a grade of C or better in Chemistry 13 and 14 to continue to Chemistry 21 and 22. Furthermore, a grade of C or better in Chemistry 21 and 22 is required to continue in the major. The chemistry department offers several academic year research programs for upperclass majors. Summer research opportunities with monetary stipends are available on a competitive basis. A student not majoring in chemistry who wishes to fulfill premedical requirements or who plans on majoring in biology can begin the chemistry requirements by electing Chemistry 11, 12, 17 and 18 in the freshman year or sophomore year. A grade of C in Chemistry 11 and 12 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 courses normally taken by biology majors and premedical students not majoring in chemistry.

Courses Required for the Chemistry Major

<i>Fall</i>	<i>Freshman Year</i>	<i>Spring</i>
Structure and Bonding General Principles Lab* Analysis I (Math 31)		Inorganic I Chemical Techniques Lab* Analysis II (Math 32)
	<i>Sophomore Year</i>	
Organic Chemistry I Synthetic Methods Lab* Analysis III (Math 41) General Physics		Organic Chemistry II Adv. Synthetic Methods Lab* Analysis IV (Math 42) General Physics

*Each of these laboratory courses is taken as a fifth course. The course, while figured into the QPI, does not count toward the 32 courses required for graduation.

Junior Year

Physical Chemistry I
Instrumental Chemistry
Analytical Methods Lab*

Physical Chemistry II
Analytical Methods Lab*
Physical Chemistry Lab*

Senior Year

Physical Chemistry Lab*
Chemistry Elective (100 level course)

2 Chemistry Electives
(100 level series)

Chemistry 10 — Methods of Chemistry

This course is designed to prepare the student with a minimal or deficient mathematical and science background for the Chemistry 11-12 sequence. An emphasis is placed on the application of concepts to problem-solving. Topics to be covered include stoichiometry, gas laws, solution chemistry, chemical equilibrium and thermochemistry. Four credits.

Chemistry 11 — General Principles I

This course provides an introduction to the fundamental chemical and physical principles which form the foundation for much of our current chemical knowledge. Topics covered include stoichiometry, gas laws, thermochemistry, atomic structure, and the role of electrons in determining chemical reactivity, the formation of bonds and molecular structure. Four credits.

Chemistry 12 — General Principles II

The concepts developed in Chemistry 11 are used to quantitatively describe properties of solutions, chemical equilibria, properties of acids and bases, chemical kinetics, and thermodynamics. Four credits.

Chemistry 13 — Structure and Bonding

The course begins with the concept of stoichiometry and proceeds through the gas laws. The atomic theory is introduced followed by the modern quantum theory as it applies to orbitals and electron configurations. The periodic table is discussed in terms of its makeup and the trends associated with various chemical and physical properties. Bonding models including Lewis structures, VSEPR theory, hybridization and MO theory are introduced. Four credits.

Chemistry 14 — Inorganic I

Thermochemistry and lattice energies are presented. Chemical equilibrium is introduced. Applications include acid and base, gas phase, complex ion and slightly soluble salt equilibria. The descriptive chemistry of the main group elements is discussed. Chemical kinetics is presented. Gibbs free energy is explained. An introduction to the chemistry of coordination compounds is given. Four credits.

Chemistry 16 — Chemical Techniques Laboratory*

An integrated introduction to the chemical literature, to the methods of quantitative chemical analysis and to the basic laboratory techniques invoked in the synthesis of inorganic compounds. Techniques of gravimetric, volumetric and colorimetric analysis will be employed to determine molecular weights and composition of unknowns and synthesized compounds. Some experiments will encourage student ingenuity by avoiding "cookbook" directions. Two four-hour laboratory periods per week. Four credits.

Chemistry 17 — General Principles Laboratory*

This laboratory introduces the student to basic analytical laboratory techniques such as volumetric and gravimetric analysis. Experiments are designed to demonstrate basic principles of chemistry such as stoichiometry and the behavior of gases. One lecture and one three-hour laboratory per week. Two credits.

*Each of these laboratory courses is taken as a fifth course. The course, while figured into the QP¹ does not count toward the 32 courses required for graduation. *Each does.

Chemistry 18 — General Principles Laboratory II*

This course is a continuation of Chemistry 17. Laboratory skills acquired in the first semester will be used to study colligative properties, chemical equilibrium, thermochemistry and kinetics. One lecture and one three-hour laboratory per week. Two credits.

Chemistry 21 — Organic Chemistry I

This course is a study of organic compounds from two points of view: the chemistry of the functional groups and modern structural theory and reaction mechanisms. The chemistry of alcohols, halides, aldehydes, ketones and the functional derivatives of carboxylic acids are introduced. Nucleophilic substitutions at alkyl and acyl carbons as well as nucleophilic additions to the carbonyl group are studied in detail. Emphasis is placed on stereochemistry. Prerequisite: Grade of C or better in Chemistry 11 and 12 or 13 and 14. Four credits.

Chemistry 28 — Advanced Synthetic Methods Laboratory*

This is the adjunct laboratory course of Chemistry 22. The composition of experiments is similar to that of Chemistry 26 but student self-reliance is more strongly emphasized. Students are expected to coordinate their activities to complete the qualitative analysis and microscale synthesis reactions during the first portion of the semester. Basic concepts of NMR and IR spectroscopy are discussed. The last five weeks are devoted to the design, execution and presentation of an independent literature-based synthesis project. Two credits.

Chemistry 41 — Environmental Chemistry

This course will relate historical and contemporary problems of air and water pollution to both natural and anthropogenic chemical compounds. Sources, sinks and interactions of these compounds will be discussed within a framework of the conversion of chemical energy to mechanical or electrical energy. Prerequisite: high school chemistry or permission of instructor. Four credits.

Chemistry 43 — Chemistry: Bane or Boon

This course is designed as a chemistry elective for non-science majors. It examines the impact of chemistry, both good and bad, on our lifestyles and well being. Among topics discussed are dyes, polymers, food additives, fuels, detergents, drugs and agricultural chemicals. Several of the major environmental disasters, i.e., Bhopal, Chernoble, Love Canal, are examined. Prerequisites: High school chemistry or permission of the instructor. Four credits.

Chemistry 44 — Chemistry and Society

A course designed to acquaint non-science majors with chemistry as human endeavor and help them acquire some appreciation of the benefits and limitations of science. Readings from the current popular and scientific literature will be examined to illustrate the relationships of science to society. Some of the basic concepts and principles of chemistry necessary for an understanding of environmental problems will be considered in detail. Four credits.

Chemistry 45 — The Chemistry and Physics of Matter

Why do scientists think that the world is made of atoms and molecules? How do scientists arrive at mental pictures of molecules? How do they test the validity of these models? What properties of atoms or molecules can be measured in the laboratory here at Holy Cross? How do molecules interact or what holds matter together? What is light? How do molecules and light interact? What questions about molecules are interesting to a chemist? What questions about molecules spark a physicist's interest? If we understand molecules, do we understand matter?

These are the kinds of questions which will be addressed in this course, which is intended for non-science, non-premed students. The course will be team-taught by a chemist and a physicist. The mathematical demands of the course will be kept at a minimum with only simple numerical calculations and basic high school algebra expected from the students.

This course gives students a unique opportunity to learn about the atomic and molecular model of matter through a hands-on approach. The weekly laboratory component will

*Each of these laboratory courses is taken as a fifth course. The course, while figured into the QPI, does not count toward the 32 courses required for graduation.

give the student an opportunity to develop and test their own models of molecular structure. In addition, students will learn that physics and chemistry are not identical. They will gain real insight into the differences in interests, approaches, and laboratory techniques of these two disciplines. Two lectures and one laboratory period per week. Four credits.

Chemistry 55, 56 — Physical Chemistry I and II

A study of the basic concepts, principles and methods of physical chemistry. Topics covered include molecular-kinetic theory, thermodynamics, structure and properties of solutions, electrochemistry, quantum theory, kinetics and transport processes. Courses in integral and differential calculus and introductory physics are prerequisites. Eight credits.

Chemistry 57 — Biophysical Chemistry Laboratory*

A laboratory course designed to illustrate some of the principles of biophysical chemistry, to train in careful experimentation, to develop the habit of quantitative interpretation of physical properties and to encourage ability in research. Classical and modern experiments in kinetics, spectroscopy, thermochemistry, electrochemistry, transport properties and equilibria are performed. One four-hour laboratory per week for two semesters. Four credits.

Chemistry 58 — Physical Chemistry Laboratory*

This laboratory course is designed to complement Physical Chemistry 55, 56 and to encourage ability in research. In the laboratory one will test the more important physical and chemical laws and in doing so acquire the habit of exact chemical techniques and the quantitative interpretation thereof. Experiments in spectroscopy, thermochemistry, electrochemistry, colligative properties, chemical and phase equilibria, kinetics and computer interfacing are performed. One four-hour laboratory per week for two semesters. Four credits.

Chemistry 100 — Chemical Thermodynamics

This course covers the laws of thermodynamics: the study of energy and order-disorder, and their connections with chemical changes and chemical equilibrium. A systematic study of the first and second laws is followed by development of the chemical potential. Applications of thermodynamics to phase and chemical equilibria, electrochemistry, and solution behavior are discussed. An introduction to molecular thermodynamics principles is also taught. Molecular thermodynamics links the properties of the constituent molecules with the bulk properties of matter. Four credits.

Chemistry 101 — Advanced Inorganic Chemistry

Group theory and modern theories of bonding are used to discuss structural and dynamic features of inorganic compounds. The structure and bonding of transition metal coordination compounds are related to various reaction mechanisms. The principal structural and mechanistic features of transition metal organometallic chemistry are studied with emphasis on catalysis of organic reactions. The role of inorganic chemistry in biological systems is also explored. Four credits.

Chemistry 103 — Advanced Physical Chemistry

The goal of this course is to acquaint the student with several selected topics in physical chemistry. The course material will change yearly, depending upon the need of the students and direction of the professor. Topics included in the past have been Molecular Orbital Theory and Woodward-Hoffmann rules; statistical mechanics; biophysical chemistry, thermodynamics, enzyme kinetics, diffusion and sedimentation, molecular spectroscopy and light scattering; and group theory and its chemical consequences. Four credits.

Chemistry 104 — Synthetic Organic Chemistry

This course will provide students of advanced organic chemistry with an understanding of the scope, limitation and stereochemical consequences of selected groups of organic

*Each of these laboratory courses is taken as a fifth course. The course, while figured into the QP^h does not count toward the 32 courses required for graduation.

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. Four credits.

Chemistry 105 — Instrumental Chemistry

The field of chemical analysis has undergone very dramatic changes within recent years due to rapid advancements in instruments which have replaced gravimetric and titrimetric methods. This course will introduce students to the theoretical and practical considerations which affect the design of modern analytical instrumentation. Instruments to be covered include those for the study of atomic and molecular spectroscopy, the separation of ions and/or molecules, and the measurement of electrochemical properties. Four credits.

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 faculty. Periodically the students meet with the faculty in seminar. The culmination of all research projects carried out under Chemistry 106 will be a research report in the form of a journal article as well as a seminar to be given during the spring semester. Course credits: Students must register for Undergraduate Investigation as a fifth course on a "in progress" basis during the fall semester. During the spring semester it should be registered as a fourth course for a letter grade. Four credits.

Chemistry 107 — Analytical Methods*

In this laboratory students acquire first-hand operating experience with the following equipment: atomic absorption; fluorescence; infrared, ultra violet; visible and proton magnetic resonance spectrometers; gas and high pressure liquid chromatographs; and electrochemical instrumentation. One four-hour laboratory per week, for two semesters. Four credits.

Chemistry 108 — General Honors Research

Selection: Students interested in participating in the departmental honors program will be invited to submit applications to the departmental honors committee during the second 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.

Program: Selected students will consult with each member of the department on research and will submit to the committee three choices for a research advisor. When possible, a student will be given his or her first choice. The student will then conduct with the research advisor an original research project culminating in a research thesis written during the last semester of the 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 of a grade of B in major courses.

Course credits: Students must register for Honors Research as a fifth course on a "in progress basis" for each semester they participate in the program. During the last semester they will register in Honors Research as a fourth course for a letter grade. Students who successfully complete this program will be graduated with Honors in Chemistry. Four credits.

Chemistry 109 — Spectroscopy

This course focusses on chemical structure identification through the interpretation of spectroscopic data. With a concentration on organic molecules, Electronic (UV-VIS), Mass, Vibrational (IR and Raman), and Magnetic Resonance (NMR and EPR) spectra are analyzed. There is an emphasis on NMR spectroscopy (including an introduction to modern

*Each of these laboratory courses is taken as a fifth course. The course, while figured into the QPI, does not count toward the 32 courses required for graduation.

techniques) to elucidate molecular structure. The course is conducted with a "problem solving" approach and student participation is expected. Prerequisite: Chemistry 26 or 28. Four credits.

Chemistry 116 — Natural Products

The chemistry of selected naturally occurring compounds is discussed. This will include classical methods of structure determination and biogenetic theory. Emphasis is placed on mechanisms of biochemical significance. Prerequisite: Chemistry 22 or 24. Four credits.

Chemistry 118 — Kinetics

This course presents an introduction to the principles of chemical kinetics along with modern applications. An intensive study of reaction rates, catalysis and mechanisms in both homogeneous and heterogeneous systems will be made. The mechanism of photochemical reactions will also be studied as well as the role played by modern instrumental techniques for measuring fast reactions. Included in this section will be studies of laser initiated reactions, stop-flow systems, pressure and temperature jumps techniques, and flash photolysis. Prerequisite: Chemistry 56. Four credits.

Classics

Rev. Robert F. Banks, S.J. M.A., *Associate Professor*

Deborah Boedeker, Ph.D., *Associate Professor*

Rev. John D.B. Hamilton, S.J., Ph.D., *Associate Professor*

Kenneth F. Happe, Ph.D., *Associate Professor*

Gerard B. Lavery, Ph.D., *Associate Professor*

Blaise J. Nagy, Ph.D., *Associate Professor*

William J. Ziobro, Ph.D., *Associate Professor and Chair*

Steven Ostrow, Ph.D., *Assistant Professor*

Kenneth S. Rothwell, Jr., Ph.D., *Assistant Professor*

The curriculum of the Classics Department affords all students the opportunity to study the Greek and Roman sources of Western culture. For the non-major, courses are available in Greek and Roman history, politics, philosophy, religion, archaeology, mythology and ancient literature in English translation. Courses in Greek and Latin are available on the introductory, intermediate, post-intermediate and advanced levels for all students. It is the aim of the department to provide courses directed toward the cultural development of all students, as well as the language skills of its majors.

For the student who chooses classics as a major, the department offers a wide selection of courses, seminars and tutorials intended to provide a liberal and comprehensive view of the ancient world through first-hand contact with the major Greek and Roman authors. The program for majors is designed to develop as rapidly as possible a command of the classical languages, to introduce the student to the technique of textual analysis and to survey the Greek and Roman worlds through their greatest works of literature. The classics major thus acquires a familiarity with the subtlety and intricacy of inflected languages, an ability for creative expression through the accurate translation of prose and poetry and a critical knowledge of those texts and institutions that are the roots of Western civilization. The Classics Department is particularly proud of its reputation for excellent teaching and for its recent successful application to the National Endowment for the Humanities for an endowed chair. In addition, the classroom experience can be enhanced by participation in one of the several year-abroad programs in Greece or Rome to which the department subscribes. Recent classics majors have pursued advanced degrees at several of the finest institutions of higher learning in the country, as well as beginning careers in journalism, law, business, medicine and banking, among others.

A minimum of 10 courses is required for a major in classics, distributed among Latin, Greek and courses in English that are appropriate to a student's primary interests. To satisfy the minimum requirements of the classics major, a student must demonstrate proficiency in one of the classical languages through one semester of an advanced (author) level course and through the intermediate level of the other language. Students entering the major with advanced classical language training at the secondary level are expected to demonstrate the same minimal level of language proficiency and to complete no fewer than eight semesters in the original languages. Any exceptions to these requirements must be approved by the chair of the department. The maximum number of courses in this major is 14.

The department offers two classic scholarships annually — the Henry Bean Classics Scholarship — to high school seniors with distinguished academic records who plan to major in the classics at Holy Cross. A recipient of a Henry Bean Classics Scholarship is granted full tuition, independent of need. The scholarship is renewable annually provided the student maintains a satisfactory academic record and continues to be a classics major. Candidates should address inquiries to Chair, Classics Department, Holy Cross College, Worcester, Massachusetts 01610. The application deadline is February 1.

Latin

Latin 1, 2 — Introduction to Latin

A grammar course introducing the student to the Latin language and its literature. Eight credits.

Latin 5 — Intensive Introduction to Latin (one semester)

Latin grammar, covered in one semester, and a limited amount of reading at the end of the course, with a view toward preparing the student for Intermediate Latin. Four credits.

Latin 13, 14 — Intermediate Latin

For those who have completed 2 years of pre-college Latin or Latin 1 and 2, or 5. Eight credits.

Latin 115, 116 — Readings in Latin

A survey of Latin Literature from its early remains to the Silver Age. Selected authors will be read in the original with analysis and discussion of each text. Eight credits.

Latin 120 — Sallust and Livy

A reading of the complete works of Sallust and selected books of Livy. Study of the sources and methods of Roman historiography. Four credits.

Latin 121 — Tacitus, Major or Minor Works

This course will study either the *Annals* or *The Historiae*, *Agricola* and *Germania* of Tacitus in the original. Four credits.

Latin 122 — Cicero's Speeches

Selected orations of Cicero will be read in the original. Emphasis will be placed on rhetorical analysis and interpretation of historical and political developments of the first century B.C. Four credits.

Latin 123 — Roman Letter Writers

Selected letters of Cicero and Pliny will be read in the original Latin. Supplementary reading of selected Senecan letters in English. Historical background. Development of letter writing as a literary form. Four credits.

Latin 124 — Juvenal

The meaning and form of Roman satire are observed in selected satires of Juvenal. Four credits.

Latin 125 — Petronius

A textual analysis of the *Satyricon* and its reflection of the reign of Nero and the 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. Four credits.

Latin 134 — Lucretius

An extensive examination of the poetic and philosophic message of Lucretius' Epicurean gospel, the *De rerum natura*. Four credits.

Latin 135 — Seneca

A study of Roman Stoicism through an 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. Four credits.

Latin 136 — Cicero's Philosophical Works

A study of Cicero's position in the Graeco-Roman philosophical tradition through an intensive examination of selections from his essays. Four credits.

Latin 143 — Horace

Selected poems from the four books of *Odes* will be read in the original. Emphasis will be placed on literary analysis and interpretation. In addition students will read a sampling of Horace's other poetic works in the original. Four credits.

Latin 144 — Catullus

A literary study and analysis of all the poems of Catullus. Four credits.

Latin 150 (RS 275) — Early Christian Literature

Reading in the original of selected works from the Patristic period. Four credits.

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. Four credits.

Latin 158 — Vergil: Aeneid

A study of Vergil's epic with emphasis on its literary artistry. Six books of the poem will be read in the original Latin. Four credits.

Latin 159 — Eclogues and Georgics

The development of pastoral and agricultural poetry, as exemplified in Vergil's two poetic masterpieces, *Eclogues* and *Georgics*. Four credits.

Latin 163 — Roman Comedy

Selected plays of Plautus and Terence read in Latin combined with a study of the Greek sources of Roman comedy. Four credits.

Latin 166 — Ovid's Metamorphoses

A close examination of the literary artistry of a number of individual stories in the *Metamorphoses*. Four credits.

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. Four credits.

Latin 301-302 — Tutorial Seminar

Designed for selected students with approval of professor and department chair. This work may be done for one or two semesters (four or eight credits) and will take the form of either a survey of selected authors or a specialized study of a single author or period. Four or eight credits.

Greek**Greek 1, 2 — Introduction to Greek**

A first course in the Greek language involving a systematic investigation of Attic Greek through a logical and intensive study of grammar, syntax, and vocabulary in the fall semester leading to the reading of selected classical texts in the spring semester. Eight credits.

Greek 5 — Intensive Introduction to Greek (one semester)

Greek grammar, covered in one semester, and a limited amount of reading at the end of the course, with a view toward preparing the student for Intermediate Greek. Four credits.

Greek 13, 14 — Intermediate Greek

Readings and textual study of Greek prose authors and the poetry of Greece. Offered mainly for students who have completed Greek 1 and 2 or 5 or have had two years of pre-college Greek. Eight credits.

Greek 115, 116 — Readings in Greek

A survey of Greek literature from Homer to Plato. Selected authors will be read in the original with analysis and discussion of each text. Eight credits.

Greek 126 — Plato: Selected Dialogues

A study of selected Platonic Dialogues. Four credits.

Greek 130 — Greek Lyric Poetry

A survey in the original Greek of the major writers of drinking and fighting songs, of political and personal songs, of sports songs and love songs from about 650 B.C. to 450 B.C. Knowledge (at least through English translation) of Homer, Hesiod and the Homeric *Hymns* will be presumed. Four credits.

Greek 131 — Greek Pastoral

Selections from Theocritus, with a consideration of his influence on later pastoral. Four credits.

Greek 132 — Homer

A reading of selected books of the *Iliad* and/or *Odyssey* with special attention to their literary value as well as to problems of oral composition, metrics, linguistics, authorship and text-history. Four credits.

Greek 138 — Plutarch

Translation and textual analysis of extensive selections from Plutarch's *Parallel Lives*. Emphasis will center around the moralizing and anecdotal character of Plutarchian biography and Plutarch's concepts of virtue (*arete*) and the statesman (*politikos*). Outside readings in English from Plutarch's *Lives* and *Moralia* and from Suetonius' *Lives of the Twelve Caesars*. Four credits.

Greek 140 — Herodotus

An examination of selected passages from Herodotus' account of the Persian Wars. Four credits.

Greek 141 — 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. Four credits.

Greek 150 — 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 and the social and economic conditions of Greek peasant life will be discussed. Four credits.

Greek 151 — 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 and a study of the historical and political events of the late fifth and fourth centuries B.C. Four credits.

Greek 152 — 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. Four credits.

Greek 160 — Aeschylus

A detailed study of the *Agamemnon* and other selected plays of Aeschylus in the original. Four credits.

Greek 161 — Sophocles

The text of the *Life* of Sophocles and selected plays; investigation of the origin of the Greek theatre and its physical structure; extensive investigation of twentieth century literary criticism of Sophocles. Four credits.

Greek 162 — Euripides

An analysis of two plays in Greek, with special attention to Euripides' dramatic technique. Four credits.

Greek 163 — Aristophanes

Selected plays will be read in the original. Historical backgrounds, literary interpretation and study of the genre, comedy emphasized. Four credits.

Greek 301, 302 — Tutorial Seminar

Designed for selected students with approval of professor and department chair. This work may be done for one or two semesters (four or eight credits) and will take the form of either a survey of selected authors or a specialized study of a single author or period. Four or eight credits.

Classics (in English)**Classics 127, 128 — Survey of Classical Literature in English**

The objective of this introductory course is a beginning acquaintance and a reasonable interpretation of a number of major works of Greek (one semester) and Latin (one semester) authors. Eight credits.

Classics 129, 130 — Latin Literature in Translation

A year-long look at 400 years of Roman literature, covering in the fall the Golden Age of the Republic and in the spring the Silver Age of the Empire. Roman art and its influence on later cultures is also illustrated with slide lectures. Eight credits.

Classics 131 — Classical America

A study of selected topics concerning the influences of the classical tradition in education, political philosophy, art and architecture of early America. (This course is also taught as part of ISP Sequence XII: Culture Community in Early America.) Four credits.

Classics 133 — Greek Drama

Selected plays of Aeschylus, Sophocles, Euripides, Aristophanes, and Menander. Four credits.

Classics 134 — Greek and Roman Epic

Readings in Homer, Apollonius, and Vergil. Four credits.

Classics 135 — Greek Literature to 480 B.C.

A close look at the beginnings of Greek literature via *The Iliad* and *The Odyssey*, Hesiod's *Works and Days* and *Theogony*, the *Homeric Hymns*, the Greek lyric and elegiac poets and Herodotus. Ancient readings are balanced by parallels in modern literature and both are illustrated with slides and films. Four credits.

Classics 136 — Fifth Century Greek Literature

A study of the interaction of current events and contemporary theatre in fifth century Athens as revealed in the historical writings of Thucydides and in the plays of Aeschylus, Sophocles, Euripides and Aristophanes. Four credits.

Classics 137 — Greek Myths in Literature

Comparison of classical and modern versions of several ancient Greek myths. The relationships between myth and literature will be considered, as well as reasons why these myths have endured through the centuries. Emphasis will be on dramatic versions of the myths; narrative poetry and other genres such as music and cinema may also be explored. Four credits.

Classics 138 — Selected Greek Tragedies

A detailed, often line-by-line study of the artistic, cultural, philosophical and theological significance of selected plays of Aeschylus, Sophocles and Euripides. Four credits.

Classics 139 — Classical Comedy

An examination of the comedies of Aristophanes, Menander, Plautus and Terence, with attention to the development of comedy in the ancient world and a consideration of its political and cultural context. Four credits.

Classics 146 — Roman Letter Writers

A study of three distinct types of Latin epistolography, as exemplified in the letters of Cicero, Seneca and Pliny. Four credits.

Classics 150 — Introduction to Roman Archaeology

The chronological limits of this course are: eighth century B.C.-second century A.D.; the geographical: Latium and Campania. Basic knowledge of Roman history is helpful. Four credits.

Classics 151 — Mythology

An exploration of the significance of myths, their meanings 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 American Indian mythology will be used for comparative purposes. Four credits.

Classics 152 — Introduction to Greek Archaeology

A study of the Bronze Age sites of Minoan Crete and Mycenaean Greece and of the archaic and classical remains of the Athenian acropolis and agora. Four credits.

Classics 157 (HIS 141) — History of Greece

A study of Greek history from the beginnings to the death of Alexander. Four credits.

Classics 158 (HIS 143) — 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. Four credits.

Classics 159 (HIS 144) — 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 for this period: the historians, inscriptions, monuments, and coins. Four credits.

Classics 160 — Plutarch's Works

A study of selected biographies and passages from the *Moralia* as reflections of the Graeco-Roman experience. Four credits.

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 and Republican Rome as well as upon other verbal arts. Four credits.

Classics 178 — Orality and Literacy in Ancient Greece

Much of the ancient Greek literature originates in a long tradition of anonymous oral poetry and story telling. In this course we will consider the aesthetic nature and social functions of oral literature, the techniques of oral performance and transmission (relying here on modern anthropological studies of contemporary oral cultures), and the relative "orality" and "literacy" of some major works of Greek literature, such as the Homeric poems, choral lyric, drama, and Herodotus. Four credits.

Classics 190 (RS 35) — Greek Religion

A study of the main beliefs, movements, rites, and practices of Greek religion from earliest times to the advent of Christianity. Four credits.

Classics 191 (RS 36) — Roman Religion

A study of the principal religious cults of the Roman people from earliest times until the advent of Christianity. Four credits.

Classics 191 (RS 36) — Roman Religion

A study of the principal religious cults of the Roman people from earliest times until the advent of Christianity. Four credits.

Classics 216 — Seminar in Ancient Epic: Vergil's *Aeneid* in English (for non-majors only)
Advanced literary criticism of the *Aeneid* through thorough reading, secondary sources, frequent short papers, and seminar discussion. Emphasis is on: structure, imagery, the transformation of Homer and the perspective of Roman heroism. The level of discussion presupposes a number of readings of the *Aeneid* in multiple translations. Four credits.

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. Four credits.

Classics 220, 221 — Classical Theatre Seminar

A study of the beginnings of theatre for beginners in theatre, this course tries to lead freshmen to both the Ancient Greek theatre and to the modern theatre and their actual practices backstage and on. The content of this course changes each year. Four or eight credits.

Classics 301, 302 — Tutorial Seminar

Designed for selected students with approval of professor and chair. Particular areas of classical civilization and/or literature may be studied for one or two semesters. Four or eight credits.

Economics

John F. O'Connell, Ph.D., *Professor*

Frank Petrella, Jr., Ph.D., *Professor*

John R. Carter, Ph.D., *Associate Professor*

Thomas R. Gottschang, Ph.D., *Associate Professor*

John D. O'Connell, Ph.D., *Associate Professor*

Nicolas Sanchez, Ph.D., *Associate Professor*

Scott Sandstrom, Ph.D., *Associate Professor*

David J. Schap, Ph.D., *Associate Professor and Chair*

Charles H. Anderton, Ph.D., *Assistant Professor*

Daniel J. Jones, M.B.A., *Assistant Professor*

George Kosicki, Ph.D., *Assistant Professor*

Michael T. Peddle, Ph.D., *Assistant Professor*

Kathryn L. Dorman, Cand. Ph.D., *Instructor*

Robert P. Hoffman, Cand. Ph.D., *Instructor*

Carol A. Martinson, M.B.A., *Visiting Lecturer*

Ute Schumacher, Cand. Ph.D., *Visiting Lecturer*

Janice G. Yee, Cand. Ph.D., *Visiting Lecturer*

The Economics Department offers majors in two distinct subject areas: economics and economics-accounting. Also offered is a select honors program. The number of students permitted in each major is limited. Students may apply for these majors during the admission process or subsequently in the spring of their freshman or sophomore year. Introductory and intermediate-level courses are also available for non-majors. Members of the department are dedicated teachers who value the opportunity at Holy Cross to interact closely with their students. They are also productive scholars, whose research has been published in leading economics and accounting periodicals.

The Economics Major

Economics can be defined as the study of how people allocate scarce resources among competing ends. It can also be understood as a particular way of thinking distinguished by its axioms, concepts, and organizing principles. In terms of both subject matter and methodology, economics promises important and powerful insights into the human experience. Completion of the major can serve as preparation for further graduate study, or it can provide a strong background for any one of a large number of careers, particularly those in business, law, and government.

The economics major is designed to provide students with the theory and methodology required to analyze a wide range of economic issues. The minimum requirement for the major is nine semester courses in economics plus two in mathematics. Five of the courses in economics are specified and cover principles (2), intermediate theory (2), and statistics. The remaining courses are electives which apply and/or extend the previous learning to an array of more specialized topics, including, for example, development, monetary policy, international trade and finance, economics of law, and labor economics. Because mathematics plays an important role in economics, majors are required also to take one year of college calculus or its equivalent. The maximum number of courses in the department which may be taken by an economics major is 14.

Economics courses are numbered 00-69, 100-169, 200-269, and 300-369. The normal order of courses for a freshman majoring in economics is:

<i>Freshman</i>	Mathematics 25, 26 (Calculus)	2
	Economics 11, 12 (Principles)	2
<i>Sophomore</i>	Economics 155, 156 (Micro/Macro Theory)	2
	Economics 149 (Statistics)	1
<i>Sophomore-Senior</i>	Economics Electives	4

At least three of the electives must be upper-level courses having as prerequisites Economics 155 (Microeconomics), Economics 156 (Macroeconomics), or both. These courses are numbered between 200 and 269. Additional work in mathematics and computer science is recommended for students planning to pursue graduate degrees in either economics or business.

The Economics-Accounting Major

Accounting is often referred to as the language of business. It has been defined broadly as the process of identifying, measuring, and communicating economic information. Because sound decisions based on reliable information are essential for the efficient allocation of resources, accounting plays an important role in our economic system. Each year the Big Eight accounting firms visit Holy Cross to recruit majors for employment opportunities in public accounting. Although most majors choose to start their careers in public accounting, the curriculum is sufficiently broad to permit careers with government, private, and non-profit institutions.

The accounting major is designed to allow students the benefits of a liberal arts education while at the same time meeting AICPA national course requirement standards. Required courses include accounting principles (2), intermediate (2), cost, and advanced accounting, income taxes, auditing, business law (2), statistics, economics principles (2), and college calculus (2). Also required is a minimum of one and a maximum of three electives. The maximum number of courses in the department which may be taken by an economics-accounting major is 16.

Accounting courses are numbered 70-99, 170-199, 270-299, and 370-399. The normal order of courses for a freshman majoring in economics-accounting is:

<i>Freshman</i>	Mathematics 25, 26 (Calculus)	2
	Economics 71, 72 (Fin. & Adm. Acctg.)	2
<i>Sophomore</i>	Economics 177, 178 (Asset & Equity)	2
	Economics 11, 12 (Principles)	2

<i>Junior</i>	Economics 289 (Cost Acctg.)	1
	Economics 292 (Fed. Inc. Tax)	1
	Economics 149 (Statistics)	1
	Elective	1
<i>Senior</i>	Economics 287, 288 (Business Law)	2
	Economics 291 (Auditing)	1
	Economics 290 (Advanced Acctg.)	1

It is strongly recommended that accounting majors choose their electives from the following: Economics 175 (Corporation Finance), Economics 117 (Money and Banking), Economics 155 (Microeconomics), Economics 156 (Macroeconomics), and Economics 126 (Operations Research). Accounting majors are required to take the AICPA Level I and Level II achievement examinations.

Departmental Honors Program

This program is limited to approximately 12 students, four from the sophomore through senior years. Application is at the end of the fall semester. Students ordinarily enter as sophomores, but juniors may also apply. During their first year, honors students attend a seminar in research methodology. In their senior year, they write an honors thesis under the direction of a faculty advisor.

The honors course sequence is:

<i>Sophomore-Junior</i>	Economics 360 (Res. Meth. 1 - Spring)	1
<i>Senior</i>	Economics 362 (Dir. Research - Fall)	1
	Economics 361 (Res. Meth. 2 - Spring)	1

Economics 360 (Research Methodology 1) is a four-credit course, while Economics 361 (Research Methodology 2) is a two-credit overload which may be taken pass/fail. Economics 362 (Directed Research) counts as the equivalent of an upper-level economics elective.

Non-Majors

The department strongly recommends that the full-year sequence of Principles of Economics be taken, especially if the student plans to take additional economics courses, most of which require the sequence as a prerequisite. Normally the sequence is taken in the order of Economics 11, then 12. However, Economics 11 is not required for 12, permitting reversal of the sequence order for scheduling convenience. The student desiring only a one-semester overview of economics is advised to take Economics 11 (Principles of Macroeconomics).

Non-majors seeking an introduction to accounting may take either the first semester or both semesters of the sequence Economics 81, 82 (Financial and Administrative Accounting).

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. Eight credits.

Economics 18 — Political Economy and the Vietnam War

This course will apply the analytical approach of economics to an examination of how the American polity reached the decisions which resulted in intervention in Vietnam, and how the lingering effects of the conflict have affected the political economy of the nation in subsequent years. The course is part of the Interdisciplinary Studies Sequence, America and Vietnam. It may not be used in fulfillment of either the Economics or Economics Accounting major. Four credits.

Economics 71, 72 — 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. Intended for freshman accounting majors only. Eight credits.

Economics 114 — Microeconomic Analysis

This course begins by addressing the use and usefulness of microeconomics as an instrument of policy analysis. Alternative welfare criteria, intrinsic limitations of economic analysis, and limitations imposed by the political arena are treated. The remainder of the course is devoted to policy issues. Topics might include: antitrust and regulatory approaches to monopoly, urban decay, education, environmental policy, energy, price controls, crime, product safety, poverty, discrimination, taxation, consumer protection, health insurance, national defense, and unionization. Closed to Economics majors. Prerequisite: Economics 11, 12. Four credits.

Economics 81, 82 — Financial and Administrative Accounting

Same as Economics 71, 72. Intended for students other than freshman accounting majors. Eight credits.

Economics 115 — Economic History of the United States

This course investigates the development of the American economy from colonial days to the present. Special emphasis is placed on the pattern of economic growth, in particular the interplay of economic principles and institutional forces shaping the transition from an agricultural to an industrialized economy. Prerequisites: Economics 11, 12. Four credits.

Economics 116 — Origins of Economic Analysis

This course considers the 18th and 19th 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. Prerequisites: Economics 11, 12. Four credits.

Economics 117 — 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. Closed to Economics majors. Prerequisites: Economics 11, 12. Four credits.

Economics 118 — 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. Prerequisites: Economics 11, 12. Four credits.

Economics 120 — International Economics

The measurement and evaluation of a country's balance of payments are studied along with the balance of payments adjustment processes which occur under different exchange rate systems and different international monetary systems. The evolution of the present system is discussed and the basic theories of international trade and investment are outlined. Prerequisites: Economics 11, 12. Four credits.

Economics 121 — Economic Development of Modern China

The goal of this course is to provide the student with a sophisticated understanding of economic development in the People's Republic of China. The historical circumstances and resource endowments which have constrained Chinese economic development are examined as a basis for analyzing the intentions and success of policies adopted since 1949. Prerequisites: Economics 11, 12, or permission. Four credits.

Economics 123 — Economics of Property Rights

This course investigates the rise of different structures of property rights and the consequences of these structures. Special emphasis is given to Coase's theorem, the impact of

spillover costs and benefits, the establishment of liability rules, eminent domain, and the management of the commons. The course studies the economic behavior of the bureaucracy and of the labor-managed firm. Prerequisites: Economics 11, 12. Four credits.

Economics 124 — Economics of Natural Resources

The application of economic principles to the use of natural resources will be stressed. Topics will include the optimal rate of use of finite and renewable resources, resource constraints on growth and technological change, demand for natural resources, the relations between resource-providing and resource-using countries, and the examination of policies towards resource use. Prerequisites: Economics 11, 12. Four credits.

Economics 125 — Public Finance

This course studies the economics of governmental expenditure and revenue generation, as well as the fiscal relationships and problems inherent in a federal system of government. Topics discussed include: the economic basis for governmental activity, the budgetary process, expenditure programs, taxation as a form of government finance, and fiscal federalism. Prerequisites: Economics 11, 12. Four credits.

Economics 126 — 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. Emphasis is placed upon the optimization of an objective, subject to constraints upon available action. Linear optimization models are treated in depth. Prerequisites: Economics 11, 12. Four credits.

Economics 128 — Comparative Economic Systems

The first segment of this course develops an analytical framework for the comparison of economic systems. The second part utilizes this framework to examine and compare major economic systems, including those of the United States, the Soviet Union, China, Yugoslavia, Hungary, and France. Prerequisites: Economics 11, 12. Four credits.

Economics 132 — 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. Four credits.

Economics 134 — Economic Demography

Demography is the science of population. Formal demography is concerned with the size, distribution, structure and change of populations. This course begins with a study of demographic methods and proceeds to use these methods and economic models to study population trends, fertility, migration and mortality. Additional topics include U.S. demographic experience, food, resource and environmental effects of population change, and population policy. Prerequisites: Economics 11, 12 or permission. Four credits.

Economics 135 — Economics of Health and Medical Care

This course examines the health care sector from an economist's perspective. Topics to be discussed include: health insurance and demand, the productivity of medicine, hospital efficiency, and the economic role of the physician. Proposals for expanded public sector participation as well as more market-like alternatives are evaluated. Topics of special interest to students are explored. Prerequisites: Economics 11, 12. Four credits.

Economics 149 — Statistics

An introduction to statistical methods emphasizing the statistical tools most frequently used in economic analysis. Topics include descriptive statistics, probability theory, random variables and their probability distributions, estimation, hypothesis testing, and linear regression analysis. Prerequisites: Economics 11, 12. Four credits.

Economics 155 — Microeconomics

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 25, 26; Economics 12. Four credits.

Economics 156 — Macroeconomics

This course studies aggregate economic behavior as determined by interactions between the product, money, and labor markets. The variables focused upon are the general levels 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 25, 26; Economics 11, 12. Four credits.

Economics 172 — Accounting for Managerial Decisions

This course stresses accounting as a tool for managerial control. It considers such subjects as the analysis and use of financial statement data, budgeting and the setting of standards, working capital flow analysis, product costing and cost control, the pricing decision, and accounting and control in decentralized operations. Prerequisites: Economics 81, 82. Four credits.

Economics 174 — Accounting for Non Profit Organizations

The objective of this course is to provide a firm grasp of the principles of fund accounting as they relate to governmental and philanthropic entities, and to familiarize students with financial reporting practices of the not-for-profit sector. Municipal fund accounting is used as a model, with consideration given to adapting the model to hospitals and colleges. Budgeting, types and uses of funds, and the lack of pervasive accounting principles will be covered. Prerequisites: Economics 81, 82. Four credits.

Economics 175 — Corporation Finance

The topics covered in this course include management of assets, tax factors in business decisions, the various sources of capital, both short-term and long-term, financing with debt versus financing with equity, the roles of the investment banker and the securities exchange, the expansion and growth of business firms, and the treatment of financially distressed business firms. Prerequisites: Economics 11, 12. Four credits.

Economics 177, 178 — Asset and Equity Accounting

This course in intermediate accounting offers a thorough study of the proper valuation of assets, liabilities, and owner's equity, and the related problems of the proper matching of revenues and expenses. Other topics covered include preparation of the statement of changes in financial position, analysis and interpretation of financial statements, and financial statements adjusted for general price-level changes. Prerequisites: Economics 71, 72. Eight credits.

Economics 201 — 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 155, 156 or permission. Four credits.

Economics 202 — Industrial Organization and Public Policy

The first half of this course will consist of a study of the theoretical and empirical relationships between market structure, conduct and performance in American industry. The knowledge gained therefrom will then be used to evaluate U.S. antitrust policy. A number of industry case studies and landmark court decisions will be read. Prerequisite: Economics 155. Four credits.

Economics 203 — 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 155. Four credits.

Economics 204 — Law and Economics

This course examines the relative efficiency of alternative legal arrangements using microeconomics as the basic investigative tool. The core of the course consists of a thorough analysis of the Common Law. Special emphasis is given to the areas of property, contract, liability, and criminal law. Prerequisite: Economics 155. Four credits.

Economics 205 — 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. Prerequisites: Economics 155, 156. Four credits.

Economics 206 — 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 155, 156. Four credits.

Economics 207 — Theory of International Trade

This course will examine the causes and consequences of the trade of goods and services between nations. Attention is given to the principle of comparative advantage, the Ricardian model of trade, the factor endowments theory of trade, the specific factors model, new theories of trade, the causes and consequences of trade restrictions, economic growth and trade, international factor movements, and economic integration. Prerequisites: Economics 155, 156. Four credits.

Economics 208 — International Monetary Theory and Policy

This course will examine the financial and macroeconomic relations among nations. Attention is given to foreign exchange markets in the short run and in the long run, balance of payments accounting, interest rate adjustments and covered interest arbitrage, the euro-currency markets, devaluation, the optimum currency area, the international monetary system, and LDC debt problems. Prerequisites: Economics 155, 156. Four credits.

Economics 211 — 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. Prerequisite: Economics 155. Four credits.

Economics 212 — Monetary Theory

This course is designed to provide a thorough understanding of the role of money in the economy. The course begins with an investigation of the quantity theory of money and alternative theories of money demand and supply.

Subsequently, the impact of money on prices, interest rates, and output will be explored. The course concludes with an examination of issues in monetary policy. Prerequisites: Economics 155, 156. Four credits.

Economics 213 — 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 155, 156. Four credits.

Economics 215 — Public Choice and Political Economy

In this course the methods of economics are applied to the study of democratic political processes. The fundamental assumption made is that participants in these processes are utility maximizers. Topics might include: public goods and externalities; logic of

collective action; voting rules; behavior of voters, politicians, and bureaucrats; property rights; regulation; income distribution; and theories of the state. Prerequisite: Economics 155. Four credits.

Economics 216—Economics of Peace, Conflict, and Defense

This course investigates the phenomenon of conflict using methods drawn largely from theoretical economics. The first segment studies the essential similarities in all conflict situations in a series of models of broad application. Differences in conflict situations are revealed and analyzed in terms of divergences from the general models. The second segment studies a variety of conflict management procedures for resolving conflict among individuals, groups, or nations. The third segment utilizes various mathematical models to analyze arms races and arms control. Prerequisites: Economics 155, 156. Four credits.

Economics 256 — Advanced Topics in Macroeconomics

This course takes the theoretical framework developed in the intermediate macroeconomics course and applies it to advanced issues in public policy and in theory. The controversies among various schools of thought are addressed as well as the following: recent reinterpretations of Keynes' writings, questions concerning the stability of the financial system, the microfoundations of macroeconomic theory, the natural rate hypothesis, rational expectations, supply-side economics, and monetarism. Prerequisites: Economics 155, 156. Four credits.

Economics 287, 288 — Business Law (Based on the Commerical 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. Prerequisites: Economics 171, 172. Eight credits.

Economics 289 — 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. Prerequisites: Economics 171, 172. Four credits.

Economics 290 — Advanced Accounting

This course covers advanced problems relating to partnership formation, operation, and liquidation; a study of corporate business combinations and consolidated financial statements under the pooling and purchase accounting concepts; and other accounting topics such as installment sales, consignments, branch accounting, bankruptcy and corporate reorganizations. Prerequisite: Economics 289. Four credits.

Economics 291 — Auditing

Consideration is given to the theory and practice of auditing including professional ethics, professional standards and procedures, and the legal environment in which the auditor functions. Emphasis is placed on the role of internal control and the impact of electronic data processing. Other topics include sampling techniques, both judgmental and statistical; the auditor's reporting responsibilities; and the nature of evidential matter. Prerequisite: Economics 290. Four credits.

Economics 292 — Federal Income Taxation

A study of the federal income tax laws as they relate to individuals, partnerships, and corporations, with special emphasis upon tax planning. Consideration is also given to the history of the federal income tax, various proposals for tax reform, and the use of tax policy to achieve economic and social objectives. Prerequisites: Economics 171, 172. Four credits.

Economics 300 — Directed Readings in Economics

A program in reading and research open to majors with a minimum CQPI of 3.25. Prerequisite: permission of instructor. Four credits.

Economics 360—Research Methodology Seminar 1

This is a department honors seminar that examines the methodology used by economists. Students learn what the economist does by examining specific economic studies. The steps

involved in undertaking research and the alternative methodological approaches are treated. A high level of student participation is expected. By the end of the seminar the students settle upon topics that they will research in the senior year. Four credits.

Economics 361 — Research Methodology Seminar 2

This is the same as Economics 360. Senior honors students participate for a second time in the seminar by presenting their completed research projects and by serving as resource persons for other honors students. Prerequisites: Economics 360, 362. Two credits.

Economics 362 — Honors Directed Research

Honors students undertake a research project under the direction of a department faculty member. The results of this endeavor are presented in the form of a thesis. The course counts toward the major as the equivalent of an upper-level economics elective. Prerequisite: Economics 360. Four credits.

Economics 371 — 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 consideration of 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 292. Four credits.

Education

Joseph H. Maguire, M.A., *Associate Professor and Chair*
 Denis J. Cleary, M.A., *Visiting Lecturer*

The Department of Education offers a limited number of courses in education to sophomores, juniors and seniors. These courses are intended to introduce the students to the concerns and issues of secondary education, but are not specifically designed to meet the provisions for teacher certification required in most states.

There is a willingness and definite commitment on the part of the departmental faculty to encourage students preparing to serve as teachers in private as well as public secondary schools and, in particular, to assist students preparing to teach religion. Adjustments in course readings and assignments will be made to assist the student interested in the teaching of religion, especially in Education 67.

Holy Cross does not offer an education major and the focus of the courses listed below is limited to *secondary* education. Courses in elementary and special education taken at other institutions are rarely approved for credit toward a Holy Cross degree.

Some students may take courses in education at Clark University as well as at Holy Cross to help prepare them as teachers of mathematics and science.

Education 62 — Principles of Guidance

This course introduces the students to a consideration of basic issues of concern in the helping relationship. It explores these issues by readings, writing and discussion. Among the areas of study are death, violence, loneliness, intimacy and hope. Four credits.

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. New and innovative approaches to education will be discussed. Four credits.

Education 68 — Philosophy of Education

This course is designed as an introduction to educational theories. The range of concern

includes: education in nature and society, education in the school, education in the United States and ultimate questions in the theory and practice of education. Four credits.

Education 75 — Principles and Methods of Secondary School Teaching

The student will study and demonstrate various teaching methods. Questions concerning the secondary school curriculum, discipline and motivation, instructional materials and secondary school goals and principles are also pursued. Four credits.

Education 200 — Special Topics in Education

Tutorial and research projects designed by students and faculty members. Admission determined by evaluation of proposal. Four credits.

English

Patricia L. Bizzell, Ph.D., *Professor*

Edward F. Callahan, Ph.D., *Professor*

John H. Dorenkamp, Ph.D., *Professor and Chair*

Thomas M.C. Lawler, Ph.D., *Professor*

B. Eugene McCarthy, Ph.D., *Professor*

John E. Reilly, Ph.D., *Professor*

John D. Boyd, Ph.D., *Associate Professor*

Robert K. Cording, Ph.D., *Associate Professor*

Maurice A. Geracht, Ph.D., *Associate Professor*

Patrick J. Ireland, Ph.D., *Associate Professor*

James M. Kee, Ph.D., *Associate Professor*

Richard E. Matlak, Ph.D., *Associate Professor*

John T. Mayer, Ph.D., *Associate Professor*

Richard H. Rodino, Ph.D., *Associate Professor*

Rev. Philip C. Rule, S.J., Ph.D., *Associate Professor*

Helen M. Whall, Ph.D., *Associate Professor*

John H. Wilson, Ph.D., *Associate Professor*

Daniel G. Madigan, S.J., Ph.D., *Assistant Professor*

William R. Morse, Ph.D., *Assistant Professor*

Susan Elizabeth Sweeney, Cand. Ph.D., *Instructor*

Rev. Michael G. Boughton, S.J., M.A., *Visiting Lecturer*

The study of English is fundamental to liberal education. It deals not only with literary works of the imagination — poems, plays, novels, short stories — but also with the use of language as a means of communication. The English department offers the student the opportunity to develop an appreciation of literature and a sensitivity to literary techniques, to expand knowledge of the way language has been used, and to increase mastery of written expression.

Accordingly, courses in the department are consonant with student interests leading not only to graduate study but also to law, medicine, business, and other fields.

Students who major in English will, in their years at Holy Cross, take a minimum of 10 upper-division English courses. Majors in the Premedical Program are allowed a minimum of eight. No student, however, may take a total of more than 14 English courses.

Normally, freshman majors are required to enroll in two semesters of Critical Reading and Writing designated for majors. All majors are required to take (as two of their 10 required upper-division courses) a two-semester second-year course, *The Traditions of English Literature*. Certain adjustments will, however, be made for those who take courses in the freshman interdisciplinary studies sequences. All majors, before they graduate, must have taken at least one course in American literature before 1900, and one course in three of the following areas:

1. Medieval literature
2. Renaissance literature, excluding Shakespeare
3. Restoration and 18th century literature
4. 19th century British literature

Each semester the English department offers approximately 25 different courses from which the student may choose. These courses vary greatly. Some are organized in terms of historical periods of English and American literature (Restoration and 18th century Literature, American Poetry to 1900); some are organized according to literary type (Modern Drama, 19th century Novel); and some are by author (Chaucer, Shakespeare). Other courses are arranged thematically, tracing a unifying element across chronological, genetic, and national lines (Tragic View, Literature and Myth). Still other courses deal with the nature and workings of language, such as Introduction to Linguistics; while others concentrate upon developing skill in the use of language, e.g., Composition, Creative Writing.

Tutorials, seminars, and lecture courses on special topics are also offered, as well as a range of courses in the College's Interdisciplinary Studies Program.

The Nu Chi chapter of Sigma Tau Delta, the national English honor society, was established in 1987. Eligible English majors are elected to membership in their junior year and actively engage in the promotion of English studies.

The English department participates in the national and college Advanced Placement Programs. Students to whom the department grants advanced placement receive four credits and may elect upper division courses (English 200-299) in their freshman year.

All English department courses carry four credits.

Introductory Courses

English 10 — Composition

A course devoted to improving the student's writing ability through frequent writing and rewriting. Each section is limited to 10 students. Intensive work during the semester concentrates on the student's own writing examined in class and in conference with the instructor.

English 20 — Critical Reading and Writing: I

This course identifies and examines the elements of literature as they are found in plays and poems of various periods, authors and kinds. Equal emphasis falls on the writing of essays which logically organize and persuasively present critical responses to literature.

English 30 — Critical Reading and Writing: II

The topics are the elements of fiction: narrative structures, various aspects of style and point of view. This course is also devoted to the writing of essays which persuasively present critical responses to literature.

English 110 — Survey of English Literature to 1660

A survey of representative works and authors of the Anglo-Saxon, Medieval, and Renaissance periods to illustrate the major literary and cultural tendencies and to familiarize the student with significant figures, forms, and literary concepts in their historical context.

English 111 — Survey of English Literature from 1660 to 1900

A survey of representative works and authors of the Neo-Classic, Romantic, and Victorian periods to illustrate the major literary and cultural tendencies and to familiarize the student with significant figures, forms, and literary concepts in their historical context.

English 141 — From Neo-Classic to Romantic Literatures

A study of central themes in the Romantic movement: the theory of the imagination, the return to nature, and the rise of the poet-hero. Freshmen only. ISP Sequence XIV.

English 142 — From Romanticism to the Last Romantics

A study of the ways in which the Victorians both related to and diverged from their Romantic predecessors in an age which demanded social responsibility from its artists. Freshmen only. ISP Sequence XIV.

English 151 — 19th Century American Literature and Its Backgrounds I

A study of 19th Century American Literature and its backgrounds integrated with social and political history. Freshmen only. ISP Sequence XV.

English 152 — 19th Century American Literature and Its Backgrounds II

A study of 19th Century American Literature and its backgrounds integrated with social and political history. Freshmen only. ISP Sequence XV.

Intermediate Courses**English 200 — Masterpieces of British Literature**

A study of selected major works of British Literature. Non-majors only.

English 201 — Masterpieces of American Literature

A study of selected major works of American Literature. Non-majors only.

English 205 — Expository Writing

Through a variety of weekly writing assignments, the course is designed to improve the student's ability to write effective expository essays.

English 210 — Medieval Literature

A study of some of the principal genres and major texts of English and Continental medieval literature: heroic poetry, the romance, religious allegory and spiritual writings, mostly read in translation. Sometimes taught as part of ISP Sequence I or III.

English 213 — Middle English Literature

A course which develops the student's ability to deal directly with Middle English texts. Works read include Chaucer's *Troilus and Criseyde*, *Piers Plowman*, and a selection of romances, lyrics, and other 13th and 14th Century texts.

English 214 — Chaucer

A reading and critical discussion of the complete Middle English text of *The Canterbury Tales* and selected minor poems.

English 219 — Medieval and Renaissance Drama

A study of the English drama from its medieval beginnings through the Renaissance. Included are mystery and morality plays and works of such Renaissance dramatists as Kyd, Marlowe, Jonson, Tourner, Webster, and Ford.

English 220 — 16th Century Renaissance Literature

A study of 16th Century prose and poetry in Europe and England. Included are works of Petrarch, Castiglione, More, Wyatt, Sydney, and Spenser. Sometimes taught as part of ISP Sequence I.

English 221 — 17th Century Renaissance Literature

This course concentrates primarily on the poetry of the period, including works of Jonson, Donne, Herrick, Carew, Herbert, Vaughan, Marvell and Milton.

English 224 — Milton

A study of Milton's early poems, *Paradise Lost*, *Paradise Regained*, and *Samson Agonistes*, and selections from the prose.

English 227 — Shakespeare's Elizabethan Drama

A close analysis of Shakespeare's dramas prior to 1600, focusing upon the history plays, with corollary studies in the tragedies.

English 228 — Shakespeare's Jacobean Drama

A close analysis of Shakespeare's dramas from *Hamlet* to *The Tempest*, with emphasis on stylistic development and Shakespeare's treatment of problems of the Jacobean age.

English 229 - Shakespeare Survey

A one semester survey of the major works of Shakespeare, focusing on individual texts as representative of the stages in his dramatic development, with some discussion of Shakespearean stage techniques.

English 230 — Restoration and 18th Century Literature

A study of the major English writers from the time of the Restoration until the publication of *Lyrical Ballads*, including Dryden, Pope, Swift, and Johnson.

English 231 — Dryden/Pope/Swift

A study of the poetry of Dryden and Pope, and of the prose works of Swift, with reference to important background materials, approximately 1660-1745.

English 232 — Johnson and the Late 18th Century

A study of developments in English poetry and prose during the latter half of the 18th century, considering the poetry of Thomson, Young, Collins, Gray, Cowper, Smart, Crabbe, and Blake; and the prose writings of Johnson, Boswell, and Gibbons.

English 236 — 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 with collateral readings.

English 239 — Restoration and 18th Century Drama

A survey of English drama from Dryden to Sheridan, including heroic drama, Restoration comedy, sentimental developments of the 18th century, and the reemergence of laughing comedy.

English 241 — English Romantic Poetry

A study of the major poets of the Romantic movement — Wordsworth, Coleridge, Byron, Shelly, and Keats.

English 245 — Major Victorians

A study of works by major poets such as Tennyson, Browning, Arnold, and Hopkins, and essayists such as Mill, Ruskin, and Carlyle, to examine some of the cultural developments which define "Victorianism."

English 246 — 19th Century Novels

A close examination of the British novel in the 19th Century, including novels by Thackeray, Dickens, the Brontes, George Eliot, and Hardy.

English 248 — Tennyson/Browning/Arnold

A close study of the three major poets of the Victorian era, with special reference to the development of the dramatic monologue.

English 250 — Early American Literature

A study of the development of American Literature up to Romanticism, with emphasis on the late 18th and early 19th centuries.

English 251 — American Renaissance

A study of the "American Renaissance" through selected prose and poetry of Poe, Emerson, Thoreau, Whitman, Hawthorne, and Melville.

English 252 — American Realism

A study of the major literary representatives of Realism and Naturalism, from the Civil War to World War I, including the Regionalists, Whitman, Twain, Howells, James, Wharton, Crane, and Norris.

English 255 — American Poetry to 1900

A survey of American poets and poetics from Bradstreet to Stephen Crane, with special attention given to Poe, Emerson, Whitman, Dickinson, and to the "Schoolroom Poets," i.e., Bryant, Longfellow, Whittier, Holmes, and Lowell.

English 256 — American Novel to 1900

A survey of selected works of major American writers of fiction before 1900, including Brown, Cooper, Hawthorne, Melville, Twain, Sims, Howells, Stowe, Crane, and James.

English 257 — Modern American Poetry

A close analysis of the development of American poetry from the early 20th century up

to the contemporary period, including such poets as Frost, Pound, Eliot, Stevens, and Crane.

English 258 — Modern American Novel

A study of the development of the modern American novel from the close of the 19th century to the present, including representative works of Wharton, Dreiser, Norris, Dos Passos, Hemingway, Faulkner, and others.

English 260 — Modern British Literature

A study of the experimental literature of the British Modernists during the period 1910-1940, including the poetry of the Imagists, Pound, Eliot, and Auden, and selected novels of such figures as Joyce, Ford, Lawrence, and Woolf.

English 261 — 20th Century Irish Literature

A study of the developments in Anglo-Irish poetry, drama and fiction from the Celtic Renaissance to the present, focusing on Yeats, Joyce, O'Casey, and Synge.

English 265 — Modern British Poetry

A study of the major British poets in the first half of the 20th century, including Hardy, the Georgians, the Imagists, Lawrence, Yeats, Eliot, Auden, and Dylan Thomas.

English 266 — Modern British Novel

A close examination of the British novel between 1900-1960, including such authors as Conrad, Ford, Lawrence, Woolf, Joyce, Greene, and Golding.

English 268 — Black Literature in America

A study of American Black literature during the 19th and 20th centuries with emphasis on the Harlem Renaissance and upon modern protest writing and literature.

English 269 — Modern Drama

A study of developments in drama since 1890 in England, America, and on the Continent through an examination of selected works of such playwrights as Ibsen, Chekov, Shaw, Pirandello, O'Neill, Brecht, and Williams.

English 270 — 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.

English 271 — Comic View

A study of the theory of comedy in drama and other literary forms from the Greeks to the present day.

English 273 — Politics, Literature and Music of Africa

A study of African music, literature and government: traditional forms, Colonial forms, reactions to Colonialism, and contemporary problems. Taught as part of ISP Sequence XI.

English 274 — Literature and Depth Psychology

This course will show how two schools of modern psychology, the Freudian and the phenomenological, can provide a revealing lens through which to examine and illuminate many literary works, modern and pre-modern. Taught as part of ISP Sequence II.

English 275 — 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.

English 276 — Contemporary Fiction

An examination of recent developments in fiction through study of selected works of present-day writers. Selections vary from year to year, but authors treated in the past have included Barth, Pynchon, Spark, Burgess, Nabokov, Boll, Brian More, Drabble, and R. Coover.

English 277 — Contemporary Poetry

A study of the different "lines" of contemporary poetry, including the "nature" poetry of Williams, Snyder, and Ammons; the "confessional" poetry of Lowell, Berryman, Snodgrass, and Plath; and the "deep image" poetry of Bly, Simpson, and Wright.

English 279 — Contemporary Drama

An examination of recent developments in drama through selected works of playwrights such as Albee, Beckett, Storey, Pinter, and Stoppard.

English 280 — Introduction to Linguistics

A study of the nature of language as a communications system and of the development of contemporary formal linguistics.

English 281 — Rhetoric

A consideration of rhetorical theory in the classical texts of Plato and Aristotle, an analysis of some famous examples of persuasive eloquence, and the students' own exercises in persuasive speech on subjects of public concern. Taught as part of ISP Sequence IX.

English 282 — Stylistics

A study of linguistic and stylistic strategies in relation to the values articulated in effective non-fiction prose, undertaken with a view to the systematic improvement of the student's own writing. Taught as part of ISP Sequence IX.

English 284 — Literary Criticism

A study of the aims and procedures of literary criticism and of representative approaches both ancient and modern. Selected readings from influential critics from Plato and Aristotle to the late 20th century, with application to literary works.

English 288 — Creative Writing

The study of the form and technique of poetry and/or fiction, with emphasis on regular creative work and practical criticism of the students' own thinking.

English 290-299 — Special Topics in English

The study of a special problem in literature or language, or a body of literature outside present course listings.

English 300

Tutorials and independent study projects. Permission of the instructor and/or the department chair ordinarily required for such courses.

English 380-389 — Senior Conference Group

This course will concentrate on a genre, a literary problem, a major author, or some aspect of an historical period.

English 390-399 — Senior Seminar

This course will involve student presentation of library research, mastery of the research essay and detailed discussion of literary topics. Students must meet prerequisites stipulated by the seminar director.

History

William A. Green, Ph.D., *Professor and Chair*

Robert L. Brandfon, Ph.D., *Professor*

James T. Flynn, Ph.D., *Professor*

David J. O'Brien, Ph.D., *Professor*

James F. Powers, Ph.D., *Professor*

John B. Anderson, M.A., *Associate Professor*

Ross W. Beales, Jr., Ph.D., *Associate Professor*

Joseph J. Holmes, Ph.D., *Associate Professor*

Rev. Anthony J. Kuzniewski, S.J., Ph.D., *Associate Professor*

Rev. Vincent A. Lapomarda, S.J., Ph.D., *Associate Professor*

Theresa M. McBride, Ph.D., *Associate Professor*

Edward F. Wall, Jr., Ph.D., Associate Professor

Lorraine C. Attreed, Ph.D., Assistant Professor

Kristin Ruggiero, Ph.D., Assistant Professor and Dana Scholar in Latin American History

Karen Turner, Ph.D., Assistant Professor

Kimberly Welch, Cand. Ph.D., Instructor

The History Department offers a wide range of studies dealing with most of the world's major civilizations. There are few prerequisites, but students should select courses that are chronologically compatible. For those beginning a serious study of history, the department has designed entry level courses, such as History 1, 2, 7, 8, 11-16. These deal with the broad outlines of our western heritage. Several sections of these courses are reserved for first-year students. Courses numbered 40 or above are considered intermediate and/or upper-level in difficulty. Students taking these courses are generally expected to enter them with a firm grasp of fundamental historical facts and concepts.

Majors in history must take a minimum of 10 and a maximum of 14 one-semester courses. Freshman courses count toward that total; advanced placement credits do not. Two entry level courses must be chosen from among the following: Ancient History (History 7), Medieval World (History 8), Europe from the Renaissance to 1815 (History 13) and Europe since 1815 (History 14). Majors also must take two United States history courses from those numbered above 40. Students who have scored four or above in their Advanced Placement test in European History are exempted from the entry level European history requirements, but they are required to take a minimum of two upper level European history courses. Entry level requirements are ordinarily fulfilled by the end of the sophomore year. First-year students are restricted to one history course a semester; upperclass students should limit their schedules to two history courses per semester. All majors are strongly encouraged to include non-Western courses in their program.

History is among the most encompassing academic disciplines. It is informed by economics, sociology, political science and international relations; it embraces the arts and literature; and it is sensitive to developments in the basic sciences. Historians study the process of change over time. All aspects of human experience are of interest to historians, consequently the expertise and vision of each member of the History Department will vary according to his or her special orientation. History majors should seek academic encounter with professors having different interpretive approaches. Most importantly, they should carefully select courses in related disciplines to expand their historical insight and to provide themselves with critical tools that enhance one's ability to pursue serious historical scholarship.

Students considering application to Holy Cross as history majors are strongly advised to pursue language study in high school. Beginning with the class of 1993, students will be required to demonstrate competence in either a modern foreign language or a classical language in order to graduate from Holy Cross as a history major. This requirement may be satisfied by any of the following: (1) completing the second semester intermediate course in a foreign or classical language with a grade of C- or better; (2) passing a proficiency examination at the second semester intermediate level in a foreign or classical language; (3) attaining an Achievement Test score of 571 or better in a foreign or classical language; (4) attaining an Advanced Placement Examination score of 4 or better in a foreign or classical language. The departmental language requirement can also be satisfied by completing one year of Chinese language at Holy Cross (or its equivalent) with a grade of B- or better.

History 1, 2 — American Themes

A reading and discussion course in which small groups of first-year students intensively study selected topics in American history and life. Eight credits.

History 3 — Perspectives on Asia: The Great Tradition

The course focuses on selected themes in the civilizations of China, Korea and Japan from traditional times through the mid-19th century. Each term will be devoted to examining the philosophical, religious and artistic traditions of one of these great cultures through creative literature, films, field trips, lectures and discussions. Four credits.

History 4 — Perspectives on Asia: Modern Transformation

The course focuses on the modern cultures of China, Japan and Korea with emphasis on how these great civilizations responded to the demands of nationalism and modernization after their confrontation with the West in the mid-19th century. Creative literature, anthropological accounts, journalists' reports, films and guest lecturers will be used to gain a multi-layered perspective of these complex societies. Four credits.

History 7 — Ancient World

A one-semester survey of the high civilizations of the ancient Near East and the classical Mediterranean. Topics include the Sumerian epic of Gilgamesh, the pyramids of Egypt, the campaigns of Alexander the Great, and the decline of the Roman Empire. Four credits.

History 8 — Medieval World

A one-semester survey of European, Islamic, and Byzantine civilizations from the fall of the Roman Empire to the Protestant Reformation, 300-1500 A.D. Topics include Charlemagne, The Vikings, feudalism, chivalry, the Norman Conquest, the Black Death and the early Renaissance. Four credits.

History 11 — Ancient Civilization, I

An examination of the history of the Ancient Near East, Egypt, and Greece from the fourth millennium through the fourth century B.C. The evolution of ancient humanity from prehistoric origins through the growth of ancient empires will be studied and compared with the very different model presented by Greek civilization through the death of Alexander the Great. Four credits.

History 12 — Ancient Civilization, II

An examination of the growth and evolution of Rome from a city-state republic to its mastery of a Mediterranean empire. The course concludes with the restructuring of the Empire by Diocletian and Constantine, and the patristic synthesis of Christian and pagan cultures. Four credits.

History 13 — Europe from the Renaissance to 1815

The course provides a comprehensive survey of social, cultural, religious, economic, and political developments in Europe from the Renaissance to the fall of Napoleon. Special emphasis will be given to Italy during the Renaissance, the rise of Protestantism, the evolution of monarchical power, the development of European overseas empires, the French Revolution and Bonapartism. Four credits.

History 14 — Europe Since 1815

The course affords a survey of European history since the fall of Napoleon. International developments in the age of Metternich, the rise of industrial society, the evolution of national states in Germany and Italy, the Bismarckian system, and World Wars I and II receive emphasis. The course also includes major social and intellectual trends in the period. Four credits.

History 15, 16 — History of the U.S.

A survey of American political, social, and cultural history from the earliest settlements to the present. The first semester ends with the Civil War. Eight credits.

History 17, 18 — U.S. in the 19th Century

Part of the Interdisciplinary sequence entitled "Nineteenth Century America: The Making of Modern Culture," this course examines the political, economic, cultural, social, and intellectual experiences of the nation from the Jeffersonian "revolution" of 1800 to 1929. Among the topics covered are: the struggle between the Jeffersonian and Hamiltonian concepts of government, nationalism, Jacksonian democracy, westernization, the Civil War, industrialization, immigration, urbanization, reform, imperialism, and the evolving of literature, art, and music. Eight credits.

History 45 — High Middle Ages

An examination of the birth of European civilization from the mid-11th until the mid-

12th century, with emphasis on institutional monarchy, the Church, the Crusades, the intellectual revival, and Romanesque art. Four credits.

History 47, 48 — Europe in the Renaissance and Reformation

A study of the most significant political, intellectual, and religious developments from the end of the 14th century until the Thirty Years War: the rise of national monarchies, humanism and the flowering of civilization, the expansion of Europe, the Age of Charles V, Reformation and Counter-Reformation, the Peace of Westphalia. Eight credits.

History 51 — Europe, 1815-1870

Commencing with the fall of Napoleon, this course examines the Congress of Vienna and the development of a concert system among the great powers. Conflicts between conservatism and liberalism and the rise of nationalism are stressed. Emphasis is given to the unification of Italy and Germany, to France under Napoleon III, and to the evolution of parliamentary government in Britain. Four credits. Recommended preparation: History 14.

History 52 — Europe, 1870-1914

This course examines the international history of Europe in the age of Bismarck, the evolution of industrial society, urbanization and social thought, and the rise of European imperialism in Africa and Asia. It concludes with an assessment of the origins of World War I. Four credits. Recommended preparation: History 14.

History 53 — Europe in the 20th Century, I

Although this course will focus on the major political events of this century, social change and cultural trends also will 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. Four credits.

History 54 — Europe in the 20th 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 Nurnberg 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." Four credits.

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 analyzed it; and novelists described it in careful detail. Among the authors to be read are: Marx and Engels, Turgenev, Dickens, Zola, Mazzini, Nietzsche, Bronte, Sorel, Mill, and Galsworthy. Four credits.

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 reform it. Some authors to be read are: Freud, Lenin, deGard, Mann, Gramsci, Celine, Woolf, Buber, Hesse, and Camus. Four credits.

History 67 — History of Poland

Development of the nations and peoples joined in the lands of the Polish-Lithuanian Commonwealth. Approximately equal attention to the development of the commonwealth to the era of partitions, partitioned Poland 1795-1918, and "independent" Poland since World War I. Four credits.

History 68 — The Hapsburg Empire

Development of the dynastic state ruled from Vienna and the peoples joined in it. Approximately equal attention to the early formation of a "great power" and the 18th-century revolutions, the supra-national state from the Napoleonic era to 1918, and the Hapsburg Legacy: Austria, Hungary, Czechoslovakia since World War I. Four credits.

History 70 — Poland and Ireland in the 19th Century

Comparative study of the development of the Polish and Irish nations, from the defeat of their reformer-revolutionaries in the late 18th century to the achievement of independent nation states in 1922-23. Focus on these examples of emerging nations whose political and economic development involved cultural conflicts between affluent and less developed countries and whose struggles helped promote the breakdown of empires in the modern world. Four credits.

History 77 — History of Latin America I: Colonial Period

Surveys Latin American history from pre-Columbian to modern times emphasizing pre-Columbian Indian civilizations; the invention and discovery of the New World; European conquest and administration of Spanish and Portuguese America; race relations; and the wars of independence and Latin America's colonial legacy in the early 19th century. Four credits.

History 78 — History of Latin America II: National Period

Surveys 19th and 20th century Latin America, focusing on representative countries in Latin America and the Caribbean together with the historic development of inter-American relations and contemporary Latin American problems. Topics considered are the military and politics; development and dependency; the Church and liberation theology; revolution and guerrilla warfare; slavery and race relations; and family and society. Four credits.

History 79 — Revolutions in Latin America

Examines the major forces that shaped and are now reshaping Latin America, and the historical reasons for the present problems which trouble the area. A look at problems and groups common to all Latin America, as well as at specific cases of revolutionary change in Mexico, Central America and Cuba, Brazil and the Southern Cone. Four credits.

History 81 — History of Brazil

Surveys the history of Brazil from the 16th century to today. Topics considered are the patterns of settlement, economic exploitation, and race relations; religious and political institutions; cultural traditions; the dynamics of political change in Brazil from 1930 to the present; and Brazil's current quest for international leadership.

History 83 — History of the Southern Cone

Surveys the history of Argentina, Uruguay, Paraguay, and Chile from the 16th century to today. Topics considered are Argentina as a divided land; Uruguay's reputation as the Switzerland of Latin America; Paraguay as a country of paradox; and Chile's abortive revolution.

History 101 — Colonial America

The exploration, settlement, and development of North America from the late 15th to the mid-18th century. Special emphasis: comparative analysis of the backgrounds, goals, and accomplishments of the original colonists; social structure, economic development, and religious life; immigration and white servitude; slavery; Indian-white relations; and development of the British imperial system. Four credits.

History 102 — The Age of the American Revolution, 1763-1815

The American Revolution and independence in the context of Anglo-American ideas and institutions. Special emphasis: imperial reorganization after the Seven Years' War; colonial resistance and loyalty; revolutionary ideology; social and political consequences of the Revolution; Confederation and Constitution; political parties under Washington, Adams, and Jefferson; and impact of the French Revolution and Napoleonic Wars on the U.S. Four credits.

History 103 — Age of Jackson: 1815-1860

American life and politics between the time of the Founding Fathers and the Civil War. Special emphasis will be given to Jackson's role as a national hero and political leader; constitutional issues, political and economic developments, continental expansion, literature and reform, and the breakup of the Jacksonian consensus over the issue of slavery. Four credits.

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 20th century. Four credits.

History 105, 106 — U.S. in the 20th Century

A study of the salient political, social, economic, and cultural developments in the history of the U.S. from the end of the 19th century to the recent past. Eight credits.

History 107 — 19th Century U.S. Diplomacy

A study of the foundations and development of American diplomacy to the turn of the 20th century. Four credits.

History 108 — 20th Century U.S. Diplomacy

A study of the foreign policies and relations of the U.S. 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 turn of the century to the present. Four credits.

History 109, 110 — Problems in American Political History

A two-semester course which deals with a number of issues in American political history. The first semester deals with nineteenth century issues and the second semester those of the twentieth century. Typical issues would include the rise of a party system, the development of a political opposition, the nature of political culture. Eight credits.

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. Eight credits.

History 115 — The Idea of American History

In this course writings of the major American historians are examined in terms of the sources and development of their thought and the uses which Americans made of their ideas. Historiography thus takes the form of intellectual history, and the objective is to become familiar with a most important expression of American national self-consciousness. Four credits.

History 116 — American Religious History

A study of the American religious experience from colonial times to the present with an emphasis on the major religions, persons, institutions, and movements. Cross-registered in the Department of Religious Studies as Religious Studies 105. Four credits.

History 119, 120 — Afro-American History

Examines African roots, the nature of slavery, and the resistance that grew out of the black family and church. Second semester deals with the failures of Southern Reconstructionism, traces black migrations to the urban north, charts the development and triumph of the Civil Rights movements, and discusses problems that remain in building an egalitarian, multiracial American society for the future. Eight credits.

History 121 — American Urban History

A study of the role of cities in American life and thought from the colonial period to the present, with emphasis on the popular experience of city life, the evolution of municipal government, the organization of urban space, the emergence of suburbs and inner city ghettos, and visions of the ideal city in the United States. Four credits.

History 122 — U.S. in the World Wars

Compares American involvement in both World Wars, and the American contribution to victory. Emphasis will be on the political, economic, intellectual, and social effects on American society. Four credits.

History 127 — American Immigration to 1882

A survey of immigration from the colonial period to the era of the Civil War. Topics include colonial immigration and the emergence of an American identity; nineteenth century immigration from Ireland, Germany, Scandinavia, and China; nineteenth century nativism and the Chinese Exclusion Act of 1882. Four credits.

History 128 — American Immigration since 1882

A survey of immigration since the era of the Civil War. Topics include "new" immigrants from southern and eastern Europe; the growth of sentiment for immigration restriction and assimilation in the wake of the National Origins Act of 1924; refugee immigrants; Hispanic American and Asian immigrants; and immigration legislation since 1965. Four credits.

History 129, 130 — U.S. 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. Eight credits.

History 131, 132 — Medieval England

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 reign of Henry VII. Eight credits.

History 135 — Early Modern England, 1471-1629

A study of the significant developments between the battle of Barnet and Charles I's personal rule: the creation of a strong monarchy, the rise of Parliament and its challenge to the monarchy, the break with Rome and resulting religious difficulties, the flowering of civilization during the Elizabethan period, the beginnings of the British Empire, and the background of the 17th-century revolutions. Four credits.

History 136 — Early Modern England, 1629-1783

A study of the significant developments from Charles I's personal rule through the War of the American Revolution: the revolutions of the 17th century; the establishment of political stability; the rise of the aristocracy; changing relations among king, ministers and Parliament; the waning of religious bitterness; the origins of humanitarianism; the development of the Empire. Four credits.

History 137 — Tudor England

Offered only as part of the ISP Sequence, *England: Genesis of a Culture*, this course, in conjunction with the other courses in the Sequence, attempts to explain the origins and early development of that part of Western Civilization known as England. Emphasis in the course will be on monarchy, Parliament, religion, and foreign policy as both unifying and divisive issues. Four credits.

History 139 — England and the British Empire, 1783-1901

This course examines the recovery of Britain after the American Revolution, her struggle against Napoleonic France, and her development as the first great industrial nation. Social reform and the evolution of parliamentary government are stressed; intellectual currents in the Victorian period, the expansion of empire, and the problem of Irish nationalism are treated. Four credits.

History 140 — Britain and the Empire in the 20th Century

Social currents in the Edwardian Era provide background for domestic struggles in the pre-war period, particularly those involving women's suffrage, working-class solidarity, and the Irish question. World War I, interwar diplomacy, the depression, World War II, the transformation of Empire, rise of the welfare state, economic decline, and membership in the Common Market are stressed. Four credits.

History 141 — History of Greece

A study of Greek history from the beginnings to the death of Alexander. Cross-registered in the Department of Classics as Classics 157. Four credits.

History 143 — 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. Cross-registered in the Department of Classics as Classics 158. Four credits.

History 144 — 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 for this period: the historians, inscriptions, monuments, and coins. Cross-registered in the Department of Classics as Classics 158. Four credits.

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 20th century. Emphasis will be placed on political, social, and economic developments, with the reigns of Ferdinand and Isabella dividing the two semesters. Eight credits.

History 151 — History of Russia to 1905

This course studies three main stages in the history of Russia: (1) the development of civilization in Russia from origins to 1700, (2) the building of a westernized Russian empire, 1700 to 1855, (3) the era of Great Reforms to the onset of the Revolutions, 1855 to 1905. Four Credits.

History 152 — Twentieth Century Russia

This course studies the main stages in Russia's twentieth century experience: (1) the Russian Revolutions, 1905-1921, (2) the development of a new order, the Soviet Union, 1921-1941, (3) World War II and the emergence of the Soviet super power, since 1941. Four credits.

History 155 — Introduction to Russian Studies

An interdisciplinary study of Russian civilization, offered every other year. The course covers a theme (such as Russia and the West or the Russian Revolution), using the methodologies of literature, history and political science. Required of Russian Studies majors and open to others. Cross-registered in the Department of Political Science as Political Science 256 and in the Department of Modern Languages and Literatures as Russian 251. Four credits.

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. Four credits.

History 173 — Early Modern France, 1560-1789

From the religious wars and the coronation of Henry IV to the Revolution of 1789, France was at the center of European political changes. This course will study the politics, society and culture of France between the Reformation and the Revolution. Four credits.

History 174 — Social History and the French Novel/Le Roman francais comme histoire

In the period between 1815 and 1914, France evolved from a feudal-agrarian society into a modern, industrial, bureaucratic state. The literature and art of this period reflect the changing social patterns and evolving sensibilities from the romantic age to the First World War. The course will consist of the reading of several French novels and works on the social and cultural history of 19th-century France. Taught in French. Four credits.

History 175 — Modern France, 1750-1848

From the Enlightenment to the Revolutions of 1789 and 1830, and the Second Republic of 1848, the 19th century in France contains the source of much of European and western civilization. The course will cover political, economic, social and cultural movements in this period. Four credits.

History 176 — Modern France Since 1848

France from the Second Empire of Napoleon III through the social revolution of 1968 was a culture in transition toward an industrial economy and a more egalitarian society. Self-appointed arbiter of European culture, France has produced grand designs for social change, artistic Impressionism, literary modernism, and a new role for political Catholicism. Four credits.

History 183 — The West and a Wider World, 1200-1600

This course examines the evolution of national monarchies, the development of a capitalist economy, and the expansion of European power overseas, including Portuguese conquest in Asia, Spanish intrusion upon the Americas, Dutch action in the East Indies, and Anglo-French penetration of North America and the Caribbean islands. Four credits.

History 184 — The West and a Wider World, 1600-1800

The evolving political, economic and social structure of Europe will provide a basis for assessing the expansion and contraction of Europe's imperial power in the outer world. Emphasis will be given to competitive mercantilist empires in the Atlantic basin, the slave systems in the Western Hemisphere, to the consolidation of British power in India, and to successive shocks to Anglo-French power in North America after 1750. Four credits.

History 187 — Revolutionary China

This course introduces students to events, personalities, and concepts of particular significance for understanding China's 20th century history. It covers the period from 1949 through the present in some detail through a variety of documentary sources, interpretive accounts and literature. Four credits.

History 188 — Imperial China

This course surveys Chinese history and culture from the classical period through the last empire. We will follow several themes throughout the class that will demonstrate how the tradition changes—and remain intact in some instances—in response to social and economic changes. Films, biographies, historical and philosophical writings, and western interpretations of events and personalities will offer students a variety of perspectives.

History 189 — The Warrior Tradition in Japan

The course uses the theme of the warrior tradition to examine important trends in Japanese society from the medieval period through the present. A major goal of the course is to examine how the West has viewed the samurai as well as to look at how Japanese perceptions of the warrior have changed over time. Four credits.

History 190 — Islamic History and Civilization

The course will treat selected topics in Islamic history and civilization from the rise of Islam to the present, exploring major political, religious, social, and intellectual themes. Cross-registered in the Department of Religious Studies as Religious Studies 90. Four credits.

History 191 — The American Social Gospel

This course will examine the response of Catholic and Protestant churches in the United States to the problems of industrial society. The heart of the course will be the writings of the major Christian theologians and the statements of the major Protestant denominations. This is a course in American intellectual and social history, locating the development of Christian social and political thought in the context of the problems posed by rapid economic expansion, trade unionism and socialism, urbanization, poverty, racism and war. Four credits.

History 192 — Catholicism, Capitalism and Democracy

This course will examine the development of modern Catholic social and political thought.

from Leo XIII to John Paul II. The major social encyclicals of the modern Popes, together with other major currents of Catholic social thought, will be examined in their historical context, locating the intellectual setting, the political, social and economic problems which faced the church, the different understandings of Christian responsibility which appeared in various countries, and the major figures who shaped the public consciousness of the church in modern times. Four credits.

History 195 — Great Leaders

A biographical study of leadership on the international scene as reflected in the persons who have shaped the social, political, intellectual, religious, and economic history of the 20th century. Four credits.

History 197 — Catholicism in the United States

An historical examination of the development of the Catholic Church and its people in the U.S. Particular attention will be devoted to issues of church and society in the contemporary American Church as they have developed since the 19th century. Cross-registered in the Department of Religious Studies as Religious Studies 88. Four credits.

History 198 — Issues in American Catholic History

Problems in contemporary American Catholicism examined in an historical context. Examples of such problems are church and state, episcopal collegiality, parish life and ministry, war and peace, and Catholic social action. The goal of the course is to become capable of participating in intelligent public dialogue on matters of significance within the church. Completion of "Catholicism in the United States" or permission of the instructor is required. Cross-registered in the Department of Religious Studies as Religious Studies 89. Four credits.

History 199 — Women's History

The course will cover the history of women in France, England, Germany, and the United States between 1790 and 1930. Among the topics to be discussed are: the new domesticity, the single woman, marriage and legal status, utopian socialism and French feminism, education and English feminism, abolitionism and American feminism, the New Woman and German feminism, women and the professions, the birth control movement, the campaign for suffrage, and women in totalitarian states. Four credits.

History 201 — Seminar in American History

An intensive research oriented study, limited to 12 participants. Four credits.

History 202 — Seminar in Latin American History

An intensive research oriented study, limited to 12 participants. Four credits.

History 203 — Seminar in Pre-Modern History

An intensive research oriented study, limited to 12 participants. Four credits.

History 204 — Seminar in Modern History

An intensive research oriented study, limited to 12 participants. Four credits.

History 205 — Seminar in Asian History

An intensive research oriented study, limited to 12 participants. Four credits.

History 207 — Tutorial

Reading of selected sources, with individual written reports and discussion, under the direction of a member of the department. Students enrolled in a tutorial must receive the approval of the department chair. Four credits.

History 208 — Tutorial

Reading of selected sources, with individual written reports and discussion, under the direction of a member of the department. Students enrolled in a tutorial must receive the approval of the department chair. (This is not a continuation of 207). Four credits.

History 209 — Colloquium

Limited to an enrollment of 12 students, this course emphasizes reading, discussion, and writing on a topic selected by the instructor. Three places are reserved for non-majors; preference will be given to students who have not already taken a colloquium. Four credits.

History 210 — Colloquium

Limited to an enrollment of 12 students, this course emphasizes reading, discussion, and writing on a topic selected by the instructor. Three places are reserved for non-majors; preference will be given to students who have not already taken a colloquium. (This is not a continuation of 209). Four credits.

History 220-221 — Thesis

An individual, student designed, professor directed, major research project. Usually available only to outstanding senior majors. A lengthy final paper and public presentation are expected. Eight credits.

History 291, 292 — Honors Thesis

An individual, student designed, professor director, major research project open to members of the History Honors Program. A substantial final paper and public presentation are expected. Eight credits.

Interdisciplinary Studies Program

Royce Singleton, Jr., Ph.D., *Director*

"True enlargement of the mind," John Henry Newman wrote in the *Idea of a University*, "is the power of viewing things at once as a whole...of understanding their respective values, and determining their mutual dependence." This program, originally funded by a major Development Grant from the National Endowment for the Humanities, offers a variety of carefully planned interdisciplinary courses directed toward the goal of the integrated learning which Newman saw as an essential aspect of a liberal education.

The interdisciplinary classroom encourages the maximum in challenging discussion between students and faculty from the participating disciplines — Marxists challenge capitalists on the values of economic choices; behaviorists debate humanists on the ultimate motivations of human behavior; psychologists, historians, sociologists, and literary critics examine the topic of male-female identity; biologists and philosophers investigate the value issues of evolutionary theory — all participating in the attempt to integrate knowledge from specialized fields on problems that are more global than any field. The medium for these exciting intellectual interactions is the Interdisciplinary Studies course or sequence.

Each interdisciplinary course is team-taught by instructors from different departments; each sequence is taken as a unit and consists of two to four courses from different departments. The aim is to clarify the nature of the various academic disciplines in the sequence while emphasizing their interrelatedness in an integrated learning experience.

The interdisciplinary approach enhances the student's awareness of the unique methodology and perspectives of each of the academic disciplines on a particular topic. It also develops the student's ability to analyze. With students enrolling in team-taught interdisciplinary courses or in a sequence of related courses, faculty members can draw on the students' knowledge of a common body of information and the perspectives of more than one discipline.

The Interdisciplinary Studies Program complements both the College's distribution requirements and free-elective system. Normally each course counts toward the fulfillment of the major in its department. By enrolling in a sequence students may satisfy a requirement in their major and have access to related courses in other departments which will satisfy distribution requirements.

Since its beginning in 1974-75, the program has developed 36 interdisciplinary courses and sequences. While not all can be offered in a single academic year, the following are representative of recent and current offerings:

The Historic and Artistic Origins of Western Civilization
(for freshmen — History, Visual Arts)

Romantic and Liberal
(for freshmen — English, History)

19th Century America: The Making of Modern Culture
(for freshmen — English, History)

Living in the Modern World
(for freshmen — Psychology, Sociology)

Economics, Values, and the Human Condition
(Biology, Economics, History, Philosophy)

The Culture of France
(in French — History, Modern Languages)

Evolution: Conflict and Synthesis
(Biology, Philosophy)

Perspectives on Gender
(English, History, Philosophy, Psychology, Sociology)

Interpreting and Making the World
(Philosophy, Physics)

Shakespeare: From Text to Performance
(English, Theatre)

The Black Experience in America
(English, History, Sociology)

Literature and the Bible
(English, Religious Studies)

Environmental Problems: Causes and Effects
(Biology, Chemistry)

Pre-Literature: Song and Story in Oral Culture
(Classics, English)

In addition to fostering a sense of the community of learning through small class size, common enrollments and participation by faculty members in each other's classes, the ISP seeks to afford additional special opportunities for interdisciplinary inquiry and discovery by inviting guest lecturers to the classroom, scheduling special films, and arranging field trips to historic sites and art museums such as the Cloisters in New York City, Boston's Museum of Fine Arts and the Worcester Art Museum.

Mathematics

Thomas E. Cecil, Ph.D., *Professor and Chair*

Peter Perkins, Ph.D., *Professor*

Patrick Shanahan, Ph.D., *Professor*

David B. Damiano, Ph.D., *Associate Professor*

Daniel G. Dewey, M.A., *Associate Professor*

John B. Little III., Ph.D., *Associate Professor*

Rev. John J. MacDonnell, S.J., Ph.D., *Associate Professor*

Leonard C. Sulski, Ph.D., *Associate Professor*

Melvin C. Tews, Ph.D., *Associate Professor*
 John T. Anderson, Ph.D., *Assistant Professor*
 Whei-Ching C. Chan, Ph.D., *Assistant Professor*
 Margaret N. Freije, Ph.D., *Assistant Professor*
 Robert H. Haring-Smith, Ph.D., *Assistant Professor*
 Mohammad Salmassi, Ph.D., *Assistant Professor*
 Ellen J. Keohane, A.B., *Visiting Lecturer*
 Kathleen F. McCarthy M.S., *Visiting Lecturer*
 Frederic D. Peterson, M. Ed., *Visiting Lecturer*
 Joel R. Villa, B.S., *Visiting Lecturer*

The program in mathematics at Holy Cross is based upon an awareness of the increasing contribution of mathematics to many areas of contemporary culture. Mathematics has always been the language of natural science and technology; in the past few decades its influence and techniques have become pervasive in the social, behavioral, and management sciences as well. The course of study in mathematics at Holy Cross is designed to acquaint the student with a broad range of basic concepts and tools of modern mathematics and to develop an appreciation of the beauty of mathematics and its power in application.

There are two tracks available to students who want to major in the mathematical sciences: the *mathematics major* and the *mathematics major with computer science concentration*. We first list the requirements for the mathematics major and then those for the computer science concentrators. In both cases, computing courses do not count toward the maximum number of courses which may be taken in one department.

The mathematics majors normally begin their studies with the four-semester Principles of Analysis sequence, a solid grounding in the differential and integral calculus of functions of one and several variables. The major must also take Linear Algebra 1 (Math 43) followed by either Linear Algebra 2 (Math 44) or Discrete Mathematics (Math 46) in preparation for more advanced courses. Including these basic courses, the major is required to take a minimum of 10 semester courses, four of which must be numbered above 100 and must include a semester of abstract algebra and a full-year course chosen from the general offerings in algebra, analysis, geometry, and applied mathematics. Seminars, independent study projects, and departmental honors allow the especially able student to explore advanced topics and work with faculty members in their special areas of interest.

The mathematics requirements for the computer science concentrators are the same as those given above with the following exceptions: nine semester courses in mathematics are required instead of ten, and these must include Discrete Mathematics (Math 46). In addition, the computer science concentrator must take a minimum of four computer science courses including CS61, 62 and two advanced courses chosen from CS181, 182, 183.

Interested students also may take advanced courses in computer science at Worcester Polytechnic Institute and Clark University through the cross registration program of the Worcester Consortium. Facilities available for study and research in mathematics are excellent. The O'Callahan Science Library in the new Swords Science Center and the College's extensive major computing facilities are described elsewhere in the catalog.

Departmental Honors Program

The program has two levels of distinction, Honors and High Honors. Each requires that the student develop a solid foundation in the core areas of real analysis and algebra and that the student builds on this foundation by taking a full complement of courses within the department. High Honors is distinguished from Honors by the successful completion of a senior honors thesis. Any questions concerning the program should be directed to the Departmental Honors Program director or the Department Chair. *Requirement for both Honors and High Honors.*

Course Requirements

Eight courses beyond 31-32, 41-42, 43-44/46

These eight must include two semesters of abstract algebra (151-152 or Seminar in Algebra), two semesters of real analysis (161-162 or Seminar in Analysis) and at least three seminar courses (201,202), two of which must be either the Seminar in Algebra or the Seminar in Analysis. Exceptions to some of these requirements may be possible for students who participate in the Junior Year Abroad Program. Students going JYA and considering this Honors Program should consult with the Departmental Honors Program director before leaving for JYA concerning any modifications of these requirements.

QPI Requirements

The average QPI for mathematics courses above the level of 31-32 must be at least 3.4 at the end of the fall semester of the senior year.

Senior Presentation (For Honors)

During the senior year all Honors majors must give an oral presentation open to the department and majors on an important problem or result from a (long) relatively fixed list. This may be related to their course work but it is not intended to duplicate material normally in the curriculum. Neither is this intended to be a large-scale project. The goal is to insure a certain degree of mathematical literacy among the Honors majors. Some topics on the list are the Poincare' Conjecture, Godel's Incompleteness Theorem, the Riemann Hypothesis, the Riemann Mapping Theorem and any of the Hilbert Problems.

Senior Honors Thesis (For High Honors)

This is a large project extending over the course of the senior year. This could either consist of original research or be of an expository nature and would be written under the guidance of one or more members of the department. This project should entail a significant amount of problem solving. It will culminate in an oral presentation during the spring term of the senior year, which will be accompanied by a written report of the year's work. Normally, a student will earn four credits in the spring semester of the senior year for successful completion of an honors thesis unless the thesis work is done as part of the student's participation in a departmental seminar. In the latter case, no extra credit will be given above the credit for the seminar itself.

Mathematics Courses

Mathematics 21 — Introductory Calculus

This course studies one variable functions—polynomial, rational, algebraic, exponential and logarithmic—with the associated algebra and geometry. The concepts of limit, continuity, derivative, and integral are developed and applied. Four credits.

Mathematics 22 — Introductory Probability

This course considers the basic ideas of probability: sets, combinatorics, sample spaces, probability measures, conditional probability, random variables, Markov chains, the normal distribution, and the central limit theorem. Four credits.

Mathematics 25, 26 — Calculus

This course provides a two-semester introduction to the calculus of one and several variables and is primarily intended for students majoring in Economics. Topics discussed will include elementary linear and matrix algebra, differentiation and integration of real valued functions of one real variable, techniques of integration and differentiation, max-min problems and improper integrals. A brief introduction is given to functions of several variables including applications to constrained optimization problems. Eight credits.

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 continues with the integral and differential calculus of the algebraic, logarithmic, exponential and trigonometric functions, max-min problems and a brief introduction to elementary differential equations. The second term includes techniques of integration, infinite sequences and series, and Taylor series with applications in the sciences. Eight credits.

Mathematics 41, 42 — Principles of Analysis III, IV

This course is a study of the calculus of functions of several variables. Topics covered include the geometry of n -dimensional space, partial derivatives, gradients, differentials, the chain rule, max-min problems, multiple integrals and transformation of coordinates, line and surface integrals, Green's and Stokes' theorems, and an introduction to differential equations. Eight credits.

Mathematics 43, 44 — Linear Algebra

The purpose of this course is to acquaint students with the basic techniques of linear algebra. Topics covered include matrices, vector spaces, subspaces, quotient spaces, dual spaces, linear transformations, bilinear forms, determinants, eigenvalue theory, canonical forms, and the finite dimensional spectral theorem. Applications and additional topics will be included as time permits. Eight credits.

Mathematics 46 — Discrete Mathematics

This course covers topics in discrete mathematics with applications to mathematical modeling or computer science, while allowing the student to develop skills in problem solving and theorem proving. Topics to be considered include elementary logic combinatorics, lattices, boolean algebras and graph theory. Prerequisite: Mathematics 43. Four credits.

Mathematics 99 — History and Development of Mathematical Ideas

The course is designed for the non-major and develops from a historical and evolutionary point of view a number of important ideas which have significant implications for an understanding of contemporary mathematics. Topics discussed include the Greek crisis of number, the discovery of non-Euclidean geometries, the evolution of algebraic structures, Galois theory and the group concept, and the hierarchy of infinities. The course is open to non-majors only. Four credits.

Mathematics 101 — Topics in Geometry

This course will center on some area of geometry other than differential geometry. Possible topics include Euclidean and non-Euclidean geometry, projective geometry, the geometry of transformation groups, and the elementary geometry of algebraic curves. Four credits.

Mathematics 102 — Differential Geometry

This is a first course in the differential geometry of curves and surfaces for students who have completed Math 42 and a semester course in linear algebra. Topics covered include the Frenet-Serret formulas, smooth surfaces in 3-space, fundamental forms, differentiable manifolds, vector fields, connections and a brief introduction to Riemannian geometry. Four credits.

Mathematics 104 — Ordinary Differential Equations

Linear differential equations are studied; basic existence theorems are proved; equations with constant coefficients and series methods are treated in detail. Topics in non-linear systems are discussed including existence and uniqueness theorems, series methods, and stability theory with an introduction to Lyapunov's direct methods. Four credits.

Mathematics 143 — Complex Analysis

This is a course in the fundamentals of complex analysis. Topics include the complex number system, analytic functions, the Cauchy-Riemann equations, Cauchy's integral theorem, Cauchy's integral formula, Taylor series, Laurent series, the calculus of residues and conformal mapping. Four credits.

Mathematics 153 — Mathematical Models

The content of this course may vary somewhat year to year, but in general the topics will be selected from the modeling of discrete phenomena. After a brief introduction to the

concept of modeling, such topics as linear programming, game theory, graph theory, network flows and combinatorics will be studied. Four credits.

Mathematics 155 — Optimization Theory

This course provides an introduction to optimization. Topics include linear programming and duality, constrained and unconstrained non-linear problems, the Kuhn-Tucker conditions, iterative optimization techniques, and, if time permits, dynamic programming. Emphasis will be placed on the geometric foundations common to these various methods of optimization. Four credits.

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 \limsup and \liminf , relation of uniform convergence to differentiation and integration, and the Stone Weierstrass approximation theorem. The second semester topics include an introduction to Lebesgue-Stieltjes integration, Hilbert space and other material from linear space theory. Eight credits.

Mathematics 163 — Topics in Topology

This course considers various aspects of topology of surfaces and solids, including orientability, the Euler number, and the fundamental group. One of the goals of the course is the topological classification of surfaces. Four credits.

Mathematics 171, 172 — Methods of Numerical Analysis

This course is concerned with numerical solution of problems using computers. Considerable time is devoted to selecting the appropriate algorithm for a given problem and analyzing the resulting numerical errors. The course will include such topics as error analysis of computer arithmetic, approximation of functions, solution of linear and nonlinear equations, numerical integration, numerical solution of ordinary and partial differential equations, the fast Fourier transform, and the Monte Carlo method. Eight credits.

Mathematics 173, 174 — Principles and Techniques of Applied Mathematics

The primary aim of this course is the understanding of a wide spectrum of phenomena through the use of mathematical ideas, abstractions, and techniques. Topics included are ordinary differential equations, the heat equation, eigenvalue problems, partial differential equations, Poisson's theorem and examples, calculus of variations, Fourier analysis, and the inversion problem of Fourier series. Eight credits.

Mathematics 175, 176 — Probability and Statistics

This course provides an introduction to the theory and applications of probability and statistics. Topics in probability theory include both continuous and discrete distributions, conditional probability, random variables, expectation, and the Central Limit Theorem. Topics in statistics include maximum likelihood estimation, the sampling distributions of estimators, hypothesis testing, regression analysis, and an introduction to the analysis of variance. Eight credits.

Mathematics 201, 202 — Seminar

The purpose of the mathematics seminar is to provide an opportunity for individual and group investigation of topics not covered in ordinary course work. Active participation on the part of the students is normally required. The subject matter varies to suit individual students and is often related to the research activity of the professor. Examples of areas of independent study: Lie groups, functional analysis, complex analysis, probability theory, commutative algebra, applied mathematics, the classical groups, mathematical logic, automata and formal languages, topics in discrete modeling, and qualitative theory of differential equations. Eight credits.

Computer Science Courses

Computer Science 50 — Introduction to Computing/PASCAL

Although this course provides a detailed treatment of PASCAL, emphasis is placed on language-independent topics such as structured programming, good programming style, use of subprograms, searching and sorting techniques and algorithm construction in general. Other possible topics are: simulation, data structures, word processing and the social impact of computers. Four credits.

Computer Science 51 — Introduction to Computing/FORTRAN

Same as CS50 except the language FORTRAN is used.

Computer Science 52 — Intermediate Computing

For those with more than an ordinary competence in CS50 or CS51, this course continues the student's education in computing by imparting extensive knowledge of structured programming using PL/1 coupled with significant projects in the laboratory. LISP and Prolog programming in the context of Artificial Intelligence is also covered, as well as special topics/discussions such as microcomputing and the social impact of computers. Four credits.

Computer Science 61 — Techniques of Programming

This course is intended to be an intensive introduction to programming in PASCAL for students considering further course work in computing. It is expected that most of the class will continue with CS62, Data Structures. Although this course does cover much of the same ground as CS50, Introduction to Computing, the pace will be somewhat faster; more topics will be covered, and more of the programs considered will be of a mathematical nature (perhaps including some ideas from calculus). Four credits.

Computer Science 62 — Data Structures

Standard data structures such as stacks, lists, trees and graphs are introduced. Algorithms and techniques for sorting, searching, graph traversal, hashing and recursion are discussed. Analysis of algorithms and special topics are covered as time allows. Four credits.

Computer Science 181 — Introduction to Computer Systems and Organization

This course covers fundamental topics related to the design and operation of a modern computing system, including basic logic design, microcode, assembly language, program segmentation and linking, memory management, and multi-tasking. Four credits.

Computer Science 182 — Principles of Programming Languages

This course discusses principles for designing and implementing programming languages reflecting a variety of programming styles. Specific topics include language syntax methods of processing a program, establishing the run-time environment of the program and programming language paradigms (especially the procedural functional, logic and object-oriented paradigms). Four credits.

Computer Science 183 — Theory of Computation

This course covers basic aspects of regular and context-free languages, propositional and predicate calculus, automata theory and computational complexity. Four credits.

Computer Science 184 — Topics in Computer Science

A topics course gives the student a chance to see the principles introduced in earlier courses applied in specific areas, and it gives faculty an opportunity to teach material of special interest to them. The most likely topics are artificial intelligence, compiler design, operating systems, database systems, graphics, advanced theory of computation, and analysis of algorithms. Four credits.

Modern Languages and Literatures

- Eckhard Bernstein, Ph.D., *Professor*
 Rev. Alfred R. Desautels, S.J., Ph.D., *Professor*
 Theodore P. Fraser, Ph.D., *Professor*
 Normand J. Lamoureux, Ph.D., *Professor and Chair*
 Isabel Alvarez-Borland, Ph.D., *Associate Professor*
 Charles A. Baker, Ph.D., *Associate Professor*
 Rev. Lionel P. Honore, S.J., Ph.D. *Associate Professor*
 George N. Kostich, Ph.D., *Associate Professor*
 Jorge H. Valdes, Ph.D., *Associate Professor*
 William L. Zwiebel, Ph.D., *Associate Professor*
 John T. Cull, Ph.D., *Assistant Professor*
 Laurence Enjolras, Ph.D., *Assistant Professor*
 Andrea Warren Hamos, Ph.D., *Assistant Professor*
 Claudia Ross, Ph.D., *Assistant Professor*
 F. Helen Wagg, A.B.D., *Instructor*
 Jutta Arend-Bernstein, Ph.D., *Adjunct Assistant Professor*
 Marco Alajmo, Cand. Ph.D., *Visiting Lecturer*
 Rev. Robert L. Keane, S.J., M.A., *Visiting Lecturer*
 Gerard P. Lavatori, Cand. Ph.D., *Visiting Lecturer*
 Esther L. Levine, M.A., *Adjunct Instructor*
 Elizabeth O'Connell, M.A., *Visiting Lecturer*
 Isabella Sipitiner, B.A., *Visiting Lecturer*

The courses offered by the Department of Modern Languages and Literatures provide a rich means for the intellectual and aesthetic development of Holy Cross students through the study of foreign languages, literatures and cultures. While foreign languages play a key role in such international concentrations as Asian Studies, Latin American Studies and Russian Studies, they lie at the very heart of the broader liberal arts curriculum and should be considered therefore by each student regardless of area of concentration.

The Department offers courses in Chinese, French, German, Italian, Russian and Spanish. Major programs, consisting of at least 10 semester courses on the intermedial level or above, are offered in French, German, Russian and Spanish. Students are assigned their own advisor within the department to help them devise their individual curriculum. Advisors see to it that students are aware of the College's many academic opportunities. They urge students to enrich and broaden their major programs by taking additional courses drawn from a wide range of humanistic and professionally oriented areas.

A Study Abroad Program in the major cities of Europe and Latin America as well as in the Near and Far East is open to qualified students. Also available are Soviet Union study programs in Moscow and Leningrad in cooperation with the American Council of Teachers of Russian. All students, and modern language majors in particular, are encouraged to avail themselves of a period of study abroad.

Native teaching assistants are employed to assist faculty members at all levels of language instruction. A language resource center and extensive audio-visual facilities support and reinforce regular classroom activities. Course materials are complemented by a library of slides, films and video tapes which illustrate and animate the general cultural background in all the languages.

The Department also offers a concentration in European Literature. Courses are conducted in English and employ translated texts. The program is designed to introduce students to the best and most representative works of the major cultures of the Continent. Students are expected to develop a sufficient competence in at least one of the national languages to assure direct contact with the original texts.

Chinese

Chinese 11, 12 — Elementary Chinese

This two-semester course aims to acquaint students with the fundamentals of Chinese grammar, pronunciation, intonation and oral expression. Emphasis is also placed on acquiring a knowledge of Chinese culture and life through the medium of language. Five class hours weekly and laboratory practice. Ten credits.

Chinese 21 — Intermediate Chinese

A continuation of Elementary Chinese, with greater focus on speaking, writing and reading practice. Study of more complex aspects of the grammar. Longer readings and discussion of Chinese culture. For students who have completed Chinese 12. Four class hours weekly and laboratory practice. Four credits.

Chinese 22 — Intermediate Chinese

A continuation of Chinese 21. Four class hours weekly and laboratory practice. Four credits.

French

French major requirements: a minimum of 10 courses on the intermediate level or above, including the following:

1. French 111 (Composition and Conversation)
2. French 117 (Introduction to French Literature)
3. One course in French culture

4. One French literature course from Middle Ages, Renaissance, 17th Century or 18th Century

5. One French literature course from 19th or 20th Century

At least one course must be taken in senior year.

French 11, 12 — Elementary French

A two-semester 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. Five class hours weekly and laboratory practice. Ten credits.

French 21 — Intermediate French

A review of the fundamentals of the language supplemented by reading of literary and cultural material and by practice in oral expression. For students who have completed French 12. Four class hours weekly and laboratory practice. Four credits.

French 22 — Intermediate French

A continuation of French 21. Four class hours weekly and laboratory practice. Four credits.

French 111 — Composition and Conversation

This course is designed for the student who wishes to gain proficiency in oral and written 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. Prerequisite: French 22 or the equivalent. Conducted in French. Four credits.

French 113 — French Culture and Civilization to 1815

French history, art, architecture, song, manners, religion, social relations to the end of the First Empire. Conducted in French. Minimum prerequisite: French 22 or the equivalent. Four credits.

French 115 — French Culture and Civilization since 1815

French history, art, architecture, song, manners, religion, social relations since the end of the First Empire. Conducted in French. Prerequisite: French 22 or the equivalent. Four credits.

French 117 — Introduction to French Literature

An introduction to literary genres as well as to approaches to analysis and interpretation of texts. Prerequisite: French 111. Conducted in French. Four credits.

French 201 — Advanced Composition and Conversation

A course designed for students who have completed French 111 or its equivalent. Intensive practice of the four language skills. Four credits.

French 203 — Syntax

An appreciation of the structure of the French sentence through two types of analyses: *analyse grammaticale* and *analyse logique*. Prerequisite: French 111 or 201. Four credits.

French 211 — Introduction to French Poetry

A critical study of French prosody and poetic practice with an analysis of poetical works drawn from Villon to the present. Conducted in French. Prerequisite: French 117. Four credits.

French 213 — French Literature from the Middle Ages to the Renaissance

A critical study of the major works and authors of the Middle Ages (including *La Chanson de Roland*, Chrétien de Troyes, *Le Roman de Renart*, *La Farce de Maître Pathelin*, Villon), and the major poets and prose writers of the Renaissance, including Rabelais, Du Bellay, Ronsard, Montaigne). Conducted in French. Four credits.

French 215 — The Classical Theater and its Aftermath

Representative dramatic works of the 17th and 18th centuries will be studied against the backgrounds of the dramatic theory from which they spring. The plays of Corneille, Molière and Racine will be featured. Conducted in French. Four credits.

French 217 — Eighteenth Century French Literature

The course is an examination of the literature of the period as it relates to the changing social, intellectual and literary values that led to the French Revolution and its consequences. Authors treated will include Beaumarchais, Saint-Pierre, Laclous, Lesage, Marivaux, Prévost, Rousseau, Diderot, Sedaine, Voltaire. In French. Four credits.

French 219 — Nineteenth Century Novel

A close examination of the French novel from 1800 to 1900, including such authors as Constant, Stendhal, Balzac, Flaubert, Maupassant, Huysmans, and Zola. Conducted in French. Four credits.

French 221 — Twentieth Century Theater

The major trends and theories in the theater of this century are considered. The reading begins with examples of important 19th century plays and continues to the present period. Authors treated will include Giraudoux, Beckett, Ionesco. Conducted in French. Four credits.

French 223 — Twentieth Century Novel

The novel from the end of the 19th century to the present. Principal authors studied will include Gide, Proust, Malraux, Camus, Sartre, Robbe-Grillet, and Duras. Conducted in French. Four credits.

French 231 — French Classicism

The principal authors of the 17th century. Classical theory and its baroque antecedents. Authors treated will include Pascal, La Fontaine, Boileau. Conducted in French. Four credits.

French 233 — French Romanticism

A study of the vision and sensibility shaped by writers of the Romantic period. Among the authors read are Chateaubriand, Lamartine, Vigny, Hugo, Musset, Balzac, and Sand. Conducted in French. Four credits.

French 235 — Les moralistes et les philosophes

A critical study of principal prose writers from the 17th and 18th centuries. The *moralistes*: Descartes, Pascal, La Rochefoucauld, and La Bruyère; the *philosophes*: Montesquieu, Voltaire, Diderot, and Rousseau. Conducted in French. Four credits.

French 241, 242 — Special Topics

A special course offered either semester for the study of a literary genre, form, theme or problem. Conducted in French. Four credits per semester.

French 251, 252 — Special Authors

A special course offered either semester for the study of one or several authors of importance drawn from specific periods. Conducted in French. Four credits per semester.

German

German major requirements: a minimum of 10 courses on the intermediate level or above. German majors are required to successfully complete German 131, 132 and German 133, 134. Majors are encouraged to enhance their knowledge of German thought and culture through allied courses in art, history, philosophy and political science.

German 11, 12 — Elementary German

A two-semester course designed for students with no previous study of German, aimed at the acquisition of a basic speaking, reading and writing knowledge. Five class hours weekly and laboratory practice. Ten credits.

German 21 — 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 and written expression. Prerequisite: German 12 or the equivalent. Four class hours weekly and laboratory practice. Four credits.

German 22 — Intermediate German

A continuation of German 21. Four class hours weekly and laboratory practice. Four credits.

German 131 — German Culture: 1750-1890

An introduction to outstanding examples of German thought, art, and cultural developments in the 18th and 19th centuries. Important German cultural figures such as Frederick the Great, Goethe, Beethoven, Nietzsche and Marx will be discussed. Readings, lectures, and discussions in German. Prerequisite: German 22 or the equivalent. Four credits.

German 132 — German Culture: The 20th Century

An introduction to political and cultural developments in Germany in the 20th century. Aspects of the Weimar Republic, the Third Reich and contemporary East and West Germany will be studied. Readings, lectures, and discussions in German. Prerequisite: German 22 or the equivalent. Four credits.

German 133 — German Syntactical and Conversational Practice

A study of the finer points of German grammar and idiom through controlled translation and written exercises as well as conversational practice. Required for German majors and recommended for freshmen with advanced placement. Prerequisite: German 22 or the equivalent. In German. Four credits.

German 134 — German Composition and Conversation

A course devoted to the achievement of basic fluency in spoken and written German. Weekly papers and oral assignments are given. Required for German majors and recommended for freshmen with advanced placement. In German. Prerequisite: German 22 or the equivalent. Four credits.

German 161 — Goethe and Schiller

Analysis of representative works of Lessing, Goethe and Schiller within the context of the German Enlightenment and German Idealism and their major philosophical, aesthetic and moral concerns. Readings and discussions in German. Prerequisite: German 22 or the equivalent. Four credits.

German 162 — German Romanticism

A study of selected Romantic writings against the background of related developments in the arts and in philosophy. Analysis of works by Tieck, Novalis, Brentano, Eichendorff, Hölderlin, E.T.A. Hoffmann and others. Readings and discussions in German. Prerequisite: German 22 or the equivalent. Four credits.

German 171 — Nineteenth Century German Literature

A study of German literature in the age of burgeoning industrialism and materialism, extending from the late romanticism through the era of realism. Works of representative

authors such as Heine, Büchner, Grillparzer, Stifter, Keller, Wagner, Nietzsche and Fontane. Readings and discussions in German. Prerequisite: German 22 or the equivalent. Four credits.

German 172 — Modern German Theater

Analysis of the major movements and playwrights of modern German theater studied against their historical and ideological background. Readings of works by Hauptmann, Kaiser, Schnitzler, Hoffmannsthal, Brecht, Frisch, Dürrenmatt, Weiss and others. Readings and discussion in German. Prerequisite: German 22 or the equivalent. Four credits.

German 181 — Kafka, Hesse, Mann and Their Contemporaries

Introduction to the most significant masters of German prose in the first half of the 20th century. Readings and discussions in German. Prerequisites: German 21, 22 or the equivalent. Four credits.

German 182 — Postwar German Literature

A study of the literature written in three German-speaking countries after World War II. Selected works by Borchert, Grass, Böll, Frisch, Christa Wolf, Dürrenmatt, Plenzdorf, Handke and Biermann. Prerequisites: German 21, 22 or the equivalent. Four credits.

German 241, 242 — Special Topics in German Literature and Culture

Intensive study of a special aspect of German literature such as themes, genres or movements. Topics announced in the preceding semester. Given in German or English according to staff decision. Recent topics: Brecht and the Political Theater, European Romanticism, Existentialism in German Literature. Four credits per semester.

German 251, 252 — Major Authors in German Literature

Intensive study of the chief works of a specific German author. Topics announced in preceding semester. In German or English according to staff decision. Recent topics: Hermann Hesse and Thomas Mann, Franz Kafka. Four credits per semester.

German 291, 292 — Junior Year Tutorial

Eligible juniors may elect German 291, 292 with permission of department chair and instructor. Topics to be determined by instructor. Recent topics: Modern German Drama, East German Literature. Four credits per semester.

German 293, 294 — Senior Year Tutorial

Eligible seniors concentrating in German may elect German 293, 294 with permission of department chair and instructor. Recent topics: Bertolt Brecht, The Literature of the Third Reich, East German fiction, Thomas Mann, the "Wall" in East and West German literature. Topics to be determined by instructor. Four credits per semester.

Italian

Italian 11, 12 — Elementary Italian

A two-semester course designed for students with no previous study of Italian, aimed at the acquisition of a basic speaking, reading and writing knowledge. Five class hours weekly and laboratory practice. Ten credits.

Italian 21 — Intermediate Italian

This course is for students who have completed successfully a basic course in the language. Emphasis is placed on a rapid review of the language with an introduction to Italian literature and concentrated oral expression. Four class hours weekly and laboratory practice. Four credits.

Italian 22 — Intermediate Italian

A continuation of Italian 21. Four class hours weekly and laboratory practice. Four credits.

Linguistics

Linguistics 11 — Introductory Linguistics

A study of the nature of language as a communications system and the development of contemporary formal linguistics. Four credits.

Russian

Russian major requirements: A minimum of 10 courses on the intermediate level or above. Majors are encouraged to enhance their knowledge of Russian thought and culture through allied courses in history, philosophy and political science. Opportunities exist for independent tutorial or internship work in the Worcester community with recent Soviet emigres.

Russian Studies

Requirements of the multidisciplinary Russian Studies major: A minimum of 12 courses, among which the following must be taken: Introduction to Russian Studies, Russian language (through Composition and Conversation), one course Russian literature, one course Russian history, and one course Soviet political science. The remainder of the area courses to be chosen from any of the participating departments (Modern Languages and Literatures, History, Political Science, Philosophy, Economics). For further information, consult the Office of Special Studies or area faculty in the participating departments.

Russian 11, 12 — Elementary Russian

This two-semester course aims to acquaint students with the fundamentals of Russian grammar, pronunciation, intonation, and oral expression. Emphasis is also placed on acquiring a knowledge of Russian culture and life through the medium of language. Five class hours weekly and laboratory practice. Ten credits.

Russian 21 — Intermediate Russian

A continuation of Elementary Russian, with greater focus on speaking, writing and reading practice. Study of more complex aspects of the grammar. Longer readings and discussion of Russian and Soviet culture. Conducted mostly in Russian. Prerequisite: Russian 12 or the equivalent. Four class hours weekly and laboratory practice. Four credits.

Russian 22 — Intermediate Russian

A continuation of Russian 21. Four class hours weekly and laboratory practice. Four credits.

Russian 131 — Studies in Russian Language and Culture

Topics in Russian literature and culture through discussion, reading and composition. Materials range from belles lettres to non-fiction texts. Also includes advanced grammar and stylistics. Conducted in Russian. Prerequisite: Russian 22 or the equivalent. Three hours weekly and laboratory practice. Four credits.

Russian 132 — Studies in Russian Language and Culture

A continuation of Russian 131. Three hours weekly and laboratory practice. Four credits.

Russian 141 — Advanced Studies in Russian Culture and Literature

Analysis of literary works and documentary materials with the aim of probing Russian cultural traditions, particularly in the 19th and 20th centuries. All discussions, readings and papers in Russian. Prerequisite: Russian 132 and permission of instructor. Four credits.

Russian 142 — Advanced Studies in Russian Culture and Literature

A continuation of Russian 141. Four credits.

Russian 151 — Masterpieces of Russian Literature

An introduction to Russian literature through the works of such leading authors of the 19th and 20th centuries as Pushkin, Gogol, and Solzhenitsyn. The course analyzes changes in Russian and Soviet art forms and the effects of historical-political pressures on writers. Conducted in English. Four credits.

Russian 152 — The Russian Novel

The development of the novel in Russia, including authors such as Tolstoy, Dostoevsky

and Pasternak. Two major considerations are Western influences on the novel and uniquely Russian solutions to social and philosophical questions through the medium of long prose works. Conducted in English. Four credits.

Russian 161 — The Russian Short Story

Shorter prose works are examined in the light of literary movements and the traditional obligation of the Russian writer to act as the social conscience for the educated public. Turgenev, Chekhov and Bunin, as well as other masters of the craft, will be studied. Conducted in English. Four credits.

Russian 162 — Russian Drama

A study of the major Russian dramatists — including Ostrovsky, Chekhov and Gorky — in the 19th and 20th centuries. Special attention is devoted to the auditory and visual nature of drama, when possible, with the aid of English recordings and Soviet films. Conducted in English. Four credits.

Russian 241 — 19th century Russian Literature

Russian Literature from the Golden Age through Realism to fin-de-siècle Decadents. Conducted in English. Four credits.

Russian 242 — 20th century Russian Literature

Russian literature from the Silver Age through the Revolution to the present "underground" works. Conducted in English. Four credits.

Russian 251 — Introduction to Russian Studies

An interdisciplinary study of Russian civilization, offered every other year. The course covers a theme (such as Russia and the West or the Russian Revolution), using the methodologies of several disciplines, such as literature, history and political science. Required of Russian Studies majors and open to others. Four credits.

Russian 261, 262 — Special Topics in Russian Literature

A special course offered either semester to study a single author or theme. Conducted in English. Four credits per semester.

Russian 291, 292 — Junior Year Tutorial

With permission of department chair and instructor only. For juniors who wish to pursue work not covered by one of the regularly offered courses. Four credits per semester.

Russian 293, 294 — Senior Year Tutorial

With permission of department chair and instructor only. For seniors who wish to pursue work not covered by one of the regularly offered courses. Four credits per semester.

Spanish

In fulfilling the departmental requirement of 10 courses at the intermediate language level or above, the Spanish major must successfully complete Spanish Composition and Conversation, Introduction to Literary Genres, one semester of a survey sequence (in either Spanish or Spanish-American literature), Advanced Composition and Conversation, and one advanced literature course in a particular period, author, or special topic. The Spanish Section recommends that majors complete two semesters of any of the four semesters of survey of literature, and two courses at the level of advanced literature. At least one of the courses required for the Spanish major must be taken during the senior year. Majors should note that internships and courses taught in English will not count toward the fulfillment of the Spanish major.

Spanish 11, 12 — Elementary Spanish

An intensive two-semester introduction to all elements of the Spanish language. Also included is a brief introduction to the culture of the Hispanic World. Five class hours weekly and laboratory practice. Ten credits.

Spanish 15 — Review Spanish

A course between the elementary and intermediate levels primarily for students who have studied Spanish for one or, in some cases, two years on the secondary level. Prerequisite: permission of instructor. Four class hours weekly and laboratory practice. Four credits.

Spanish 21 — 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. Four class hours weekly and laboratory practice. Four credits.

Spanish 22 — Intermediate Spanish.

A continuation of Spanish 21. Four class hours weekly and laboratory practice. Four credits.

Spanish 127 — Aspects of Spanish Culture

A course devoted to the study of outstanding examples of Spanish thought, art, and historical developments. Readings, lectures, and discussions in Spanish. Prerequisites: Spanish 22 or the equivalent. Four credits.

Spanish 128 — Aspects of Spanish American Culture

A course devoted to the study of examples of Spanish-American culture from pre-Columbian times to the present, including the early civilizations, the Spanish Conquest, the Wars for Independence, and the modern period. Readings, lectures, and discussions in Spanish. Prerequisite: Spanish 22 or the equivalent. Four credits.

Spanish 129 — Spanish Composition and Conversation

A course designed for students who have completed one year of intermediate Spanish. This course (or its equivalent) is a prerequisite to any literature course taught in Spanish. The class is limited in size to enable students to receive individual attention in developing their writing and speaking skills and oral comprehension. Prerequisite: Spanish 22 or the equivalent. Four credits.

Spanish 130 — Spanish Communication: Rhetoric and Writing

A course designed for students who have completed Spanish Composition and Conversation and who need further practice in speaking and writing. The course will focus on developing fluency in oral expression and, in particular, perfecting pronunciation. Prerequisite: Spanish 129 or the equivalent. Four credits.

Spanish 132 — Introduction to Literary Genres

Designed especially as an introduction to drama, poetry, and prose fiction of 20th century Spain and Spanish America, this course will familiarize students with literary analysis and will further develop their oral and written skills. Recommended for students who have completed Composition and Conversation or a survey course in Hispanic literature. Advanced (Spanish) literature students should *not* enroll in this course. Conducted in Spanish. Prerequisite: Spanish 129 or the equivalent. Four credits.

Spanish 133-134 — Survey of Spanish Literature

A survey of the literature of Spain from medieval times to the present, including the major writers of the Golden Age, of the romantic and realist periods, and of the Generation of 1898. Conducted in Spanish. Prerequisite: Spanish 129 or the equivalent. Spanish 132 is highly recommended. Four credits per semester.

Spanish 135, 136 — Survey of Spanish American Literature

A study of the literature of Spanish America from pre-Columbian times to the present, including the major writers of the Colonial period, and of the 19th and 20th centuries. Conducted in Spanish. Prerequisites: Spanish 129 or the equivalent. Spanish 132 is highly recommended. Four credits per semester.

Spanish 137 — Advanced Spanish Composition and Conversation

This one-semester course provides practice in all the skills of advanced language through a wide variety of activities: the study of basic phonetics, in-depth review of difficult grammatical structures, conversations, readings, and discussions. Students will also practice creative and analytical writing. Prerequisites: Spanish 129 or the equivalent. Spanish 132 or a semester of survey is highly recommended. Four credits.

Spanish 152 — Medieval Spanish Literature

Close reading, analysis, and discussion of representative works of medieval Spanish literature, including the *jarchas*, the *Poema del Cid*, *El Conde Lucanor*, *El libro de buen amor*, and *La Celestina*. Conducted in Spanish. Four credits.

Spanish 153 — Golden Age Literature

Intensive study of the major authors of the 16th and 17th centuries, including Garcilaso, San Juan del la Cruz, Cervantes, Lope de Vega, Quevedo, and Calderón. Conducted in Spanish. Four credits.

Spanish 154 — Don Quixote

A close reading of Cervantes' masterpiece in order to provide a coherent understanding of the author's attitude toward life and art. Through an analysis of such elements as point of view, plot structure, characterization, interpolated novels and poems, language, and irony, the course will define Cervantes' conception of narrative prose fiction and his role as the originator of the modern novel. Conducted in Spanish. Four credits.

Spanish 156 — Nineteenth-Century Spanish Literature

A study of the rise of romanticism and realism in Spain and their respective developments as literary movements in the Spanish peninsula. The course includes such authors as Larra, Bécquer, and Galdós, and such classics as *Don Alvaro o la fuerza del destino* and *Don Juan Tenorio*. Conducted in Spanish. Four credits.

Spanish 158 — Twentieth-Century Spanish Narrative

A study of the major trends and writers of fiction in Spain after the realist and naturalist eras. Through the writings of such prominent authors as Cela, Sender, and Matute, the course examines the formal and thematic characteristics of Spanish narrative before and after the Spanish Civil War. Conducted in Spanish. Four credits.

Spanish 160 — Modern Spanish-American Narrative

This course explores the response of several modern Spanish-American writers to the following questions: What is fiction? What are the roles of the author, the narrator, and the reader? Special attention will be given to such outstanding novelists of the "Boom" as Juan Rulfo and Gabriel García Márquez, and to the development of their works within the context of the modern novel. Conducted in Spanish. Four credits.

Spanish 161 — Modern Spanish and Spanish-American Drama

The principal objectives of this course are a knowledge of selected works by major modern Spanish and Spanish-American playwrights (e.g., Lorca, Buero, Vallejo, and Carballido) and of the chief currents in 20th century drama. Emphasis will be placed on both the technical and thematic characteristics of the genre. Whenever appropriate, the course will also seek to establish parallels between the development of the genre in the two continents. Conducted in Spanish. Four credits.

Spanish 162 — Modern Spanish and Spanish-American Poetry

A study of representative works of Spanish and Spanish-American poetry from the last quarter of the 19th century to the present. Both historical and analytical in its approach, the course will examine the major poetic currents since *modernismo* and the "Generation of 1898;" it will study the interaction between the poetry of Spain and Spanish America; and it will familiarize students with poetic theory. Among the authors studied will be Rubén Darío, Antonio Machado, Federico García Lorca, and Pablo Neruda. Conducted in Spanish. Four credits.

Spanish 231 — 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. Four credits.

Spanish 241, 242 — Special Topics

A special course offered either semester for the study of a literary genre, form, theme, or problem. Four credits per semester.

Spanish 291, 291 — Junior Year Tutorial

Eligible juniors may elect one or both of these courses only with the permission of the department chair. Tutorials are offered only to students who have taken previously all other advanced courses offered in a given semester. Four credits.

Spanish 293, 294 — Senior Year Tutorial

Eligible seniors may elect one or both of these courses only with the permission of the department chair. Tutorials are offered only to students who have taken previously all other advanced courses offered in a given semester. Four credits.

Studies in European Literature (SEL)

Studies in European Literature (SEL) courses are open, without prerequisites, to all students of the College. Requirements for the SEL major: 10 courses specifically designated SEL. In order to assure direct contact with texts in the original, a competence in at least one of the national languages of Europe is required. Students are, therefore, expected to take a minimum of two semesters beyond the intermediate level in French, German, Russian, or Spanish. The requirement may be fulfilled in Composition and Conversation courses, in advanced literature courses conducted in a foreign language, or in culture and civilization courses conducted in a foreign language.

SEL 101, 102 — Landmarks of European Literature

An introduction to major works of Continental literature, the course explores the works of at least six major authors each semester and serves as a basis for the advanced study of literature. Four credits per semester.

SEL 110 — Medieval Literature

Representative works of Continental Europe in the Middle Ages. Among works read are *The Song of Roland*; *The Poem of the Cid*; Chrétien de Troyes, *Iwain, The Knight of the Lion*; Wolfram von Eschenbach, *Parzival*; Gottfried von Strassburg, *Tristan*; Guillaume de Lorris and Jean de Meun, *The Romance of the Rose*; Dante Alighieri, *The Divine Comedy*. Four credits.

SEL 111 — The Renaissance

An introduction to the literature of the Continental Renaissance with emphasis upon the prose fiction of the period. Readings from selected authors such as Boccaccio, Castiglione, Machiavelli, More, Erasmus, Luther, Rabelais and Montaigne. Four credits.

SEL 121 — Baroque and Classic Literature

An interdisciplinary approach to Continental literature between 1580 and 1680. Among authors read are Cervantes, Calderón, Lope de Vega, Corneille, Molière, Pascal and Grimmelshausen. Four credits.

SEL 131 — The Age of Enlightenment

A study of the literature of 18th 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. Four credits.

SEL 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 Stael, Leopardi, and Manzoni. Special consideration is given to the relations between the Romantic Movements of the individual countries. Four credits.

SEL 143 — The Rise of Realism in the 19th 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 19th century. Among authors read are Balzac, Stendhal, Gogol, Turgenev, Flaubert, Dostoevsky, Zola, Galdós, and Tolstoy. Four credits.

SEL 145 — Bourgeois vs. Artist in 19th century France

A study of the Restoration through the second Empire, the symbolist revolt at mid-century and the society of the belle époque, through the selected prose and poetry of Stendhal, Balzac, Flaubert, Zola, Huysmans, Baudelaire, Rimbaud, Verlaine, Proust and Gide. Sometimes taught as part of ISP Sequence VIII. Four credits.

SEL 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. Four credits.

SEL 153 — Modern European Theater

The major movements and playwrights of modern European theater are studied against their historical and ideological background. Brecht, The Theater of the Absurd (Beckett, Ionesco, Pinter), Frisch, Dürrenmatt, Genet, and Weiss. Four credits.

SEL 241, 242 — Special Topics in European Literature

Offered periodically for the study of a literary genre, theme or problem. Recent topics have been: The Image of Man in European Literature, Existentialism in European Literature, German Literary Existentialism, Contemporary European Literature, Spanish Thought, Cinema and Humanism, German Novel: The World Mirror, Weimar to Hitler. Four credits per semester.

SEL 251, 252 — Major Authors

A course offered periodically for the study of one or more significant authors drawn from specific periods. Some recent topics: Franz Kafka, Hermann Hesse, Thomas Mann, Jean-Paul Sartre and Albert Camus. Four credits per semester.

Music

Shirish Korde, M.M., *Associate Professor and Chair*

Suzanna E. Waldbauer, M.M., *Associate Professor*

Carol Lieberman, D.M.A., *Assistant Professor*

Hollace A. Schafer, Ph.D., *Assistant Professor*

James David Christie, M.M., *Visiting Professor, organ; Director, Schola Cantorum*

Diane Heffner, M.M., *Visiting Lecturer, clarinet/saxophone*

Marian C. Hanshaw, M.M., *Visiting Lecturer, piano*

Ronald Lowry, M.M., *Visiting Lecturer, 'cello*

Karen Lykes, M.M., *Visiting Lecturer, voice*

Thomas L. McKinley, Ph.D., *Visiting Lecturer*

Bruce I. Miller, M.M., *Visiting Lecturer; Director, College Choir*

Michael Monaghan, M.A., *Visiting Lecturer, jazz improvisation; Director, Jazz Ensemble*

Daryl Robbins, M.M., *Visiting Lecturer, trumpet*

Suzanne E. Stumpf, B.A., *Visiting Lecturer, flute*

Robert Sullivan, *Visiting Lecturer, guitar, lute*

Kathleen Supove, M.M., *Visiting Lecturer, piano*

Marsha Vleck, M.M., *Visiting Lecturer, voice*

Toshimasa Francis Wada, M.M., *Director, Chamber Orchestra*

The Music Department offers all Holy Cross students the opportunity to develop an understanding and appreciation of music through a wide range of courses in the history and theory of music, both on an introductory and on an advanced level. It also provides an opportunity for further study to those who, by virtue of previous training and continuing serious interest, wish to concentrate in music.

The major in music consists of a minimum of 10 and a maximum of 14 courses. Required courses are Music 211-212, 201-202, 301-302 and 400. Electives should include one course in History, Theory, Ethnomusicology and Performance in addition to those required. Music 1 and Music 3 do not count towards the major. Students who do not wish to enroll in the Performance Program of the college may meet the Performance requirement for the major by participating in any one of the performing organizations of the college listed below for at least two semesters with the permission of the department chair.

Facilities in the Music Department include a music library with up-to-date listening equipment and a sizeable collection of scores, books, records and videotapes; practice rooms with pianos; classrooms; a studio equipped with electronic synthesizers and taping units; music analyzing equipment with visual displays; computer terminals; and a variety of traditional instruments.

All courses are open to majors and non-majors. Students without prior experience should choose from courses 1-90; students with prior musical experience should choose from courses numbered 100 and above.

Performance Program

The Performance Program consists of a series of courses offered by the Music Department in instrumental and vocal instruction at the intermediate and advanced levels. Instruction is given by professional musicians selected by the Music Department. Twelve lessons are offered per semester. Admission to a course in Performance is gained by a successful audition with members of the department. No student may enroll in more than one *Performance* course each semester. Students must register for the course as a fifth course in the first semester in which they participate in the program. At the end of the first semester of registration in Performance, they will be assigned an IP (In Progress). During the second semester they will register for *Performance* as a fourth course with a letter grade. Students may only claim a maximum of eight credits with letter grade towards graduation. A semester fee is charged, to be paid to the secretary of the Music Department by October 1, (Fall) and by February 15 (Spring).

Students enrolled in the program for credit must:

- 1) Present a letter of evaluation from their teacher at the end of the semester.
- 2) Take a final examination given by members of the Music Department at which time they will perform two pieces studied during the semester.
- 3) Take a semester of theory or history (excluding Music I and Music 3) prior to or concurrently with *Performance*.

They are expected to perform at least once in the semester at recitals sponsored by the department.

The department sponsors student recitals and encourages participation in the following performing organizations: Holy Cross College Choir, Holy Cross Chamber Singers, Holy Cross Chamber Orchestra, Holy Cross Jazz Ensemble, and the Schola Contorum.

Music 1 — Introduction to Music

A one-semester listening course for students without any previous musical knowledge. It introduces the elements of music and examines their use in the principal forms and styles of Western and non-Western music through a study of representative works by major composers. Four credits.

Music 3 — Fundamentals of Music

A course in introductory theory (notation, scales, intervals, chords, rhythm and meter) and basic musicianship (keyboard skills, score-reading and ear training). Four credits.

Music 10 — College Choir

The study and performance of works for mixed chorus. Two or three major concerts per year, often with orchestral accompaniment. No previous musical training or choral experience is required, but students will be given instruction in the rudiments of reading music and ear training. Prerequisites: permission of instructor (audition). Must be taken on a Pass/Fail basis and in two consecutive semesters. Does not count toward the 32 courses required for graduation. Two credits.

Music 23 — Politics, Literature and Music of Africa

This course will be team taught and explore Africa from colonial to modern times, emphasizing the political, literary and musical changes during this period, with special focus on Nigeria and South Africa. This course is part of ISP Sequence XI. Four credits.

Music 30-40 — Great Composers

The study of the life and works of a major composer (e.g., Beethoven, Mozart, Wagner,

J.S. Bach) and of the age in which he lived. Attention will be paid to the development of his musical style, the socio-cultural context in which he worked, the contemporary reaction to his music, and the evaluation of his achievement by posterity. Four credits.

Music 41 — Music and Theatre

An introduction to opera, musical comedy, and related genres such as dance and film music, with attention to the relationship between drama and music. A brief historical survey of each category with study of representative scenes and complete works. Four credits.

Music 42 — Words and Music

An historical survey 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. Topics also include traditional Anglo-American ballads and popular songs of 19th and 20th-century America. Four credits.

Music 43 — Choral Music

A survey of music for a *capella* choir and orchestally accompanied chorus. Topics include: 16th-century masses and motets (which will be examined from the viewpoint of style rather than liturgical function); oratorios, passions, and cantatas of Bach and Handel; the masses of Haydn, Mozart, and Beethoven; and choral works by various 19th and 20th-century composers. Four credits.

Music 44 — Music and Worship

A history of sacred music from the early Christian Church to Vatican II. This course includes a study of plainchant and polyphony in the Mass and motet of the Catholic church, the music of the Reformation and Counter Reformation, and the secularization of religious music in the concert hall in the 19th and 20th centuries. Four credits.

Music 50 — American Music

This course will survey three main repertoires of music in the United States: 1) folk and traditional music of urban, rural, and ethnic origin; 2) jazz; and 3) art music from Charles Ives to the present, with particular attention to the influence of science and technology on recent developments. Four credits.

Music 51-59 — World Music

Introduction to music of selected African, Asian and American cultures. Each culture will be approached through: 1. social and cultural context, 2. theoretical systems and musical instruments and 3. major musical and theatrical genres. Four credits.

Music 60 — Introduction to Electronic Music

This course will survey musical and scientific theories related to developments in electronic music. Topics will include: physical parameters of audio waveforms, and specific means of processing sound using analog synthesizers and computers. Students will be introduced to techniques of electronic music composition through the analysis of selected works as well as studio assignments. No prerequisite. Four credits.

Music 101 — Concerto

The study of representative works written for soloists and orchestra from the late 17th-century Concerto Grosso to the *Solo Concerto* of the 20th century. Examples will include the *Brandenburg Concertos* of J.S. Bach, the concertos for piano and violin of Mozart and Beethoven, and selected works of Brahms, Liszt, Rachmaninov and Bartok. Four credits.

Music 102 — Symphony

Introduction to the orchestra, its instruments and its repertory from the inception of public concerts in the 18th Century to the present day. Four credits.

Music 104 — Music for Keyboard

A study of representative works for keyboard instruments (the organ, the harpsichord, and the piano) from the 17th Century to the present.

Music 105 — Chamber Music

A survey of music for small instrumental and vocal groups from the 16th century to the

present. Examples include: the madrigal and chanson of the 16th century, the trio sonata of the 17th century, the string quartet, wind quintet, and other representative works from the 18th century to the present. Four credits.

Music 201, 202 — Theory of Music I, II

A two-semester intermediate theory sequence of the materials of modal and tonal music: elementary counterpoint, harmony, and analysis. The course is designed to develop musical skills and theoretical concepts (voice-leading, harmonization of melodies, figured bass, etc.) which underlie performance, analysis, and composition. Prerequisite: Fundamentals of Music or equivalent background. Eight credits.

Music 211 — History of Western Music I

Historical development of musical styles from the ninth to the middle of the 18th century. This course includes a survey of major composers and genres of the Middle Ages, Renaissance, and Baroque periods (i.e., from Gregorian Chant to J.S. Bach). Prerequisite: the ability to read music. Four credits.

Music 212 — History of Western Music II

Historical development of musical styles from the late 18th into the 20th century. A survey of major composers and genres of the Classic, Romantic, and Modern periods (i.e., from Haydn through Stravinsky). Prerequisite: History I or permission of instructor. Four credits.

Music 214 — Music of the 20th century

A study of representative works of the major composers of this century, illustrating their new compositional techniques and their relationship to the past (i.e., the music of Bartok, the different styles of Stravinsky, the atonal and serial music of Schoenberg and his followers). The course will also include selected readings of contemporary music theory and practice. Prerequisite: Fundamentals of Music or equivalent knowledge. Four credits.

Music 215 — Music of the Classical/Romantic Era

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. This course also will study music of the 19th century written after the death of Beethoven. Special emphasis will be placed 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 the instructor. Four credits.

Music 216 — Music of the Baroque Era

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 analysis will be drawn from the music of Monteverdi, Schuetz, Vivaldi, Handel, J.S. Bach, etc. Prerequisite: ability to read music, or permission of instructor. Four credits.

Music 217 — Music of the Medieval/Renaissance Era

The study of the development of Western music, both sacred and secular, from Gregorian Chant to the polyphonic mass, motet and madrigal of the 16th century. Prerequisite: ability to read music, or permission of instructor. Four credits.

Music 301-302 — Theory III, IV

Semester I will emphasize analysis of tonal music through the study of representative works of such composers as Bach, Haydn, Mozart, Beethoven, and Brahms. Semester II will focus on 20th-century musical systems through the study of compositional theory and the analysis of selected works of 20th-century composers. This advanced theory sequence will also include original composition. Prerequisite: Theory II. Eight credits.

Music 311-330 — Special Topics

Tutorials in computer music, orchestration, theory, composition, form and analysis, music history and jazz. By arrangement. Four credits.

Music 331-332 — Performance

Instrumental or vocal lessons for students of intermediate competency. Interested students must consult with the chair of the department. Four credits.

Music 333-334 — Advanced Performance

Instrumental or vocal lessons for students of advanced competency. Interested students must consult with the chair of the department. Four credits.

Music 400 — Senior Seminar

The Senior Seminar is designed to integrate the three areas of music: History, Theory and Performance. Required for music majors. Topics will be selected from the important repertoires of both Western and non-Western music. Prerequisite (or co-requisite): Music 212 and Music 302. Four credits.

Naval Science

Capt. Robert S. Badgett, USN, M.S., *Professor and Chair*

Cmdr. Paul L. Bennett, USN, M.S., *Visiting Lecturer*

Lt. Brian W. Burke, USN, M.S., *Visiting Lecturer*

Capt. Joseph F. Dunford, USMC, M.A., *Visiting Lecturer*

Lt. Nathan M. Grimes, USN, *Visiting Lecturer*

Lt. John L. Shea, USN, *Visiting Lecturer*

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 in 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.

Scholarship Program

High school seniors can apply through the national competition for a four-year Naval ROTC Scholarship. If selected for the four-year Naval ROTC Scholarship Program, they 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 four to six weeks duration, and are required to serve at least four years on active duty after commissioning.

College sophomores can apply through the national competition for the two-year Naval ROTC Scholarship Program. If selected, during their junior and senior years they will receive full tuition, all textbooks, military uniforms, and a \$100 a month subsistence allowance. In addition, they will attend the Naval Science Institute at Newport, R.I. for six weeks during the summer before their junior year, will be required to take certain college courses, and will undergo one summer training cruise of four to six weeks duration. They will be required to serve at least three years on active duty after commissioning.

College Program

Entering freshman students may apply directly to the Professor of Naval Science for enrollment in the College (non-scholarship) 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 students. College Program students are required to take certain college courses, to undergo one summer training cruise of four to six weeks duration the summer preceding their senior year and are required to serve at least three years on active duty after commissioning. Sophomore students may apply for enrollment in the two-year College (non-scholarship)

Program. If selected, during their junior and senior years in college they will receive uniforms, books when available in the Unit bookroom, and a subsistence allowance of \$100 a month. In addition, they will attend the Naval Science Institute in Newport, R.I. for six weeks before their junior year, will be required to take certain college courses, and will undergo one summer training cruise of four to six weeks duration during the summer preceding their senior year. They are required to serve at least 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 or her junior year. As a College Program Student, a student is eligible for Naval ROTC scholarships based on GPA and performance in the Naval ROTC Unit.

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 benefits provided to the NROTC students.

General Information

The Holy Cross NROTC Unit is composed of approximately 210 midshipmen. The battalion is divided into companies, and the overall leader is the Midshipman Battalion Commander, a senior who is chosen for outstanding leadership qualities. The battalion meets for drill periods once a week. In addition, each year the battalion sponsors an active social program which includes a fall and spring picnic, a spaghetti dinner, the Military Ball, and football, raquetball, basketball, ice hockey, and pool tournaments. During semester breaks, the Unit sponsors orientation trips to New London, Conn., to visit nuclear submarines; to Pensacola, Fla., to visit aviation units; to Boston or Newport, R.I., to visit Navy surface ships; and to Camp Lejuene, N.C., to observe Marine training. These trips are completely voluntary on the part of midshipmen.

Naval Science Courses

Naval Science 11 — Naval Orientation

A non-credit course, presented on a pass/fail basis, as an introduction to the customs, traditions, missions, rules and regulations of the Department of Defense and the United States Navy and Marine Corps. Topics include rank structure, uniform regulations, military law, terminology, ships and aircraft types, naval history, and present naval missions. No degree credit, but required for all midshipmen.

Naval Science 12 — Naval Ship 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 operation and ship stability characteristics are examined. No degree credit, but required of all midshipmen.

Naval Science 13 — Naval Ship Systems II

A continuation of the Ship Systems I course presenting an introduction to major shipboard, aircraft and land-based weapons systems utilized by the United States Navy and Marine Corps. The course is divided into the six specific areas that comprise a weapons system, including: sensors and detection systems, tracking systems, computational systems, weapon delivery systems, the fire control problem and system integration. Basic principles of electromagnetic theory and sound wave propagation, as they apply to radar systems and sonar systems are covered. No degree credit, but required of all midshipmen.

Naval Science 14 — Naval Seapower

An overview of American naval history beginning with the birthday of the U.S. Navy on

13 October 1775 until the present. The naval mission and role in United States history will be emphasized. Four credits.

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. Four credits.

Naval Science 42 — Operations Analysis

An introductory course to the procedures used in Naval Operations and Naval Shiphandling. Includes: Maneuvering Board Concepts, Rules of the Road and basic shiphandling. Four credits.

Naval Science 45 — Evolution of Warfare

The course is designed to cover the causes of continuity and of changes in the means and methods of warfare during major periods of history. It studies the evolution of strategic principles and the influence of economic, moral, psychological, political and technological factors and strategic thought. The course also examines the interrelationships between technological progress and military changes in rendering obsolete the successful strategies, policies, doctrines and tactics of the past. Four credits.

Naval Science 51 — Naval Organization and Management I

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. Four credits.

Naval Science 52 — Naval Organization and Management II

The study of Naval junior officer responsibilities in Naval administration. The course exposes the student to a study of counseling methods, military justice administration, Naval human resources management, directives and correspondence, Naval personnel administration, material management and maintenance, and supply systems. This capstone course in the NROTC curriculum builds on and integrates the professional competencies developed in prior course work and professional training. No degree credit, but required for all midshipmen.

Naval Science 55 — Amphibious Doctrine

Amphibious Doctrine is, at its core, a study of the evolutionary development of a unique form of armed engagement, i.e., the contested transition of military power from sea to land. Beginning with studies of selected examples of pre-20th century landings, the course uses the World War I landing at Gallipoli as the turning point in methodology. Study then progresses through World War II and the Korean War to the present. Throughout, the increasing complexity, and incredible detail, of amphibious operations is made evident. Four credits.

Philosophy

- Hanna Buczynska-Garewicz, Ph.D., *Professor*
 Hermann J. Cloeren, Ph.D., *Professor and Chair*
 George H. Hampsch, Ph.D., *Professor*
 Clyde V. Pax, Ph.D., *Professor*
 Thomas D. Feehan, Ph.D., *Associate Professor*
 Hilde S. Hein, Ph.D., *Associate Professor*
 Edward Hudlin, Ph.D., *Associate Professor*
 Joyce Kinoshita, Ph.D., *Assistant Professor*

Joseph Lawrence, Ph.D., Assistant Professor
 Daniel Shartin, Ph.D., Assistant Professor
 Mark J. Burke, S.J., M.A., Lecturer

The Department of Philosophy offers to both majors and non-majors an opportunity to pursue, in a formal fashion, a fuller and more reflective understanding of human experience as it has developed in intellectual, socio-political, aesthetic, economic, religious and moral ways. To its majors, through a series of electives and through a personal advisory program, it extends an opportunity to work toward a deep as well as broad philosophical understanding. Courses in the history of philosophy and those addressing contemporary movements within philosophy offer breadth; advanced seminars offer depth. To its minors, it offers the opportunity to tailor a program of philosophical study to fit individual interests, majors, and career plans. To all students, it extends an open invitation to participate in the grand philosophical dialogues that have shaped, and continue to shape, all human lives.

The courses offered by the department are open to the student body at large. However, for those freshmen who have not taken a Themes course, Critical Thinking or Introductory Logic, the intermediate and the advanced courses are open only with the approval of the department chair.

The minimum requirement for the major is 10 semester courses in philosophy, at least nine of which must be non-Themes courses and at least two of which must be chosen from within the Advanced (200) level. Upon deciding to become a philosophy major, a student chooses an advisor from the philosophy faculty in conjunction with whom he or she sets up a program of studies within the department. Although there are no extra-departmental requirements for philosophy majors, majors planning to do graduate work are strongly advised to study at least one foreign language.

The minimum requirement for the minor is 6 semester courses in philosophy, at least 5 of which must be non-Themes courses. Upon deciding to become a philosophy minor, a student chooses a co-advisor from the Philosophy faculty. Together with his or her philosophy co-advisor and the advisor from the major department, the student designs a program of philosophical study complementing his or her major interests.

In their senior year, majors and minors are invited to participate in a Senior Seminar Project. In addition to a wide range of general and more specialized courses, the department offers a number of seminars, tutorials and opportunities for independent study. From time to time the department also offers courses as part of various sequences in the Interdisciplinary Studies Program. Student-faculty community is deepened through informal conversation in the relaxed atmosphere of the Philosophy Common Room as well as through formal participation in departmental colloquia. Students who maintain a good scholastic record in philosophy may apply for membership in the Holy Cross Chapter of the National Honor Society in Philosophy, Phi Sigma Tau.

Introductory Courses

Philosophy 10 — Themes

A one-semester consideration of a single theme in philosophy specifically designed for freshmen and sophomores. Students will learn to think philosophically, as well as learn to read and write carefully about abstract ideas. Themes will vary from section to section and from year to year. Four credits.

Philosophy 20 — Team Theme

A team-taught version of Philosophy 10 above involving two or more professors.

Philosophy 30 — Intensive Freshman Seminar

A one-semester Honors-type seminar specifically designed for highly motivated freshmen. Enrollment will be limited to accommodate the critical discussions and intensive work that a seminar format allows. *Students will be selected by formal application to the instructor.* Applications for this course will be sent to first semester freshmen through the summer pre-registration mailing and second semester freshmen can pick them up in the professor's office during pre-registration period.

Intermediate Courses

Philosophy 101 — Metaphysics

Aristotle described metaphysics as the "science which takes up the theory of being as being and of what 'to be' means taken by itself." Before and since Aristotle the meaning and significance of metaphysics has been in dispute. While some thinkers have dismissed metaphysics as meaningless speculation, others have held it to be the center of western philosophy. Using primary texts of classical and contemporary writers, this course studies the origins of metaphysics in ancient Greece, major developments of metaphysical thinking, and contemporary meanings of and challenges to metaphysics. Four credits.

Philosophy 104 — Approaches to Ethics

An examination of the attempts to arrive at the foundations of ethical values and their meaning for 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. Four credits.

Philosophy 107 — Foundational Questions in Ethics

An explication 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. Four credits.

Philosophy 109 — Theory of Knowledge

This course addresses several specific questions in the field of Epistemology. The problems considered vary from year to year but in general the primary questions are: 1. What is it "to know" something? and 2. What in fact do we know? Reflection on these questions will involve consideration of the nature, value, limitations and justifications of knowledge claims. Four credits.

Philosophy 115 — Introductory Logic

This course is an introductory study of the formal structure of reasoning patterns such as deduction. It includes an introduction to formal languages, sentential calculus, and predicate calculus, as well as an investigation into logic's value and limits. Four credits.

Philosophy 122 — Critical Thinking

This includes issues formerly covered under the titles of informal logic, practical reasoning and classical rhetoric. Hence we will be dealing with the formation and critique of definitions, the meaning and evaluation of unsupported claims plus the recognition, generation and assessment of ordinary language arguments and their related fallacies. Since we are trying to make students more adept at gathering, analyzing, synthesizing and assessing information as well as identifying misinformation, disinformation, prejudice and one-sidedness, we will continually be engaged in class participation and discussion.

Philosophy 125 — Ancient Philosophy

A study of main contributions of ancient Greek philosophy to the development of Western thought. Students will be introduced to central problems raised by Pre-Socratic Greek Philosophy and will then study Plato, and Aristotle. Four credits.

Philosophy 130 — Medieval Philosophy

A study of selected medieval thinkers such as Augustine, Boethius, Dionysius, Anselm, Bonaventure, Aquinas, Scotus, and Ockham. The birth of scholasticism, an analysis of this philosophical movement in the 13th century, and its decline will be presented. Four credits.

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, his influence on the development of European rationalism, Spinoza, Leibniz. Equal attention will be given to the competing empiricist philosophers such as Bacon, Hobbes, Locke, Berkeley, Hume and their approach to philosophy and science. Four credits.

Philosophy 141 — Modern Philosophy II

A study of the later development of modern philosophy including Kant's new evaluation of metaphysics, epistemology, the nature of the sciences and morality. The growth of post-Kantian thought through Fichte and Hegel will be studied. Attention will also be given to the thought of those opposing idealism, especially Marx and Kierkegaard. Four credits.

Philosophy 143 — American Philosophy

A survey of the beginnings and development of American philosophic thought from the colonial period to the present. Detailed discussion of the work of several leading philosophers and of some important movements such as transcendentalism, pragmatism and analytic thought. Four credits.

Philosophy 144 — Contemporary European Philosophy

Some main currents in European philosophy will be dealt with: 1. Logical positivism/analytical philosophy, 2. Phenomenology, 3. Existentialism, 4. Neo-Scholasticism, 5. Marxism, 6. Structuralism & Post-Structuralism. Topics considered will include the attitudes of these philosophies toward science and technology, their understanding of historicity and their contributions to the philosophico-political dimensions of life. Four credits.

Philosophy 145 — Phenomenology: Introduction

An examination of the origin and intent of the contemporary philosophical movements of phenomenology and existentialism. Detailed study of selected texts of Husserl, Heidegger and others. Influence of existential thinking in the areas of psychology, sociology, aesthetics, political and religious thought. Four credits.

Philosophy 146 — Philosophy and Literature

The main purpose of the course is to introduce students to contemporary philosophical problems and to show how philosophical ideas live in the intellectual culture of the epoch. The cultural realm analyzed is that of great works of art. The analysis will focus on the influence some philosophical ideas have on literature and on the way writers express philosophical ideas. This purpose is accomplished through the simultaneous reading of philosophical and literary texts which present analogical ideas. The course deals with texts from the last hundred years. Literary texts used in this course are considered equally significant with philosophical ones. The principal objective of the course is to make obvious to students that philosophical ideas are indispensable components of intellectual life in the Western tradition. Understanding this tradition and active participation in it is impossible without philosophy. Philosophy exists not in an ivory tower but in all forms of intellectual life, and in literature in particular. Four credits.

Philosophy 151 — Indian Philosophy

Survey of the central ideas of philosophic thought in India. Examination of the origins of Indian philosophy in the Vedic hymns, the *Upanishads*, and the *Bhagavad-Gita*; study of the development of philosophy in the classical schools of Hinduism and Buddhism; brief consideration of selected texts of contemporary authors. Four credits.

Philosophy 152 — Chinese Philosophy

Survey of some of the main schools of philosophic thought in China: Confucianism and Taoism. Emphasis is placed upon the development and interaction of the various movements and their relation to Western ideas. Four credits.

Philosophy 154 — Philosophy East and West

A comparative study of selected philosophical questions as they arise in Eastern and Western thought. Topics may include the foundation of ethics, theories or aesthetics, justification of political authority, and concepts of existence, time and causality. Four credits.

Philosophy 157 — Bio-medical Problems

This course begins with an introduction to various ethical theories and basic ethical principles and proceeds to an analysis of specific ethical problems which arise in medical practice and genetic research. Occasionally, medical and legal experts are invited as guest lecturers. Four credits.

Philosophy 160 — Aesthetics I

Examination of selected issues from the history of Aesthetics. Traditional theories of aesthetics — imitation theory, formalism, expression theory — are discussed, as well as modern approaches and contemporary problems. Particular attention is given to the relation of art to society and socio/political issues, to the interaction of art and philosophy, and to the aesthetics of nature and everyday life. Four credits.

Philosophy 161 — Philosophy of Mind

An examination and discussion of such topics as the nature of consciousness, the self, and action; the relation between mind and body; the relation between thought and language. Four credits.

Philosophy 164 — Philosophy of History

The course surveys major philosophical theories of history. A variety of cyclical theories of history will be considered, ranging from views in antiquity to those of G. Vico in the 18th century and of Spengler and Toynbee in the 20th. The linear conception of history will be contrasted with dialectical views as developed in Hegel's idealist and Marx's materialist philosophy. Optimistic theories advocating the idea of progress will be contrasted with pessimistic theories that anticipate decline and deterioration. Four credits.

Philosophy 165 — Utopian Models in Political Philosophy

Classical designs of ideal societies (utopias) will be studied as a basis for an evaluative discussion of present-day interests in utopias. The course examines utopias as blueprints for a better future, as forms of escapism, as warnings against the danger of wholesale acceptance of the ideal of technical progress. Among the authors studied will be Plato, More, Bacon, Campanella, Zamiatin, Huxley, Orwell, and Skinner. Four credits.

Philosophy 166 — Theory of Communism

An in-depth analysis of Marxism-Leninism. A study of its basic tenets as applied practically in socialist societies 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. Four credits.

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. Four credits.

Philosophy 168 — Economics and Ethical Values

Ethical dimensions of contemporary economic practices, focusing on such issues as world hunger, worker rights, socio-political involvement of transnational corporations, income distribution, etc. The ethical dimension of capitalism, democratic socialism and communism as alternative economic models will also be explored. Four credits. Sometimes taught as ISP Sequence IV.

Philosophy 169 — Philosophy of Law

This course studies the history and nature of law. Attention is paid to Natural Law Theory, Formalism, Positivism and Realism, and the intellectual climate in which each tends to flourish. Philosophical issues such as legal causality, obligation, certainty, the relationship of law to morality, and the rationale for punishment are examined. Four credits.

Philosophy 171 — Philosophy of Science

An examination of the structure, function, value, and limits of science. Specific topics include the structure of scientific explanation, the role of experimentation, the nature of scientific progress, and the nature of scientific values. The course will also investigate whether the activities of science are both rational and ethical. Four credits.

Philosophy 172 — Philosophy and Biology

This course examines biology as related to the other physical sciences and in terms of its philosophical foundations and methodology. Attention is given to the classical

mechanism — vitalism controversy, to issues in evolutionary theory and to certain contemporary controversies, e.g., socio-biology, creationism, environmentalism. Four credits.

Philosophy 174 — Philosophical Anthropology

The philosophical approach to the understanding of the person as intentional thinker and actor. The nature of human freedom. An analysis of the language of human freedom and self-understanding. Four credits.

Philosophy 175 — Philosophy of Community

An exploration of the social dimensions of personal existence: meaning and direction of human life examined in terms of social interaction. Readings will be used from American and Continental traditions. Four credits.

Philosophy 176 — Philosophy of Technology

An examination of some of the social and intellectual issues implied by technology. The course explores epistemological and ethical questions at the root of technology and also its practical consequences. Particular examples are studied, e.g., the computer revolution, artificial intelligence, reproduction technology, nuclear weapons. Four credits. Sometimes taught as ISP Sequence XXII.

Philosophy 177 — Philosophical Perspectives on Women

This course surveys the classical literature of western philosophical views on women and the feminist response to it. Attention is given to feminism as a method of analysis as well as to representative issues whose philosophical significance has been identified by feminism, e.g. gender, friendship, dependence. Four credits.

Philosophy 178 — Philosophers on War and Peace

An exploration of some major philosophical issues concerning war and peace viewed through the classic writings of Kant, Clausewitz, Lenin, Wm. James, Tolstoy, Gandhi and contemporary authors. Emphasis is on the questions of the possibility of eliminating war, the morality of war both conventional and nuclear, and the moral problems involved with maintaining a policy of nuclear deterrence. Four credits. Sometimes taught as ISP Sequence XXXII.

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. Four credits.

Philosophy 184 — Faith and Reason

The distinction between God as an object of thought and God as the fundamental ground of prayer will be considered. Next there will be a consideration of the distinctive characteristics of religious faith and philosophical reason. The course will conclude with the attempt to unify these aspects of human activity within human life. Four credits.

Philosophy 185 — Philosophy and Myth

This course will examine 1) philosophy's own ground in mythical thinking (Parmenides, Plato), 2) the attempt to incorporate myth as an object of philosophical investigation (Hegel, Cassirer), and 3) the suggestion that philosophy might once again rejuvenate itself at the foundation of myth (Nietzsche, Heidegger). Four credits. Sometimes taught as ISP Sequence X.

Philosophy 190 — Seminar: Knowledge of Self

A joint venture of students and professor to address the question of self-knowledge critically. We will touch upon a number of classical philosophical issues such as: the mind/body problem, the elusiveness of self, and the cluster of problems centered around self-identity through time and beyond. This will involve extensive readings as well as intensive personal reflection and active group participation. Four credits.

Philosophy 191 — Seminar: Lying and Self-Deception

Philosophical analysis, both descriptive and normative, of lying, deception and self-deception. We treat various dimensions of truth bearing and deceptive speech-acts and

the intentionality involved, from the point of view of linguistics, epistemology, philosophy of mind and ethics. This will involve extensive readings, oral presentations and group discussions. Four credits.

Philosophy 193 — Seminar: Moral Reasoning

A critical study of ethical discourse particularly of what is ordinarily referred to as "moral reasoning". This will involve a brief study of some major normative and metaethical theories as well as certain common fallacies of moral reasoning. Emphasis will be placed on student participation in oral presentations and open discussions which will center around their own reasoning about contemporary moral problems. Four credits.

Advanced Courses

Philosophy 201 — Seminar: Language and Thought

Central themes of this study are the interdependence of language and thought, the resulting linguistic and conceptual relativity, and the critical function of linguistic analysis. Texts to be studied are taken chiefly from the works of Bacon, Locke, Berkeley, Hamann, Herder, Lichtenberg, Reinhold, Humboldt, Gruppe, F. M. Muller Cassirer, Langer, Whorf, and Austin. Four credits.

Philosophy 204 — Seminar: Problems in Metaphysics

A systematic reflection upon selected metaphysical questions such as time, identity and existence in both their classical and contemporary formulations. Four credits.

Philosophy 208 — Seminar: Problems in Theory of Knowledge

An intensive investigation of selected epistemological problems. Topics include the nature and role of justification, the modes of knowledge-acquisition, and the limits of human knowledge. Four credits.

Philosophy 210 — Seminar: Problems in Philosophy of Nature

A joint attempt of professor and student to understand, critically evaluate and contrast various philosophical theories on the nature of physical being. There will be particular emphasis on the continuity and evolution of philosophical thought from the ancients through the medieval and modern eras into the present. Four credits.

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. Four credits.

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, the 17th, the 18th and 19th centuries, and the present. Four credits.

Philosophy 226 — Seminar: Philosophy of Social Science

An examination of the differences between natural and social phenomena, of methodological issues such as explanation and understanding. Attention will also be given to the goal of "value free" interpretation and the problems of ideology in human science. Four credits.

Philosophy 232 — Seminar: Phenomenology II

Seminar examining major works of several masters of phenomenology and existential philosophy. Choice of texts and authors varies with semester. An introductory knowledge of the field is required. Four credits.

Philosophy 234 — Hermeneutics

A study of the problems of interpretation as it affects human knowing and action. The course examines classical and contemporary theories about interpretation and seeks to provide a framework for resolving difficulties arising from the interpretive character of human experience. Four credits. Sometimes taught as ISP Sequence XVII.

Philosophy 236 — Mathematical Logic

Formal language. Natural deduction systems and Axiomatics. Sentential calculus. First-order Predicate calculus. Graphs, Networks. Switching theory. Introduction to Automata theory. Presuppositions and philosophical value. Emphasis varies depending on student background and interests (Philosophy 115, Introductory Logic, is not a prerequisite). Four credits.

Philosophy 240 — Philosophy of Mathematics

An examination of the nature, function, value, and limits of mathematics. Topics include the nature of mathematical entities, the nature of mathematical proof, and the foundations of mathematics. Four credits.

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 sophists. Emphasis will be placed upon the study of the texts of Pre-Socratic philosophers and the interpretations of modern scholars. Four credits.

Philosophy 254 — Plato

An introduction to the philosophy of Plato: his dispute with the sophists of his day and the development of the theory of Ideas, the consequences of his theory for his understanding of the life of the soul in terms of love and knowledge, and his last critical reflections on his own major dialogues. Four credits.

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 *Nicomachean Ethics*. Four credits.

Philosophy 262 — Augustine

A study of Augustine's philosophy as it developed through the odyssey of his personal formation, with special emphasis on free will and evil, knowledge, soul and body and creation. Four credits.

Philosophy 266 — Thomas Aquinas

An introduction to the philosophical synthesis of Thomas Aquinas, his consideration of God, creation, nature, and person, as seen through a study of his principal writings. Four credits.

Philosophy 268 — Hume

A study of the origins of British Empiricism based on a study of Hume's *Treatise of Human Nature* and his *Enquiries Concerning Human Understanding and Principles of Morals*. Attention will be given to Hume's influence in the history of modern thought. Four credits.

Philosophy 270 — Kant

A reading course in the primary sources, concentrating on the first and second *Critiques* and on 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. Four credits.

Philosophy 275 — Hegel

An in-depth study of the philosophy of Hegel. This will include a probing and testing of his positions on the nature of reality and his 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. Four credits.

Philosophy 277 — Marx

An advanced-level investigation of the more important writings of Karl Marx with selections taken from his early, transitional and later periods. Special emphasis will be placed on the 19th century philosophical movements influencing Marx, his understanding of alienation, philosophy of history, political economy and his social theory. Independent research by the student will be stressed. Four credits.

Philosophy 278 — Kierkegaard

This 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 his influence on Sartre, Camus, Marcel and others. Four credits.

Philosophy 280 — Nietzsche

An advanced-level investigation of Nietzsche's work from the *Birth of Tragedy* to the final *Ecce Homo*. The approach will be historical and critical. Nietzsche's place in 19th century Western philosophy and his influence on 20th century philosophers will be stressed. Four credits.

Philosophy 283 — Heidegger

The course will consist of a reading and discussion of some of the major works of Heidegger. Special attention will be given to his criticism of Western philosophy, his understanding of truth, his teaching on the meaning of being human (*Dasein*), and to his pursuit of the question of the meaning of Being. Four credits.

Philosophy 288 — 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* and *Dialectics of Reason*. 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. Four credits.

Philosophy 291 — Wittgenstein

The course will provide an introduction to one of the most influential analytical philosophers by concentrating chiefly on his early *Tractatus Logico-Philosophicus* and his posthumous *Philosophical Investigations*. In addition to studying Wittgenstein's views on language, philosophy, science and ethics, the course will review the historical background to modern linguistic philosophy and outline some of its developments after Wittgenstein. Four credits.

Philosophy 295 — Special Topics and Tutorials

Independent study and tutorial work on various topics of special interest to individual students and faculty directors. Four credits.

Philosophy 298 — Senior Major Seminar

A seminar open to senior majors, and other qualified seniors, examining a broad philosophical topic from various perspectives. The selection of the topic is made by the professor and the prospective enrollees in meetings held during the semester prior to that in which the seminar is offered. Four credits.

Physics

Edward F. Kennedy, Ph.D., Professor

Ram S. Rana, Ph.D., Professor

Francis W. Kasetta, Ph.D., Associate Professor

Frank R. Tangherlini, Ph.D., Associate Professor

Robert H. Garvey, Ph.D., Associate Professor and Chair

Randy R. Ross, Ph.D., Associate Professor

Janine Shertzer, Ph.D., Assistant Professor

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, law, medicine, earth sciences, or engineering, or for entry positions in research, business, teaching, and other fields. Freshmen planning to major in physics are ordinarily enrolled in General Physics (Physics 23, 24), an intensive one year course in mechanics, wave motion and electricity and magnetism, with liberal use of calculus taken concurrently in the Mathematics Department.

The requirements for a major in physics consist of both a physics and a mathematics requirement. Physics majors must either take, or have had the equivalent of, Mathematics 31, 32 and 41. In addition, majors must choose, in consultation with their academic advisor, either Mathematics 42 or Physics 118 (Methods of Physics). The required physics courses for a physics major are General Physics (Physics 23, 24 and 27 or Physics 21, 22), Modern Physics (Physics 25), Classical Mechanics I (Physics 121), Electromagnetic Theory I (Physics 133), Quantum Mechanics I (Physics 144) and Thermophysics I (Physics 163). Including these required lecture courses, majors will select, in consultation with their advisors, a minimum of 10 lecture courses below the 200 level. Lastly, physics majors are also expected to elect at least two laboratory courses, besides the General Physics Labs (Physics 34 and 37).

All physics courses at the 100 level or above have Physics 22 or Physics 27 as a prerequisite. Any student seeking to take one of these upper level courses without taking the prerequisite listed should seek the permission of the instructor of the course in question.

Program of supervised research in theoretical or experimental physics are available for qualified physics majors. Research and student laboratory equipment include a 2-MeV, positive-ion, Van de Graaff accelerator, multi-channel pulse-height analyzers, ultra-violet monochromators, a precision refractometer, crystal growing equipment, a 7-inch variable gap precision electro-magnet, a 1.5 meter optical spectrograph, a high resolution grating spectrography (U.V. to far I.R.), an X-ray diffraction system, and several PCs. The College also has a VAX 11/780 computer with time available for student use in research.

The department also offers a variety of courses for non-science majors, including Earth Science (Physics 35), History and Philosophy of Science (Physics 39, 40), Introduction to Physics (Physics 41), Atomic and Nuclear Physics (Physics 42), Meteorology (Physics 53), Astronomy (Physics 54), The Scientific Viewpoint (Physics 56), The Physics and Chemistry of Energy (Physics 57), and The Physics of Music (Physics 59).

Physics 21 — General Physics

An introduction, with calculus, to the basic principles of mechanics, thermal physics, and wave motion. Three lectures and one (two-hour) laboratory period. Five credits.

Physics 22 — General Physics

An introduction, with calculus, to the basic principles of electricity and magnetism, and optics, with selected topics in modern physics, as time allows. Three lectures and one (two-hour) laboratory period. Five credits.

Physics 23 — General Physics 1

An intensive study of the basic principles of mechanics, including rectilinear and rotational motion, with liberal use of calculus. Primarily for freshman physics majors and any other freshmen taking calculus concurrently. Four credits.

Physics 24 — General Physics 2

Continuation of Physics 23. An intensive study of the basic principles of wave motion, thermal physics and electricity. Four credits.

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: Physics 22 or Physics 24. Four credits.

Physics 27 — General Physics 3

Continuation of Physics 24. An intensive study of the basic principles of magnetism, A.C. circuits and optics. Four credits.

Physics 34 — Freshman Physics Laboratory*

A required course for physics majors. Taken concurrently with Physics 24. One credit.

Physics 35 — Earth Science

An elective for non-science majors, the course studies the geological processes that influence the surface and internal structures of the earth. The nature of the earth as an evolving planet is explored, including the implications of historical geology and the theory of plate tectonics (continental drift). Four credits.

Physics 37 — Sophomore Physics Laboratory*

A required course for physics majors. Taken concurrently with Physics 27. One credit.

Physics 39 — History and Philosophy of Science I

An elective for non-science majors. Development of ideas about the solar system and the atom from the ancient Greeks to the times of Galileo and Newton. The decline of science in late Roman times and the critique of astrological determinism. Islamic science and the infusion to Europe. Development of the concept of impetus and momentum. "From closed world to infinite universe." Newtonian gravity and the critiques of Berkeley, Mach and Einstein. "Chemical philosophy" from Boyle to Avogadro. Four credits.

Physics 40 — History and Philosophy of Science II

History of optics and electromagnetism from the Greeks and the Chinese to Maxwell. Einstein's special and general theories of relativity. Wave-particle duality and the discovery of quantum mechanics. Debate with the Copenhagen school over deterministic versus probabilistic descriptions of nature. Nuclear physics and its problems. Elementary particles and the quest for beauty in science. Origin and evolution of life; reductionism and teleology. Modern cosmology and the "big bang." Intended for non-science majors. Four credits.

Physics 41 — Introduction to Physics

An elective for non-science majors. Topics are selected from classical physics, Einstein's relativity, modern physics, and contemporary problems in physics. Four credits.

Physics 42 — Introduction to Atomic and Nuclear Physics

An elective for non-science majors. Topics include atomic structure, radioactivity, nuclear reactions, fission, fusion, and applications of nuclear physics, including nuclear energy, nuclear weapons and carbon dating. Four credits.

Physics 53 — Introduction to Meteorology

An elective for non-science majors. Atmospheric properties. Solar and terrestrial radiation. Cloud types and their causes. Thunderstorms. Extra-tropical cyclones and anticyclones (low and high pressure systems) — causes and effects. Tropical cyclones. Forecasting. Climate and climatic changes (ice ages). Stratospheric ozone. Optical atmospheric phenomena. Four credits.

Physics 54 — Astronomy

An elective for non-science majors. 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. Four credits.

**Each of these laboratory courses is taken as a fifth course. The course, while figured into the Q.P.I., does not count toward the 32 courses required for graduation. Two of these laboratory courses must be taken by any physics major before graduation.*

Physics 56 — The Scientific Viewpoint

An elective for non-science majors. An introduction to the scientific interpretation of reality. The differences between classical and modern physics are discussed. The problematic relationship between science and technology is discussed. The explicit and implicit assumptions on which all technology is based are examined. Four credits.

Physics 57 — Physics and Chemistry of Energy

An elective for non-science majors. An introduction to the laws of thermodynamics and their implications and to the ways these laws are used by physicists and by chemists. Introduction to non-material concepts in physics such as waves, fields, and bonds. Includes discussion of electromagnetic radiation, nuclear force, chemical bonds. Four credits.

Physics 59 — The Physics of Music

An elective for non-science majors. An introduction to the science of acoustics and its application to music. Includes wave motion, vibration and resonance, the production and reception of musical sound, and the physics of musical instruments. No prior knowledge of music or physics required. Four credits.

Physics 81 — 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. Four credits.

Physics 91 — Radiological Physics

Nature and origin of radiation, fundamentals of radiation dosimetry, interaction of radiation with matter, environment and physiological systems. Production, detection and applications of different types of radiation. Principles of radiation protection. Radiation Dose Calculations, Radiation Measurements. Practical use of Radionuclides. Nuclear weapons. Ionizing radiation and public health. Four credits.

Physics 92 — Topics in Biophysics

An introductory course. 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. Four credits.

Physics 111 — Modern Physics Laboratory*

Experiments in modern physics including the Millikan oil-drop experiment, gamma-ray spectroscopy and absorption, the Franck-Hertz experiment, and measurements of e/m for the electron, of Planck's constant, of the Balmer lines, and of the speed of light. Four credits.

Physics 115 — Optics

Geometrical Optics: Fermat's Principle, laws of reflection and refraction at plane and curved surfaces, image-forming properties of mirrors and lenses, aberrations, aperture and stops, optical systems. Wave Optics: interference, diffraction, polarization, thin films, scattering of light and holography. Quantum Optics: optical spectra, lasers. Four credits.

Physics 116 — Optics Laboratory*

Optical instruments such as the interferometer, refractometer, spectrometer and polarimeter are used to investigate optical properties such as refractive index, optical activity, magneto- and electro-optical properties of matter. Lasers and holography are also a part of this laboratory. Four credits.

Physics 118 — Methods of Physics

Provides a working knowledge of the mathematical techniques needed for the study of physics at the intermediate and advanced level; includes vector calculus, linear differential equations, partial differential equations, matrices, Fourier Series and transforms, etc. Four credits.

**Each of these laboratory courses is taken as a fifth course. The course, while figured into the Q.P.I., does not count toward the 32 courses required for graduation. Two of these laboratory courses must be taken by any physics major before graduation.*

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 and normal coordinates, beat phenomena. Four credits.

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. Prerequisite: Physics 121. Four credits.

Physics 133 — Electromagnetic Theory I

Review of Vector Analysis; Electrostatics: The Electrostatic field and potential, Div. and Curl of E-field, work and energy in electrostatics; special techniques for calculating potentials, E-fields in matter. Magnetostatics: The Lorentz and Biot-Savart's Laws, Div. and Curl of B-field, magnetic vector potential, magnetostatic fields in matter; Electrodynamics: EMF, Faraday's Law, Maxwell's equations. Four credits.

Physics 134 — Electromagnetic Theory II

Electrodynamics before Maxwell, Maxwell's equations in vacuum and inside matter; Boundary Conditions, Potential formulation of electrodynamics, Energy and Momentum in electrodynamics. EM waves: wave equation, EM waves in non-conducting and conducting media. Electromagnetic radiation: Dipole radiation and radiation from a point charge. Some applications of EM theory in Solid State, Astrophysics, Plasma Physics and Optics. Prerequisite: Physics 133. Four credits.

Physics 135 — Electronics

Analog electronics is developed starting with Kirchhoff's Laws applied to DC and AC network analysis. The physics of semi-conductors and the properties of diodes and transistors are studied with various circuit applications, e.g., rectifiers, regulators, amplifiers, oscillators, etc. Principles of feedback systems are covered and applied to operational amplifier circuits. Four credits.

Physics 136 — Electronics Laboratory*

AC and DC circuits, low- and high-pass filters, diode characteristics, rectifiers, transistor characteristics, amplifiers, multiple stage amplifiers with feedback, oscillators, operational amplifiers, TTL integrated circuits. Four credits.

Physics 144 — Quantum Mechanics I

The postulates of quantum mechanics, one-dimensional problems, and three-dimensional problems, including the hydrogen atom. Prerequisite: Physics 25. Four credits.

Physics 145 — Quantum Mechanics II

Operator methods for the quantum-mechanical, harmonic oscillator. Perturbation theory, Fermi's Golden Rule No. 2. Matrix methods in quantum mechanics. Angular momentum and spin. Parity. Pauli principle and applications. Virial Theorem. Topics from atomic, molecular, and nuclear physics, and elementary particles. Prerequisite: Physics 144. Four credits.

Physics 154 — Theoretical Physics

Selected topics in theoretical physics. Topics in previous years have included advanced dynamics and general relativity and cosmology. Four credits.

Physics 155 — Nuclear Physics Laboratory*

Counting statistics, beta counting and complex nuclear decay, nuclear electronics pulse tracing, alpha spectroscopy, gamma spectroscopy, angular correlation, neutron activation, measurement of thermal neutron cross sections, Van de Graaff accelerator operation, Rutherford scattering, charged-particle-induced nuclear reactions. Four credits.

**Each of these laboratory courses is taken as a fifth course. The course, while figured into the Q.P.I., does not count toward the 32 courses required for graduation. Two of these laboratory courses must be taken by any physics major before graduation.*

Physics 161 — Solid State Laboratory*

Certain topics in solid state physics are studied experimentally. These include crystal structure using X-ray diffraction methods, optical spectroscopy of solids, thermal and magnetic properties using susceptibility and resonance methods, and electron transport in semiconductors. Four credits.

Physics 163 — Thermodynamics I

Basic concepts and the laws of thermodynamics are presented and applied to various systems in equilibrium, including gases, magnetic materials, and solids. The concepts of temperature, heat, work, entropy, and the thermodynamic potentials are developed. Reversible and irreversible processes are analyzed. Four credits.

Physics 164 — Thermodynamics II

The fundamentals of kinetic theory and statistical mechanics are discussed. Fluctuations in equilibrium systems are discussed. Maxwell-Boltzmann, Bose, and Fermi statistics are developed and applied. Special topics in solid state physics (magnetism and heat capacities) are discussed. Prerequisite: Physics 163. Four credits.

Physics 181 — Introduction to Astrophysics

A survey course at the introductory level of selected topics of current interest in astrophysics such as solar physics, stellar evolution, stellar remnants (white dwarfs, neutron stars, black holes), cosmological models for the origin of the universe. This course is designed for science majors who have had one year of general physics. Four credits.

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 graduate levels. Four credits per semester.

Physics 203, 204 — Physics Seminar. Four credits per semester.

Physics 205, 206 — Independent Study. Four credits per semester.

Political Science

Judith A. Chubb, Ph.D., *Associate Professor and Chair*

Caren G. Dubnoff, Ph.D., *Associate Professor*

Walter T. Odell, Ph.D., *Associate Professor and Acting Chair*

David L. Schaefer, Ph.D., *Associate Professor*

Selma Botman, Ph.D., *Assistant Professor*

Janet M. Grenzke, Ph.D., *Assistant Professor*

Bradley S. Klein, Ph.D., *Assistant Professor*

J. Ann Tickner, Ph.D., *Assistant Professor*

Maurizio Vannicelli, Ph.D., *Assistant Professor*

Paul H. Zernicke, Cand. Ph.D. *Instructor*

George M. Lane, M.A., *Visiting Lecturer*

Political science is the study of government — from philosophical questions regarding the ideal form of government, to the political dynamics of specific sovereign states and the larger international system, to broader theories attempting to explain political behavior in its various forms. The Political Science major is composed of four sub-fields: Political Philosophy, American Government, Comparative Politics, and International Relations. The

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major is designed to provide both breadth and depth knowledge. Introductory courses in each of the four sub-fields are required for Political Science majors. In addition to the four introductory courses, Political Science majors must take six upper-level courses in any of the four sub-fields for a total of ten courses required for the major. A grade point average of 2.0 in the major is required for graduation. Majors are also strongly encouraged to take courses in related fields like history, economics, and sociology. Knowledge of a modern language is highly recommended as well, especially for students considering careers in the international field.

The study of Political Science is valuable for non-majors as well as majors. Today, as in the Greek city-states of Plato and Aristotle, every citizen has a responsibility to learn about the workings of the political system of which he or she is a part, to understand other nations and the workings of the international system so as to be able to make informed choices regarding foreign policy issues, and to understand the philosophical and ethical underpinnings of competing ideologies, political choices, and political systems.

Beyond the demands of intelligent citizenship, in both an American and a world context, a Political Science major provides good training for certain kinds of career choices. These include teaching, the legal profession, government service at the federal, state or local level, international business and international organizations. Finally, apart from a student's ultimate career plans, a Political Science major helps students to develop powers of reasoning, critical and analytical skills, and competence in oral and written expression.

Membership in Pi Sigma Alpha, the national student honor society in political science, is open to students with distinguished records.

Introductory Courses

Political Science 100 — Principles of American Government

This course aims at providing a basic understanding of the nature of the American political system by examining political behavior, such as voting, public opinion, interest group activities and decision-making in institutions of American national government, such as Congress, the Presidency and the Supreme Court. Attention is also given to the ideological and institutional foundations of American government. Four credits.

Political Science 101 — Introduction to Political Philosophy

Concise survey of history of political philosophy. Intended to introduce the student to some of the major alternative philosophic answers that have been given to the fundamental questions of political life, such as the nature of the good political order and the relation of the individual to the community. Authors to be studied include Plato, Aristotle, Machiavelli, Hobbes, Rousseau, and others. Four credits.

Political Science 102 — Introduction to Comparative Politics

An examination of the political systems of selected foreign societies to illustrate major types: Western and non-Western, democratic and authoritarian, mature and developing. Four credits.

Political Science 103 — Introduction to International Relations

Study of relations between nations and impact of emerging trans-national forces. Course examines a variety of conceptual approaches to understanding global politics and the manifestation of these theories in practice. Among topics addressed are: modes of influence, models of diplomacy, war and peace issues, the role of transnational forces, regional and universal international organizations, international economic relations, human rights in foreign policy, and the impact of science and technology. Four credits.

Political Science 104 — Introduction to Catholic Political Thought

The purpose of the course is to provide students with an understanding of the major principles that have been the basis in the past and the present for Catholic thought on political life. Sources studied will vary from year to year but are most likely to include the teaching of St. Paul, Augustine, Aquinas and also of such contemporary writers as Murray, Rommen and Coleman. Four credits.

Intermediate Courses

Political Science 201, 202 — The Supreme Court and the Constitution

A two-semester course that examines the ways in which the Constitution has been defined over time by the Supreme Court. Topics include formation of the Constitution; separation of powers, judicial review, congressional and presidential authority; citizenship, suffrage and representation; individual liberties. Emphasis on the nature of legal reasoning and judicial process. Prerequisite: Political Science 100 or permission. Eight credits.

Political Science 203 — The American Legal System and Judicial Behavior

A study of origins of common, written, and administrative law, nature of the legal system, relationship of Supreme Court to Circuit Courts, Circuit Courts to District Courts, State Court systems, with special emphasis on and the role of courts in a democratic society to decision-making process, additional topics as warranted. Prerequisite: Political Science 100. Four credits.

Political Science 204 — American Politics and Social Change

Approaches may vary, including emphasis on: possibilities and limits for democratic control of the economy; political participation of social, ethnic, and racial groups; and the impact on politics of social and economic change. Prerequisite: Political Science 100. Four credits.

Political Science 206 — Public Policy

Political analysis of the making of domestic public policy. The focus is on who gets what, why and how in the policy process. Central questions: Why and when should government act? Can government act when it wants to? Case studies are used to examine institutional roles in public policy making and to gain substantive knowledge of selected policy areas. Prerequisite: Political Science 100 or permission. Four credits.

Political Science 207 — American Presidency

The course is an intensive study of the Presidency, emphasizing the use of original materials and contemporary literature. Topics include the founding period, presidents in the Presidency, the modern president in foreign and domestic affairs, and contemporary views of the importance of the personality of the president. Prerequisite: Political Science 100. Four credits.

Political Science 208 — U.S. Congress

The course examines congressional behavior over time. Whom does Congress represent? Is Congress responsible? Topics include: the relationship between Congress and the presidency, Congress and the bureaucracy, Congress and the Courts. Comparative perspectives on legislative politics may be used. Prerequisite: Political Science 100. Four credits.

Political Science 209 — 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. Prerequisite: Political Science 100. Four credits.

Political Science 210 — Interest Groups and Social Movements

Investigates competing perspectives on pluralism in America. How and why do social movements arise? What are the consequences of the historical pattern of interest group politics in America? Students will apply different theoretical perspectives that explain the role of groups and movements to concrete cases, evaluating the evidence provided for competing theories. Prerequisite: Political Science 100. Four credits.

Political Science 211 — American Political Parties

Why did American party politics develop the way it did? What are the consequences of this development for the mobilization of consent and responsible government? Topics may include: party identification among the electorate; the operations of parties at the local, congressional, and presidential level; and American party politics in comparative perspective. Prerequisite: Political Science 100. Four credits.

Political Science 212 — Politics and the National Bureaucracy

A survey of the political characteristics of bureaucratic decision-making with special emphasis on the relationships between the President, Congress, and the bureaucracies in the formation and implementation of public policy. The focus will be on public administration and bureaucratic accountability at the national level. Prerequisite: Political Science 100. Four credits.

Political Science 213 — Reform Movement in America

Focusing on the Populists, the Progressives, and the New Deal, this course will analyze the historical tension between capitalism and democracy. Special attention is devoted to Theodore Roosevelt, Woodrow Wilson and Franklin Delano Roosevelt as a basis for questioning standard historical interpretations. Four credits.

Political Science 216 — Electoral Politics

Course focuses on the question of how do voters, candidates, political parties, and other political actors operate in national elections. Knowledge about presidential and congressional elections is then applied to understanding practical concerns of campaigning, such as polling, voter organization, and the mass media. Four credits.

Political Science 225 — Democratic Political Thought

A study of the relation between democratic values and democratic institutions from the classical age to the modern industrial state. Emphasis on the attempts of various theorists to identify and explain the significance of democratic values, the problems arising from implementing them and the methods for managing those problems. Authors studied will vary from year to year but will most likely include Aristotle, Rousseau, De Tocqueville, Mill, Dahl and Pateman. Four credits.

Political Science 227, 228 — 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. Cross-registered as History 61, 62. Eight credits.

Political Science 229 — Contemporary Political Theories

Critical examination of works by several 20th century political thinkers, evaluating their diagnoses of contemporary political problems and their proposed solutions to those problems. Specific authors read and topics covered may vary from year to year; recent readings included John Rawls' *A Theory of Justice*, Robert Nozick's *Anarchy, State and Utopia*, and Irving Kristol's *Two Cheers for Capitalism*. Four credits.

Political Science 230 — Politics and Literature

Examination of fundamental problems of political life through the study of literary works dealing with these problems. Typical readings include Shakespeare's *Coriolanus* and *Julius Caesar*; Swift's *Gulliver's Travels*; di Lampedusa's *The Leopard*; James' *The Bostonians*; and Koestler's *Darkness at Noon*. Four credits.

Political Science 231 — Modern Political Philosophy

An in-depth study of works by several major political philosophers of the 16th through 19th centuries, such as Locke, Montesquieu, Rousseau, and Burke, stressing the relevance of their thought to an understanding of the foundations of contemporary politics and to the evaluation of alternative solutions to contemporary political dilemmas. Four credits.

Political Science 232 — Science, History and Political Philosophy

Study and evaluation of the philosophic foundations of historicism and positivistic social science, and their impact on contemporary politics and political thought. Readers will include works by Kant, Hegel, Nietzsche, Max Weber, and Leo Strauss. Four credits.

Political Science 233 — American Political Thought, I: to 1850.

This course focuses on some of the most important texts setting forth the principles underlying the founding of the American regime, as well as the subsequent development of

those principles up to the pre-Civil War period. Two non-American writers (Locke and Tocqueville) are included because of the influence of their works on American political thought. Four credits.

Political Science 234 — American Political Thought, II: 1850 - present.

This course traces the development of American political thought from the slavery controversy and the Civil War up to the present. Major themes include: Lincoln's "re-founding" of the American regime; the transformation of American liberalism by Woodrow Wilson and Franklin Roosevelt; black political thought; and recent "radical" and "neo-conservative" thought. Four credits.

Political Science 243 — Atlantic Relations

Course examines the relationship between the United States and Europe going beyond the disputes and clashes which characterize the Atlantic Partnership and appraising its internal dynamics, sources of conflict and elements of convergence. Prerequisite: Political Science 103. Four credits.

Political Science 245 — Federalism and the Nationalization of American Politics

This course investigates the constitutional division of powers between the national and state governments, fluctuations in the actual division of such power and the implications of this organization of government on who gets what, when, where, and how. The advantages and disadvantages of this arrangement are assessed. Prerequisite: Political Science 100. Four credits.

Political Science 250 — Politics of Revolution in Developing Nations

Study of the problems faced by developing nations and the social, economic, and political conditions which render the occurrence of an attempt at a revolutionary solution of these problems likely. Comparison of "model" cases to try to understand what shapes the course of revolutions and what revolutions change or leave unchanged. Prerequisite: Political Science 102. Four credits.

Political Science 251 — Latin American Politics

Comparative study of the politics of representative Latin American countries, the political culture processes and institutions of these societies will be analyzed and compared with reference to dominant themes in contemporary theories of social and political change. Prerequisite: Political Science 102. Four credits.

Political Science 255, 256 — Soviet Political Development, 1917-1953;

Contemporary Soviet Politics and Society

A two semester sequence dealing with the evolution of the Soviet political economic and social system from 1917 to the present. The first semester will focus on the ideological bases of the soviet regime, the Revolution and the Leninist and Stalinist period (in particular the political and ethical dilemmas associated with the rapid modernization of a backward country). The second semester will focus on political, social and economic development from the death of Stalin in 1953 to the present. Topics include the rise and fall of Khrushchev, the organization and role of the communist party, the problems of essentially planned economy, social problems and policies and dissent. Prerequisite: Political Science 102. Eight credits.

Political Science 257 — Politics of Development

The position of Third World countries in the international system, past and present. Options and strategies for promoting "development." Alternative models for Third World modernization. Options available to developed countries for assisting Third World development. Prerequisite: Political Science 102. Four credits.

Political Science 259 — Politics of the United Kingdom

Examination of the political system of the United Kingdom, including an analysis of the effect of different nationalities on the state's politics and an evaluation of the impact of the effects of regional, social and international factors on party structure and policy output. Four credits.

Political Science 260 — Republic of Ireland

In-depth analysis of how the Republic was formed, and how it has become a stable, progressive two-party democracy of increasing importance. Special emphasis to be given economic development, European Economic Community matters, and cultural heritage. Four credits.

Political Science 261 — Politics of Africa

An examination of the process of establishing political order and providing for change in contemporary Africa. Topics to be considered will include; problems of decolonization, national integration and mobilization, parties, ideologies, elites, and political symbols. Prerequisite: Political Science 102. Four credits.

Political Science 262 — Politics of Ulster

A survey of the social, economic and political developments that cause this community to be divided, with special emphasis on the performance of the defunct Stormont Regime, the role of the Irish Republican Army and the Protestant extremists, the balance sheet of direct rule from Westminster, the role of the Dublin Government, and future prospects. Four credits.

Political Science 263 — 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. Cross-registered as History 177. Four credits.

Political Science 264 — Government and Politics of the Middle East

The course will focus on inter states' politics and international relations of the modern Middle East. It will attempt to explain the evolution and functioning of several phenomena: Modern states, political institutions, elite's and social classes, the state of Islam and others. Special emphasis will be laid on the dynamic and political aspects of the region: Revolutions, Wars, great powers influence and inter-Arab relations, nationalism, and Islamic fundamentalism. The course will commence with a brief analysis of the perceptions that Middle Easterners and Westerners have held about each other dating from the days of the Crusades. It will then deal with the rise of colonialism, the development of nationalism and the growth of conflict in the region and ending with the resurgence of religion in the Middle Eastern politics at the current time. Four credits.

Political Science 265 — Contemporary Western European Politics

Analysis of political culture, structure, and processes of major Western European powers: Great Britain, France, Italy and West Germany. Examination of contemporary political issues facing these countries. Prerequisite: Political Science 102. Four credits.

Political Science 267 — Politics, Literature and Music of Africa

This course will be team taught and explore Africa from colonial to modern times, emphasizing the political, literary and musical changes during this period. With special focus on Nigeria, the East African Community and South Africa. This course is part of ISP Sequence XI. Four credits.

Political Science 268 — International Communism

The course focuses first on the evolution of the relationship between the Soviet Union and the international Communist movement, including both ruling and non-ruling parties (e.g., the seizure of power in Eastern Europe, the Yugoslav split, the Hungarian revolt of 1956, the Sino-Soviet split, the Czech invasion of 1968). It then examines attempts to elaborate alternatives to the Soviet model of Communism in Eastern and Western Europe. Prerequisite: Political Science 255 or permission of instructor. Four credits.

Political Science 270 — Politics of European Integration

Historical survey of the ideas, forces, and processes that led to the creation and expansion of the institutions of the European Community, with special emphasis on the role of supranationalism and functionalism in these developments. Course will conclude with an appraisal of the Community's future in light of the current inflation, its expansion to include underdeveloped countries, and Britain's demand that financial arrangements be amended. Prerequisite: Political Science 103. Four credits.

Political Science 271 — United States and the Middle East

This course will discuss the relations between the United States and the Middle East, beginning with the early interest of American missionaries and oil men in the region. The bulk of the course will deal with events in the region since the creation of Israel, and how they have affected, and been affected by U.S. foreign policy. The primary goals of the course are to give the student a better understanding of the recent history of the Middle East, U.S. interests in the region, and how the U.S. has attempted to promote these interests. Prerequisite: Political Science 103. Four credits.

Political Science 274 — Nationalism in World Politics

This course will examine 19th century notions of nationalism and then it will move into a discussion of how the nation-state has survived. The relationship between nationalism and race, class, religion and territory will be analyzed through case studies on Jewish-Arab nationalism, Irish nationalism, and Algerian nationalism. Prerequisite: Political Science 102 or 103. Four credits.

Political Science 275 — International Political Economy

This course will examine the interrelations of these various types of economic issues with international politics. Central questions to be covered: North-South relations, the effects of economic interdependence, on the domestic economic policies of advanced capitalist states and the level of international tension dependency, debt repayment and development, access to resources, trade and technology transfer as it has affected the rivalry between the superpowers. Other topics in international political economy, such as international trade and aid, monetary issues and multinational corporations will be introduced as they relate to these larger issues. Prerequisite: Political Science 103. Four credits.

Political Science 278 — Arab-Israel Conflict

The course will attempt to provide the students with knowledge and understanding of the components of the Arab-Israeli conflict. Discussions will focus on the basic enmity between the parties, the clashes and wars which ensued, the attitude of local actors and the great powers, the PLO and on prospects for Arab-Jewish understanding. Four credits.

Political Science 279 — Soviet Foreign Policy

A survey of the historical, ideological and institutional factors that account for the role of the USSR in the world today, with special emphasis on the causes and consequences of the Cold War, Soviet aims in Central and Western Europe, Soviet relations with the Middle East, and the USSR's performance in international bodies. Prerequisite: Political Science 102 or 103, or permission. Four credits.

Political Science 280 — British Foreign Policy

Survey of the problems, interests and dynamics that led to the dismantling of the world's largest empire in a context of more intricate Commonwealth relations. The new directions of British foreign policy towards the U.S. and Europe will be juxtaposed with those towards Southern Africa. Four credits.

Political Science 282 — American Foreign Policy

This course analyzes and appraises the evolution of the foreign policy of the United States. Particular emphasis will be placed on the historical, political, cultural-ideological, and economic factors which have influenced American behavior in world politics. Prerequisite: Political Science 100 and 103. Four credits.

Political Science 283 — International Organization

This course will examine the role of international organizations with international relations. While the United Nations system will be the major focus of attention, intergovernmental organizations such as NATO and EEC and GATT will also be discussed, with a view to evaluating if and how these organizations contribute to international conflict management, economic cooperation and a more equitable distribution of global resources. Prerequisite: Political Science 103. Four credits.

Political Science 284 — War and Conflict Resolution

In-depth analysis of the various interpretations of the roots and manifestations of war and

of the most relevant proposals for conflict resolution. The approach of the course is interdisciplinary, drawing from political science, philosophy, psychology, sociology, and literature. Four credits.

Political Science 286 — International Law

An introduction to public international law focusing on 1) the nature and substance of international law, covering such standard topics as sovereignty, jurisdiction, peaceful settlement of disputes, neutrality, laws of war, international crimes, conflict of laws, and the status of the individual in international law; and 2) the place of law in the international political system, including such questions as the nature and sources of international legal obligation, the problem of enforcement, the processes of norm-creation and law-making, and non-Western doctrinal challenges. An "internal" casebook approach to the substance of international law and the nature of legal reasoning will be combined with an "external" political analysis of the international legal system. Combining these perspectives will provide a clearer understanding of what international law is *and* what it is not, what it can do and has done as well as what it cannot do and seems unlikely to be able to accomplish in the future. Prerequisite: Political Science 103. Four credits.

Political Science 288 — Power, Morality and Foreign Policy

This course seeks to explore the doctrine of *Realpolitik* or power realism, the view that international politics is — and must be — governed solely by considerations of national interest defined in terms of power. To what extent does realism describe the actual basis of past and present international politics? Can considerations of justice and equity be successfully incorporated into national foreign policies, given the will to do so? In particular, must a successful foreign policy always be amoral? Prerequisite: Political Science 103. Four credits.

Political Science 290 — National Security Policy

National security policy has become an intrinsic aspect of American foreign policy and, because of high levels of defense spending, has obvious ramifications also on the domestic political process. This course will examine the meaning of national security and the development of strategic thought and security policy. Topics to be included are the World Wars, limited wars, nuclear war and crisis management. Attention will also be paid to the problems of civil-military relations, the costing of military alternatives, the assessing of threat to security and defensive military capabilities. Particular emphasis will be given to security and interdependence in a nuclear age. Four credits.

Advanced Courses and Seminars

Political Science 300 — Law, Politics and Society

This course will examine the relationship of the American legal system to certain critical social and political processes. After a survey of existing law on civil liberties and rights, the role of groups in bringing test cases and the dynamics of civil liberties litigation will be discussed, using case studies involving political surveillance, racial equality, church-state issues, consumer rights, women's rights and other issues. Implementation of court decisions will also be assessed. Four credits.

Political Science 302 — Seminar on Urban Policy

The seminar will discuss specific policy areas as they have developed in the urban arena. Students will be required to select and become specialized in one policy area. The ways in which the politics of the metropol, the state and the nation affect public policy in contemporary American cities will be examined. Prerequisites: Political Science 100; 209 or permission. An urban studies, urban history, or urban sociology course would also prepare the student for this seminar. Four credits.

Political Science 303 — Seminar on Religion and Politics

Advanced analysis of the historical and current role of religion and religious groups in American politics. How have religious interests shaped and affected government and policies? How should government relate to religious interests and values? What is the proper

relationship between church and state in a liberal democracy? What's new about the New Christian Right? Four credits.

Political Science 304 — Research Seminar of Public Policy

An advanced seminar for students prepared to do research on contemporary issues of public policy. The members will select a single policy area, devise a research project to provide answers to some central questions of this area, conduct the research, and write a final term report on the policy in question. Intended for advanced undergraduates with research skills. Prerequisites: Political Science 100; 206 or permission. Four credits.

Political Science 306 — Seminar in Constitutional Law

A study of selected problems of individual liberties, the theory and history underlying them. Topics may include the rights of the accused in the U.S., the right to privacy, the 5th and 14th amendments, prohibition on racial and sexual discrimination. Prerequisites: Political Science 201; 202. Four credits.

Political Science 307 — Government and Business

Analysis of the role of commercial life in a liberal democratic regime and an evaluation of the various policy options available to government to promote, regulate, and suppress specific forms of economic behavior. Regulation by independent commission, wage and price controls, and antitrust policy are among the topics to be addressed. Prerequisite: Political Science 100. Four credits.

Political Science 308 — Women and Politics Seminar

This course will analyze the role of women in U.S. politics both historically and in the contemporary period. The nature and scope of female participation in the 19th century will be examined by analyzing the early women's rights and suffrage movements. Twentieth Century feminism will be looked at through use of original and secondary works. Modern feminist theory and its development will also be discussed. Four credits.

Political Science 309 — Seminar on Media & Politics

The course will investigate the tie between the media and American politics. It will examine some of the influences on the media, including legal, organizational, commercial, ideological and professional influences. The focus will then shift to the impact of the media on the political environment. Some of the topics will include the impact of the media on public opinion, the role of the media in agenda setting, and the consequences of the media for leaders and institutions. A central question addressed throughout the course is whether the media is more an effect than a cause of the American social, political, and economic environment. Prerequisite: Political Science 100. Four credits.

Political Science 310 — Seminar on Plato's Political Philosophy

Detailed study of one or more works by one of the two foremost political thinkers of classical antiquity. The aim of this course is not merely antiquarian; it is intended to elucidate the relevance of Plato's thought to the permanent human and political problems, and hence to facilitate, by comparison, a critical evaluation of the political and moral foundations of modern life. Four credits.

Political Science 311 — Theories of Socialism

This seminar will analyze the development of socialist theory since Marx, using primary sources only. Focus will be on Marx (both early and late), Lenin, the 20th century "New Left," and contemporary Eastern European theory. The aim is to trace the evolution of classical Marxism in both industrialized and developing countries through close textual analysis. Four credits.

Political Science 313 — Hegel's Political Thought

A thorough examination of Hegel's political thought as expressed in the *Philosophy of Right* and the *Philosophy of History*. The topics covered will include Hegel's theory of personality, law, ethical life and the state, as well as his conception of world history. Four credits.

Political Science 314 — Seminar on the Concept of Authority

An examination of Christian Thought and secular political philosophy to find insight into

the meaning and basis of authority and the relation of authority to freedom and to the use of force. Preliminary readings will most likely include work of Arendt, Augustine, Hobbes and Sennett. A research paper is required on a philosophical or historical topic related to the subject. Four credits.

Political Science 315 — Seminar on Commentaries on Hegel's Political Thought

An examination of some of the scholarly and critical commentaries on Hegel's political philosophy which have appeared in the past two centuries. Prerequisite: Political Science 313. Four credits.

Political Science 316 — Seminar on Political Philosophy

Detailed study of one or more works by some major ancient or modern political thinker, stressing the relevance of the philosophic tradition to the understanding of contemporary political dilemmas, and aiming at the same time to train the student in the careful reading of serious books. Four credits.

Political Science 317 — Seminar on Modern Political Philosophy

Detailed study of one or more works by some major ancient or modern political thinker, stressing the relevance of the philosophic tradition to the understanding of contemporary political dilemmas, and aiming at the same time to train the student in the careful reading of serious books. Four credits.

Political Science 318 — Seminar: The Nature of Political Science

Exposes students to some of the basic methods and concerns in the study of politics. Can there be a science of politics, given the nature of our subject matter? What is the relationship between political theory and political science? What are the merits of different research methods such as case studies, personal interviews, and quantitative analysis? This is an advanced course intended for juniors and seniors (with others by permission of the instructor). Four credits.

Political Science 323 — Comparative Study of Industrialization and Democratization

Systematic comparison of the processes of industrialization and democratization as they developed in Latin America and Europe. Study of some crucial features of these processes: international environment, political conditions, social concomitants, and concrete results. Discussions of recent theories of social change concerning their ability to explain the diverging paths of Latin America and Europe. Prerequisites: Political Science 102; 200 level course in Comparative Politics or permission. Four credits.

Political Science 324 — Seminar on Comparative Urban Politics

The course will offer a comparative analysis of urban politics and policy dealing in particular with the following issues: the nature of the problems confronting the city, political economy of the city, linkages between local and national politics, bases of political participation in the city, and social struggles in the urban context. The readings will attempt to provide the students with a broad comparative perspective on the experiences of American, Western European and Third World cities. Prerequisite: Political Science 100 or 102 or permission. Four credits.

Political Science 325 — Seminar on Comparative Politics

An in-depth focus on selected topics in comparative politics. Prerequisite: Political Science 265 or permission. Four credits.

Political Science 326 — Seminar on Peasant Politics

This course will examine the political institutions and structure of peasant societies. Four credits.

Political Science 330 — National Development and International Politics

This course will begin with an examination of the positive and negative impacts of the international system on the political and economic development options of Third World countries. Such a course would begin with an examination of realist models of international politics and liberal models of political economic development. These alternative conservative and liberal perspectives have themselves been subjected to radical critiques by

dependency theorists and neo-mercantilist writers. Both of these perspectives will be discussed as well as some alternative development strategies, implicit in or emerging out of these critiques. Case studies will be selected to illustrate the types of responses states make to minimize the detrimental effects of the international system. Four credits.

Political Science 334 — Arms Control

The first half of the course will focus on the negotiations concerning nuclear weapons and defense: INF, SALT/START, and SDI. The background and the current state of play in each set of negotiations will be examined, including the key issues and the factors affecting the positions of the participants. The second half of the course will deal with a number of specific topics related to both nuclear and non-nuclear arms control, such as the conventional weapons talks, the chemical weapons talks, the concept of deterrence, the threat of nuclear terrorism, the questions of first use, etc. Each student will be expected to make an oral presentation in class on one of these subjects, and lead the class discussion. Prerequisite: Juniors and Seniors only. Four credits.

Political Science 335 — Seminar in International Relations

A single topic of major importance in the field of international relations will be discussed. Interested students should discuss the proposed topic with instructor before enrolling. Four credits.

Political Science 336 — Case Studies in U.S. Foreign Policy

The central theme of this course is the role of the President and his appointed advisors on one hand, and the career professions on the other, in the formation and implementation of U.S. foreign policy in recent years. After a brief introductory section on the traditional roles of the head of state and the diplomat, four specific examples in recent U.S. diplomatic history will be examined from this point of view. Each of these "case studies" will review the background of the issue, describe how the two groups interacted, and discuss what effect each had on the eventual outcome of the problem. Prerequisite: Permission of the Director of International Studies and the Professor. Four credits.

Political Science 337 — Seminar/The U.S. and the Mediterranean

This seminar analyzes the foreign policy of the United States towards the Middle East, with special focus on the American response to the most critical events and developments which have taken place in the region in recent years. Four credits.

Political Science 338 — Issues in the Foreign Policy of United States

Using a policy-making approach, this course analyzes the most important issues on the foreign policy agenda of the United States in the 1980s. Special attention is given to the question, What is to be done? Four credits.

Political Science 342 — Leadership and Statecraft

Investigation of the relevance of leaders and statecraft in political life. What is the actual impact of leaders? Do they approximate the Hegelian world-historical individuals capable of imposing their "will" on their environment and fellow human beings? Are they instead captive of their "institutional positions," having little independent will and leaving policy unaffected by their psychological traits and ideological and political values? Four credits.

Political Science 351, 352 — Tutorial Seminar

Research with individual reports on selected topics or projects. Approval of the professor and the department is necessary. Eight credits.

Psychology

John F. Axelson, Ph.D., *Associate Professor*
 Danuta Bukatkó, Ph.D., *Associate Professor*
 Charles M. Locurto, Ph.D., *Associate Professor*
 Ogretta V. McNeil, Ph.D., *Associate Professor*
 Charles S. Weiss, Ph.D., *Associate Professor and Chair*
 Bruce M. Bongar, Ph.D., *Assistant Professor*
 Linda L. Carli, Ph.D., *Assistant Professor*
 Mark Freeman, Ph.D., *Assistant Professor*
 Patricia E. Kramer, Ph.D., *Assistant Professor*
 James A. Sheppard, Cand. Ph.D., *Instructor*
 Matthew A. Toth, Ph.D., *Visiting Lecturer*

The curriculum in psychology is designed to provide students with a multifaceted education that fosters critical thinking and intellectual development. The field of psychology is broad and the course offerings in our department reflect that breadth. We offer majors and non-majors a variety of electives that include basic courses such as abnormal psychology, personality development, the physiological bases of behavior, and human learning and cognition, and interdisciplinary topics such as brain disorders, gender, the study of the self, the experience of being a Black American, psychology and literature, and coping with disabilities.

Majors in psychology are required to take a series of basic courses that allow them to view the world from a psychological perspective. Required courses included Introductory Psychology, Statistics, Experimental Psychology, Experimental Psychology Laboratory, the History and Systems of Psychology, and one biology course. Electives are grouped into categories that represent psychology as a natural or social science. Students must select five electives, including at least one each from the social and natural science categories. In addition, majors must take one advanced seminar in which they are required to participate in group discussions and class presentations.

We encourage our students to be actively involved in their education and provide them with a variety of learning options in addition to the traditional classroom experience. Students have the opportunity to participate in small, intensive seminars, beginning and advanced research projects, internships involving local businesses and hospitals, and one-on-one directed study with individual faculty members.

Students are encouraged to work with faculty on research. Our faculty are actively engaged in research or writing on a variety of topics, including work on the effects of hormones on animal behavior, drugs and human behavior, the effects of heredity and environment on intelligence, cognitive development in children, social influence, suicide, assessment of neurological disorders, perception of victims, adjustment to new environments, use of biofeedback, and anxiety and phobic disorders. Every year, some of our students present their own research findings at professional conferences.

Our required courses prepare our students to meet the requirements to gain admission to graduate programs in psychology and counseling and many of our majors do go on in these programs. A large number of our students become physicians or lawyers. Some go on to graduate training in business, social services, or administrative work. Others begin their careers immediately after graduation from college, entering business, social service or teaching professions.

Psychology 40 — Psychology of Everyday Life

Exploration of some fundamentals of psychology as they relate to personal identity, self-direction, self-mastery, and life's dilemmas. Specific topics include the principles of development, determinants of behavior, motive patterns, and effective and maladaptive behavior. Four credits.

Psychology 50 — Psychology and Literature

An exploration of some basic issues concerning human nature through the joint study of literature and psychology. Depending on the instructor, the focus is on one of two areas — interpersonal relationships or early experience and memory. This course is offered as part of the Interdisciplinary Studies Program. Four credits.

Psychology 70 — Philosophy of Psychology

A treatment of several philosophical objections to contemporary psychology and psychiatry, including the question of the appropriateness of modeling psychology on the natural sciences. Philosophical perspectives introduced include ordinary language, analytic philosophy and existential phenomenology. The course emphasizes the development of a capacity for critical analysis. Four credits.

Psychology 80 — Psychology of Life History

This course considers both methodological and theoretical concepts and problems in the study of life history. On the methodological side, special attention is devoted to issues including the gathering of life-historical data, the interpretive process, and the eventual presentation of information. On the theoretical side, special attention is devoted to the various ways of accounting for life histories, the problem of studying the histories of individuals living their lives in times and places different from our own, and finally, the problem of psychological "normality" and "abnormality" and the extent to which they may (or may not) be differentiated. Four credits.

Psychology 100 — Introductory Psychology

An introduction to the principles of psychology as emerging from the areas of perception, learning, intelligence, assessment of abilities, emotion, motivation, personality, psychopathology, and social processes. Required of psychology majors. Four credits.

Psychology 145 — Existential Psychology

An introduction to the humanistic, essential, and phenomenological approaches to psychology. Emphasis is on the application of the existential perspective to problems in clinical and abnormal psychology, the relation between the existential-phenomenological orientation and other major perspectives, and the philosophical underpinnings of the approach. Four credits.

Psychology 155 — Psychology of the Exceptional Person

A survey of the psychological factors operating on people with special needs: the physically and familially retarded, the intellectually gifted and the creative, the culturally disadvantaged, those with sensory and motor disabilities, and legally-defined minority groups. Four credits.

Psychology 157 — Psychology and Biology of Gender

A study of the psychological and biological factors that influence the development of masculine and feminine identity and behavior. This course is offered as part of the Interdisciplinary Studies Program. Four credits.

Psychology 160 — Sex Role Development

A critical examination of theory and research on gender differences. Emphasis will be placed on the physiological, cognitive, and social bases of masculine and feminine behavior. A variety of special topics are covered, including gender and work, sexual violence, gender roles in the family, and gender and the media. Four credits.

Psychology 200 — Statistics

An introduction to descriptive and inferential statistical methods in analysis and interpretation of psychological data. Required of psychology majors. Four credits.

Psychology 201 — Experimental Psychology

Survey of methods and techniques of current and traditional experimental psychology. Emphasis is placed on research approaches and procedures, experimental design, statistical applications, and critical evaluation of research. Required of psychology majors. Prerequisite: Psychology 200. Four credits.

Psychology 203 — Experimental Psychology Laboratory

Provides students with direct experience with some of the methodological techniques used in psychology through the completion of several laboratory projects. Students develop the skill to design an experiment, statistically analyze and interpret the results, and to present the findings in a written and oral report. Taken as a fifth course in conjunction with Psychology 201. Two credits.

Psychology 205 — History and Systems of Psychology

Major theoretical systems in psychology are assessed, including associationism, introspectionism, functionalism, Gestalt psychology, behaviorism, existential psychology, and structuralism. The course takes both an historical approach to the development of these schools and a systematic approach involving a critical evaluation and comparison of these various perspectives. Required of psychology majors. Prerequisite: Psychology 100 or permission of instructor. Four credits.

Psychology 220 — Sensation and Perception

A critical examination of the physiology of the major sensory systems (receptor, pathway, cortical representation) and the theoretical models underlying human perceptual phenomena. Prerequisite: Psychology 100 or permission of instructor. Four credits.

Psychology 221 — Physiological Psychology

The structure and function of the nervous and endocrine systems are studied with reference to animal and human behavior. Physiological and neural substrates of the senses and perception, learning and memory, emotion, motivation, sleep and arousal, stress, drug effects, and social behavior are emphasized. Prerequisite: Psychology 100 or permission of instructor. Four credits.

Psychology 223 — Learning

An intensive evaluation of Pavlovian and operant conditioning in animals and human subjects. Special topics include the application of these principles to psychotherapy and the biological influences and constraints on learning. Prerequisite: Psychology 100 or permission of instructor. Four credits.

Psychology 225 — Developmental Psychology

A survey of theory and research pertaining to both cognitive and social development. Special topics include prenatal development, early experience, perception, memory, intelligence, socialization, moral development, sex-role development, and patterns of child-rearing. Prerequisite: Psychology 100 or permission of instructor. Four credits.

Psychology 226 — Personality

Covers several major conceptions of personality such as the psychoanalytic, humanistic, cognitive, trait, and behavioral approaches. The theories of such psychologists as Freud, Maslow, Kelly, Allport, and Skinner are presented in order to attain a broad understanding of human personality. Prerequisite: Psychology 100 or permission of instructor. Four credits.

Psychology 227 — Social Psychology

An overview of the methods and research findings of social psychology. Emphasis is placed on the experimental analysis of topics such as person perception, interpersonal attraction, prosocial behavior, aggression, social exchange, and group behavior. Prerequisite: Psychology 100 or permission of instructor. Four credits.

Psychology 229 — Abnormal Psychology

A general introduction to the development, assessment, and treatment of maladaptive behavior. A history of the treatment of mental disorder, the theoretical and empirical bases of the major approaches to understanding abnormal behavior, and legal and ethical issues are also considered. Prerequisite: Psychology 100 or permission of instructor. Four credits.

Psychology 230 — Environmental Psychology

A consideration of the psychological impact of the environment on the individual. Prerequisite: Psychology 30 or 101 or permission of instructor. Four credits.

Psychology 231 — Industrial Psychology

Surveys the application of psychological knowledge to a variety of industrial situations. Topics include the selection and development of personnel and the effects of organizational forms on individuals and individual productivity. Prerequisite: Psychology 100 or permission of instructor. Four credits.

Psychology 232 — Psychological Assessment

A history of psychological testing and personality assessment; the rationale of test construction, administration, and interpretation; evaluation of selected tests and testing procedures; and an examination of personal, social, and examiner variables affecting test performance. Prerequisite: Psychology 100 or permission of instructor. Psychology 200 recommended. Four credits.

Psychology 233 — Drugs and Human Behavior

The effects of drugs on animal and human behavior; the physiological, psychological, and social consequences of various psycho-active agents; examination of tranquilizers, antidepressants, psychotomimetic, and dependence-producing drugs; and introduction to the biochemical theories of schizophrenia and manic-depressive psychosis. Prerequisite: Psychology 100 or permission of instructor. Four credits.

Psychology 234 — Comparative Psychology and Ethology

Topics of central importance to an understanding of human behavior, such as aggression, parent-child relations, and social behavior, are treated from an evolutionary perspective. Particular consideration is given to the extent to which these behaviors may be similar to those observed in species other than homo sapiens. Special topics include language learning in non-human primates and sociobiology. Prerequisite: Psychology 100 or permission of instructor. Four credits.

Psychology 235 — Hormones and Behavior

Roles of hormones in fetal development, adolescent development, cognitive processes, stress reactions, psychopathologies, and aging. Prerequisite: Psychology 30 or 101 or permission of instructor. Four credits.

Psychology 236 — Cognition and Memory

An overview of contemporary conceptualizations of cognitive processes from both the information-processing and structural-organismic points of view. Special consideration is given to the topics of attention, the structures and functions of memory, the role of language in cognition, and cognitive development. Prerequisite: Psychology 100 or permission of instructor. Four credits.

Psychology 238 — Counseling and Psychotherapy

A critical evaluation of major forms of counseling and psychotherapy, including the psychoanalytic, behavioral, existential, and interactional (e.g., family therapy) approaches. There will be an emphasis both on techniques of therapy and on the underlying theoretical rationale for the various methods. Prerequisite: Psychology 229 or permission of instructor. Four credits.

Psychology 240 — Behavior Modification

The applications of principles derived from empirical research in psychology for the purpose of producing behavior change in applied settings, such as school, prison, outpatient clinic. Topics range from the application of learning theory to the treatment of special populations, such as autistic children. Special attention is devoted to the theoretical and empirical bases of therapeutic strategies. Prerequisite: Psychology 100 and 223 or permission of instructor. Four credits.

Psychology 242 — Clinical Psychology

A general introduction to the origin, development, and techniques of clinical psychology. Survey of treatment issues, interviewing, importance of assessment and diagnosis. Importance of specific areas, e.g., behavior therapy, to the modern-day approach to clinical psychology will be stressed. Prerequisite: Psychology 229 or permission of instructor. Four credits.

Psychology 244 — Human Motivation

An exploration of the integration of basic psychological processes with cues from the environment to form the goal-directed behavior that is characteristic of complex human motivation. Topics covered include major theories of motivation, measurement of motivation, and the relationship between motivation and action. Prerequisite: Psychology 30 or 101 or permission of instructor. Four credits.

Psychology 300 — Advanced Laboratory in Physiological Psychology

Designed to give students hands-on experience with the methods and techniques of physiological psychology. Topics include gross neuroanatomy, stereotaxic surgery, histology, and recording of biological events. Each student will conduct an original project using one of the above methods. Prerequisites: Psychology 201 and 221. Four credits.

Psychology 302 — Advanced Laboratory in Learning

Emphasizes the development and execution of an original experiment derived from any area of operant or Pavlovian conditioning. Occasional seminars in specific areas of learning theory supplement the student's individual research as do experimental demonstrations of several phenomena including imprinting, aggression, and addictive behaviors. Prerequisites: Psychology 201 and 223. Four credits.

Psychology 304 — Advanced Laboratory in Developmental Psychology

Students will conduct original research projects, either individually or in small groups, drawing from the literature in developmental psychology. Appropriate methods of investigation and the particular problems of doing developmental research will also be discussed. Prerequisites: Psychology 201 and 225. Four credits.

Psychology 306 — Advanced Laboratory in Clinical Psychology

Students will design and carry out empirical research projects, either individually or in cooperation with another student. They will participate in all phases of the research process, including reviewing relevant literature, collecting and analyzing data, and communicating results in professional format. Prerequisites: Psychology 201 and 229. Four credits.

Psychology 308 — Advanced Laboratory in Sensation and Perception

Students will conduct original research projects, either individually or in groups, drawing from either classic or contemporary work in sensation and perception. Prerequisites: Psychology 201 and 220. Four credits.

Psychology 310 — Advanced Laboratory in Social or Personality Psychology

Students are given the opportunity to participate in research on human social behavior or on the characteristics of human personality. Students design, execute, statistically analyze, and complete a written report of their own choice within the area of social or personality psychology. Prerequisites: Psychology 201 and either Psychology 226 or 227. Four credits.

Psychology 318 — Advanced Statistics

Several advanced techniques in inferential statistics are covered, including multifactor analysis of variance, multiple regression, power analysis, and trend analysis. Prerequisite: Psychology 200. Four credits.

Psychology 321 — Exceptional Child Practicum

Combines a classroom component with field experience working with children having special needs. Students work in a community agency and are supervised in that setting as well as in the classroom. Class meetings are used to discuss various kinds of exceptionality and strategies of helping. Prerequisite: permission of instructor. Four credits.

Psychology 323 — Clinical/Community Practicum

This course involves both classroom and field experience. The latter is obtained through placement at a mental health facility in the community. Supervision of students' placement activities is provided both at the agency and in the classroom. Classroom activities include discussion of readings and exercises focusing on helping skills as well as the particular problems presented by the client populations with which students work. Prerequisite: permission of instructor. Four credits.

Psychology 350, 351 — Special Topics in Psychology

From time to time, intermediate or advanced seminars on particular topics in psychology will be offered by members of the department. Prerequisites: to be determined by instructor. Four credits (each semester).

Psychology 360, 361 — Research Projects

Students may undertake an independent research project under the direction of a particular faculty member. Prerequisite: permission of instructor. Four credits (each semester).

Psychology 370, 371 — Directed Readings

A reading program conducted under the supervision of a faculty member, generally focusing on an area of psychology not covered in depth in course offerings. Prerequisite: permission of instructor. Four credits (each semester).

Religious Studies

Bernard J. Cooke, S.T.D., *Professor*

John L. Esposito, Ph.D., *Professor*

John J. Paris, S.J., Ph.D., *Professor*

John E. Brooks, S.J., S.T.D., *Associate Professor*

Vincent J. Forde, S.T.D., *Associate Professor*

Alice L. Laffey, R.S.M., S.S.D., *Associate Professor and Chair*

Gary A. Phillips, Ph.D., *Associate Professor*

William E. Reiser, S.J., Ph.D., *Associate Professor*

Robert E. Craig, Ph.D., *Assistant Professor*

Mary Ann Hinsdale, I.H.M., Ph.D., *Assistant Professor*

Irena Makarushka, Ph.D., *Assistant Professor*

Frederick J. Murphy, Ph.D., *Assistant Professor*

Martha A. Crunkleton, Ph.D., *Adjunct Professor*

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 students are in the process of coming to terms with their own traditions and personal identities, the department has designed courses for the student body at large that will enable them to achieve both these purposes. Since Holy Cross is a Jesuit college and the majority of its students come from the Roman Catholic tradition, the department believes it is necessary to provide them with an opportunity to know and understand this tradition as well as to situate it in the larger context of other religious traditions and in the broader cultural context in which they live. Students from any tradition must come to terms with the fact of pluralism — both religious and cultural. Departmental courses are designed to help them achieve these goals.

Because the field of religious studies is multidimensional, a program for the majors must acquaint them with each of these dimensions — world religions, bible, theology, ethics — as well as enable them to pursue in depth the particular area of their own interest. A major is required to take 10 courses in the department, including one course in each of the following areas: World Religions (1), The Bible-Old Testament (1), New Testament (1); Theology (1); Ethics (1), and two intensive courses (seminars or tutorials) in their area of concentration. For those students who intend to pursue graduate studies, the department strongly advises competence in the classical and modern languages, as well as the social sciences and philosophy, and encourages them to pursue a research project in their senior year.

Tutorial reading programs and individual research projects are available to the qualified student by arrangement with the appropriate department faculty and the chair.

RELIGION/RELIGIONS

Introductory Courses

Religious Studies 11 — Prophetic Religious Traditions

An introduction to three classical prophetic religions: Judaism, Islam and Christianity. The course examines aspects of their shared history and identifies their distinctive understandings of scripture, law, community, theology, and worship. The course also seeks to develop an appreciation for the ways each prophetic faith responds to the challenges of the modern period.

Religious Studies 31 — Islam and Politics

A study of the Islamic resurgence: its causes, manifestations, issues and problems. The role of Islam in socio-political change will be analyzed through focusing on selected case studies: Libya, Saudi Arabia, Egypt, Pakistan, Iran and Malaysia. In addition to the role(s) of religion in contemporary politics, the course emphasizes its implications for legal and social (women's status) change. Cross-registered with Center for Experimental Studies 139. Four credits.

Religious Studies 35 — Greek Religion

A study of the main beliefs, movements, rites and practices of Greek religion from earliest times to the advent of Christianity. Cross-registered with Classics 190. Four credits.

Religious Studies 36 — Roman Religion

A study of the principal religious cults of the Roman people from the earliest times until the advent of Christianity. Cross-registered with Classics 191. Four credits.

Religious Studies 48 — Introduction to Modern Judaism

A survey of Jewish denominations; the beginnings and growth of Jewish academic scholarship (*Wissenschaft des Judentums*); Jewish nationalism; Bundism and Zionism; Hasidism; Havurah "fellowship" Judaism; Post-Holocaust response in contemporary Judaism. Four credits.

Religious Studies 61 — Religions (China and Japan)

Introduction to history and phenomenology of the religions of China and Japan. An examination of Confucianism, Taoism, Shintoism, Chinese-Japanese Buddhism and Zen Buddhism as an expression of reaction to the total human situation in which persons live. Four credits.

Religious Studies 62 — World Religions (Hinduism, Buddhism and Islam)

An introduction to three religious traditions through an analysis of those historical events, beliefs, values and practices which exemplify each of their worldviews. Four credits.

Religious Studies 80 — Religion in the Ancient World

Egypt and Mesopotamia as origins of ancient Near East religious developments. Emergence of Israel, its religious distinctiveness, its development as a nation and a people. Growing influence of Greek religious thought, particularly in the Hellenistic period. This course is part of the Ancient Origins of Western Tradition — ISP Freshman Sequence VI. Four credits.

Religious Studies 81 — Christianity in the Greco-Roman World

Context in which Christianity emerges as a world religion. Impact of Greek culture and Roman political institutions on the structuring of Christian faith and life. Formulation of Christian creeds, community life, and liturgy. This course is part of the Ancient Origins of Western Tradition — ISP Freshman Sequence VI. Four credits.

Religious Studies 87 — Introduction to the Study of Religion

An introduction to the nature and place of religion as critically understood through the eyes of modern humanistic, social scientific and natural scientific thought. Viewpoints covered include the historical, political, psychoanalytic, biological and philosophical.

Religious Studies 88, 89 — Catholicism and Society in America

An historical examination of the development of the Catholic Church and its people in the U.S. Particular attention will be devoted to issues of church and society in the contemporary American church as they have developed since the 19th century. Cross-registered with History 197, 198. Eight credits.

Religious Studies 90 — Islamic History and Civilization

This course will treat selected topics in Islamic history and civilization from the rise of Islam to the present, exploring major political, religious, social and intellectual themes. Cross-registered with History 190. Four credits.

Intermediate Courses

Religious Studies 105 — American Religious History

A study of the American religious experience from colonial times to the present with an emphasis on major churches, persons, institutions, and movements. Cross-registered with History 116. Four credits.

Religious Studies 106 — Buddhism

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, with special emphasis on Zen. Four credits.

Religious Studies 107 — Islam in the Middle East: Religion and Development

Islam and the challenge of modernity in the Middle East and the Indian subcontinent as witnessed in the traditional and modern Muslim responses to change: political (pan-Islamism, nationalism, socialism) and social (the changing family, women's rights, etc.). Four credits.

Advanced Courses

Religious Studies 217 — Approaches to the Study of Religion

A seminar probing the various methods by which religions and religious phenomena may be studied. Focus upon the presuppositions of the methods central to the study of religion, whether historical, psychological, sociological, phenomenological, or structural. Recommended for Religious Studies majors. Four credits.

Religious Studies 220 — Comparative Religious Worldviews

A systematic exploration of similarities and differences both within and among several traditions (Buddhism, Judaism, Christianity, and Islam) and an examination of several key issues which emerge from the encounter of Christianity with other world religions. Four credits.

Religious Studies 260 — Mystics and Zen Masters

A comparative analysis of the foundations, method or path, and nature of the mystical experience as seen in several religions, among them the Judaeo-Christian, Hindu, Zen Buddhist, and Islamic traditions. Autobiography and biography will be utilized to examine the world of mystics and masters such as John of the Cross, Teresa of Avila, Sri Ramakrishna, Thomas Merton, al-Ghazzali, Dogen et al. Four credits.

BIBLE

Introductory Courses

Religious Studies 18 — Introduction to the New Testament

An introduction to early Christian literature and thought in the context of the emerging church. Particular attention paid to Jewish and Hellenistic influence upon the early Christian understanding and response to Jesus in the Gospels and Pauline epistles. Four credits.

Religious Studies 22 — Jesus and His Contemporaries

An historical and theological study of Second Temple Judaism (520 B.C.E. to 70 C.E.) paying attention to the variety, richness and complexity of the Judaism of this period. Major Jewish groups will be treated: Sadducees, Pharisees, Essenes, Priests, Scribes. Focus will also be on apocalypse as a literary genre and apocalypticism as a worldview and social phenomenon. Special emphasis will be placed on the ways in which Jesus has been seen to fit into this context.

Religious Studies 26 — Introduction to the Old Testament

A study of the major themes of the Hebrew Scriptures: creation, fall, exodus, covenant, promised land, the Davidic kingship, prophecy, wisdom, and apocalyptic. Reconstruction of the historical background of the themes with reference to ancient Near Eastern source, as well as literary and theological analysis. Four credits.

Religious Studies 66, 67 — Introduction to Biblical Hebrew

A first course introducing the student to the grammar, syntax, and vocabulary of the Hebrew language. The second semester includes selected readings of biblical prose. Four credits.

Intermediate Courses

Religious Studies 101—Early Christianity

A study of various views and models of church in early Christianity in the context of their historical, theological and social settings. Attention will be paid to the ways in which these views complement and contrast with one another.

Religious Studies 102— Early Christian Interpretations of Jesus

A study of different understandings of Jesus in the early Church in view of their historical, theological and cultural settings. Attention will be paid to the New Testament Apocrypha, and hellenistic and rabbinic texts.

Religious Studies 103 — Methods of New Testament Criticism

Study of the principles, methods and models used in New Testament interpretation including textual, literary, form, redaction and structural criticism and the problem of historical reconstruction and theological analysis. Four credits.

Religious Studies 110 — The Land: Then and Now

An investigation of Israel's land as promise and gift, as jeopardized, as possession, as lost and regained, and as symbol of Israel's fidelity to God. This seminar will also probe "the land motif" as it has come to influence both ecology and contemporary Middle Eastern politics. Four credits.

Religious Studies 112 — The Gospels

An in-depth study of the theological concerns of Matthew, Mark, and Luke as reflected in their varying presentations of the Christian kerygma. Attention paid to the literary and historical character of each Gospel as a unique expression of the traditions about Jesus and an exploration of selected contemporary modes of theological reflection as models for understanding the Evangelists as theologians. Four credits.

Religious Studies 116 — Art and Practice of Biblical Exegesis

An historical and literary study of the ways and means of Scriptural reading as they have developed within the Western Religious Traditions. The aim is to see how different

exegetical principles and techniques reflect distinctive understandings of the text, the world, meaning, the critical reader and history. Attention is paid to rabbinic, early Christian, patristic, medieval, renaissance Reformation, 19th century historicist, modern and post-modern exegesis. Taught in tandem with "Literary Responses to Biblical Patterns of Meaning," (Interdisciplinary Sequence 20). Four credits.

Religious Studies 119 — The Gospel of Matthew

The literary structure and theological emphases of Matthew's gospel and its place in the synoptic tradition. Four credits.

Religious Studies 125 — John in the New Testament

This seminar is a study of the structure and theology of the fourth gospel; the epistles of John; the Book of Revelation. Four credits.

Religious Studies 129 — Paul the Apostle

A study of Pauline Christianity, its place in the early church using the letters of Paul, the Deutero-pauline letters and the portrait of Paul in Acts. Attention paid to the structure and development of Paul's thought, its Jewish and Hellenistic backgrounds. Four credits.

Religious Studies 134 — Women and the Bible

This seminar has been developed for students who wish to learn more about the feminist interpretation of Scripture. It studies the emergence of patriarchy and its effects on Ancient Near Eastern society, as well as the influence of patriarchy on the biblical texts. Particular attention will be paid to character portrayal within the patriarchal family structure, as well as to the characteristics of those females who emerge as exceptions to patriarchy. Further, the similarities and differences between the portrayal of women in the Old Testament and their depiction in the New Testament literature will be examined. Four credits.

Religious Studies 145 — Princes, Prophets, and Wise Men

A study of the interaction of the socio-religious groups in ancient Israel represented by the conflict between the prophets and the wise men. Study of the particular tensions which exist in religion as an organization and as a way of life. Focus upon the key elements which represent the message of the wisdom literature and the proclamation of the prophets of Israel. Four credits.

Religious Studies 150 — The Quest for the Historical Jesus

Since the Enlightenment scholars have recognized the difficulties involved in trying to recover the historical Jesus. This course will acquaint the student with the exegetical and historical problems encountered in the quest for the historical Jesus; review the history of scholarship to the present to determine presuppositions, methods and results; examine the range of options currently available and the exegetical strategies used to support those options; encourage the student to take up an option and defend it. Four credits.

Religious Studies 153 — Parables and Paradox

This seminar is a study of the nature of parable in its form and function, the history of parable study, parables in the setting of the ministry of Jesus and the theologies of the Evangelists. Attention paid to literary criticism of the parables of Jesus. Four credits.

Religious Studies 159 — The Psalms

This seminar examines such themes as: The role of the Psalms in Israel's worship (e.g., the dating of the Psalms, their classification, their function as sung prayer, the God of the psalmists); the relationship of the Psalms to the New Testament; the functions of the Psalms in the Christian liturgy. Four credits.

Advanced Courses

Religious Studies 215 — Old Testament and Contemporary Prophets

The seminar will examine the function of prophets in the Ancient Near East, including Israel, and the prophetic literature of the Bible (Former and Latter Prophets). It will investigate the role of Israel's prophets as spokespersons of Yahweh and social critics. Finally, after determining how contemporary society is similar to and different from ancient

Israel's, the seminar participants will seek to develop, if possible, criteria against which to identify the prophetic personality, then and now. Four credits.

Religious Studies 218 — The Mystery of Evil and Suffering

This seminar will examine the symbols of evil through the primary experiences of it as defilement, guilt and sin. The conversion of these symbols of human experience into the myths of the origin of evil, the development of the belief in Satan, etc. The seminar will include the content and consequences of evil as understood by the Deuteronomistic historians, the prophets and Job, as well as more contemporary literary approaches to the same mystery. Four credits.

Religious Studies 225 — Scripture/Story and Value

A study of the Biblical text as persuasive discourse through concentration upon the language and narrative character of selected New Testament texts in order to explore the ways in which the Biblical text challenges, proposes and affects change in fundamental value. Special areas of concern will be the relationship between reader and text, the nature and processes of communication and interpretation and the literary character of the Biblical text. Four credits.

THEOLOGY

Introductory Courses

Religious Studies 12 — Christ the Teacher: Theology of Word and Sacrament

The first part of this course examines the nature and role of worship and prayer in Christian life, and the Christian understanding of God as the One who creates, who redeems, and who is revealed in the person of Jesus. The second part studies the meaning and place of sacraments in Christian living. Particular attention is given to baptism, reconciliation, and eucharist as liturgical events which focus the Gospel's call to repentance, to faith, to worship, and to service. Four credits.

Religious Studies 13 — The Problem of God

A systematic and historical presentation of the debate focusing on the doctrine of God, God's nature and knowability. The course will be divided into two equal parts: a discussion of the problem of understanding God in a non-mythological way and a discussion of the reasonability of belief in God. Four credits.

Religious Studies 15 — The Church in the Modern World

A basic presentation of how the Church sees itself, its mission, and its ministry in today's world in terms of the major decrees of the Second Vatican Council. Topics include: the changing nature of the Church's attitude toward other world religions; forms of ministry, ecclesiastical authority, and infallibility; and the Church's approach to contemporary issues of justice and peace as reflected in papal teaching and statements of the United States Bishops' Conference. Four credits.

Religious Studies 24 — Problems in the History of Christian Thought

This course will examine in detail one of the problems that has occupied the attention of Christian theologians and philosophers throughout the ages. The range of problems will include the relationship between faith and reason, the existence of God, the nature of evil, the immortality of the soul and the nature of religious language. Four credits.

Religious Studies 32 — Christian Sacraments

Examination of the basic sacramentality of human experience and its transformation by the life, death, and resurrection of Jesus of Nazareth. Role of sacramental liturgies in the process of individual and social Christianization. Four credits.

Religious Studies 33 — Patterns of Discipleship: Introduction to Christian Spirituality

An introduction to those influential theological and spiritual writings which represent major historical periods and theological schools within the Christian tradition. The course focuses upon the quest for holiness and truth, the variety of ways in which God has been experienced, and the ways in which those experiences have been described and shared. Four credits.

Intermediate Courses

Religious Studies 108 — Development of Christian Personhood

Growth in Christian faith as a deeper dimension of the process of human maturation. The Christian perspective on, and transformation of, self-identification, love, sexuality, suffering, responsibility, and freedom. "Grace" and "salvation" as intrinsically linked with healthy psychological development. Four credits.

Religious Studies 126 — Readings in Feminist Theology

This seminar is designed to introduce students who are already conversant with Judaism and Christianity to a feminist critique of those prophetic religions. It will consider the close correlation between religious expression and culture and examine how Judaism and Christianity have reinforced a patriarchal culture. Further, the students will endeavor to identify and deconstruct the patriarchal underpinnings in order to develop more egalitarian religious models. Four credits.

Religious Studies 135 — Contemporary Roman Catholic Thought

The aim of the course is to develop an appreciation for the work of contemporary Catholic Christian theology, to see its range of inquiry, and to be introduced to theologians by reading them first hand. Four credits.

Religious Studies 136 — The Makers of Modern Theology: Religion and Common Sense

Each semester this seminar will examine in depth one author or school of thought that has helped to shape modern theological thought. Topics will include Kierkegaard, Nietzsche, Liberal Protestantism, Roman Catholic Modernism, Liberal Catholicism, Bultmann, Barth and Tillich. Four credits.

Religious Studies 137 — Modern Religious Thought: Coping with Modernity

An introduction to the principal themes in Christian (Protestant and Roman Catholic) theology since the Enlightenment. Special emphasis will be placed on the challenges to traditional Christian belief from scientific and historical criticism, Marxism, and the Enlightenment emphasis on the autonomy of human reason. Among the theological responses to these critiques to be discussed will be Liberalism, Modernism, Fundamentalism, Revivalism, and Existentialism. Four credits.

Religious Studies 138 — Modern Religious Thought: The 20th Century

A study of three issues that emerge in the history of theology from 1870 to the present: the doctrine of God, the interpretation of religious statements (especially Biblical statements) and the relationship between faith and reason. Movements discussed include: Liberal Protestantism, Modernism, the revival of Thomism, nihilism, existentialism, logical positivism and process theology. Four credits.

Religious Studies 139 — Jesus: God/Human

An introduction to the discussion of the nature and significance of Jesus Christ. Primary attention is paid to the varied New Testament perceptions of Jesus, but the classical formulae of the Councils of Nicaea and Chalcedon as well as the contemporary debates concerning the divinity of Jesus are also treated in detail. Four credits.

Religious Studies 157 — Modern Catholic Theology

This seminar acquaints the student with selected ethical, biblical, historical, and theological questions which are being raised and addressed by contemporary Catholic writers. Two or three major works are read and discussed in detail. Enrollment is limited to juniors and seniors. Four credits.

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 prepared to meet. Four credits.

Advanced Courses

Religious Studies 231 — Early Christian Writers

This seminar introduces students to the faith and thought-world of selected Church writers from the second to the fifth centuries: Justin, Irenaeus, Origen, Athanasius, Gregory of Nyssa, and Augustine. It studies their method of interpreting Scripture, their exposition of Christian doctrine, the way in which they bridged faith and culture, and their insight into the life of prayer and the practice of faith. Four credits.

Religious Studies 232 — Theology of Revelation: Working Towards a Theological Understanding of Truth

This course is devoted to understanding the theological notion of the word of God, how that word addresses humans, and the process of its interpretation and transmission. Drawing on the work of both theologians and philosophers, the course examines theories of revelation and tradition, theology's use of Scripture, the nature of religious truth, and the need for a contemporary Christian apologetic. Four credits.

Religious Studies 233 — Comparative Theology: Christianity and the Encounter of World Religions

An exploration of the meaning and significance of Christianity's encounter with the Hindu, Buddhist, and Islamic traditions. The course will be divided into two parts: first, an investigation of major theological questions emerging from the dialogue of world religions (e.g., nature of revelation, prophecy, Christology, truth claims, status of founders, missions, etc.); and second, a study of several Christians who have encountered the East both theologically and existentially. Four credits.

Religious Studies 271 — Contemporary Christology

A comparative analysis of the christological writings of major contemporary Catholic and Protestant theologians, with emphasis given to an examination of each theologian's understanding of the centrality of Jesus in modern society, the nature of the Scripture and what it reveals about Jesus, and the nature of faith in Christ and in His resurrection. Prerequisite: Cumulative QPI of 3.0 or better. Four credits.

Religious Studies 275 — Early Christian Literature

Reading in the original of selected works from the Patristic period. Cross-registered with Latin 150. Four credits.

ETHICS

Introductory Courses

Religious Studies 41 — Contemporary Christian Morality

A suggested methodology for evaluating contemporary Christian thought and practice in major areas of ethical concern. An in-depth discussion of responsible decisionmaking in an age of situationism and ethical relativism, with detailed application to crucial moral dilemmas facing modern man. Four credits.

Religious Studies 51 — Faith/World Poverty

Introduction to the challenge which the issues of poverty and the poor pose for our understanding of the Christian faith, especially as articulated by the Christian community of the Third World. That challenge has two sides: one is the reality of oppression and domination and the other side is that of liberation and self-determination. Four credits.

Intermediate Courses

Religious Studies 109 — Critical Issues in Religious Thought: War/Peace

An introduction to some of the important ethical issues involved in war/peace studies. Beginning with an examination of the two major religious traditions, just war theory and pacifism/nonviolence, the course then turns to an examination of the experience of war

by a focus on World War II and Vietnam. In light of an examination of both approaches to issues of war and peace and the experiences of war the course concludes with a critical analysis of the American Bishops' pastoral *The Challenge of Peace*. Four credits.

Religious Studies 130 — Law, Medicine and Ethics

A study of the legal and moral aspects of selected issues in medicine: informed consent, sterilization, organ donation, compulsory medication, allocation of scarce resources, death and dying, national health insurance option, etc. Four credits.

Religious Studies 141 — Social Ethics

Focus on the social dimensions involved in an adequate formulation of Christian ethical understanding which takes seriously issues such as social justice, economic justice, conflicts between Church and State, and the questions of nuclear war/weapons in the search for peace. Four credits.

Religious Studies 146 — Business Ethics

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. Prerequisite: permission of instructor. Four credits.

Religious Studies 189 — Marriage Today and Tomorrow

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 modern challenges to the viability of monogamy and of permanent commitment. Four credits.

Advanced Courses

Religious Studies 230 — Life and Death Issues

A study of issues concretely relating to the qualitative human dimensions of personal and social living, together with an evaluation of current theories of death and the right to die humanly. Questions pertinent to the substance of medical ethics are the focus, but are not comprehensive of course content. Four credits.

Religious Studies 235 — Economics and Ethical Values

Ethical dimensions of contemporary economic practices, focusing on such issues as investment practices, population, food and energy resources, ecology, income distribution, etc. Also the ethical dimension of capitalism, democratic socialism and communism as alternative economic models will be explored. ISP Sequence IV. Four credits.

Religious Studies 237 — Religion and Social Protest

This course explores the relationship between religion and social protest in modern American history. The central problems to be addressed include the manner in which religious based ethical judgments are shaped in part by social conditions and perceptions and how social movements to some degree derive their power by an appeal to religious symbols and traditions grounded in communities or people. Four credits.

Religious Studies 240 — Catholic Social Reforms

A social-historical review of the interplay of the American, French and Industrial Revolutions, economic liberalism (England), Catholic social pioneers (Lamennais, Montalambert, Lacordaire), socialism, communism (Marx), the *Kulturkampf* and *Risorgimento*, on Catholic social teaching culminating in Leo XIII's *Rerum Novarum*. The social teachings of 20th century Popes and Vatican II. Discussions of current relevant problems and practice. Four credits.

Religious Studies 277 — Supreme Court and Human Values

A case-study analysis of Supreme Court decisions focusing on the interaction of society and human rights. Topics treated will include speech, press, privacy, obscenity, religion, abortion, and educational opportunity. Prerequisite: permission of instructor. Cross-registered with Political Science 205 — Four credits.

Religious Studies 311 — Tutorial

Religious Studies 411 — Research Project

Sociology

Victoria L. Swigert, Ph.D., *Professor and Chair*
 Stephen C. Ainlay, Ph.D., *Associate Professor*
 David M. Hummon, Ph.D., *Associate Professor*
 Rogers P. Johnson, Ph.D., *Associate Professor*
 Royce Singleton, Jr., Ph.D., *Associate Professor*
 Edward H. Thompson, Ph.D., *Associate Professor*
 Carolyn Howe, Ph.D., *Assistant Professor*
 Jerry Lembcke, Ph.D., *Assistant Professor*

Sociology is a way of thinking about the social world — about people in relation to other people. Sociology requires us to think critically and analytically: digesting ideas, assessing the adequacy of an argument, and questioning the strength of evidence supporting an idea.

The curriculum in sociology is designed to provide a critical assessment of the modern world and a familiarity with the latest issues in social theory and research. The courses themselves feature the analysis of social institutions and social processes, problems that confront different people, the impact of public policy on societal problems, and the contribution of social science to policy implementation.

The department works with students whose educational and career interests range from graduate study in health care management, communications, urban affairs, or gerontology to careers in business, government, law, medicine, and public health. Opportunities exist for advanced seminars and field research courses, independent research, directed readings, and participation in a sociology-related internship.

There are three levels of courses. The introductory level presents the basics of both sociological analysis and the sociological perspective. Intermediate courses are comprehensive examinations of significant topics and fields within sociology. The advanced courses offer an opportunity to undertake more intensive studies in specialized fields of sociology and to engage in individualized projects and research.

Ten courses constitute the major. All majors are required to take an introductory course, one course each in social theory and research methods, and one advanced seminar. The remainder of each major's program will be arranged in consultation with her or his departmental advisor.

Introductory Courses

Open to all students with preference given to sophomores and freshmen. Either course will satisfy the prerequisite for enrollment in intermediate-level courses. Only one introductory course can be taken for credit.

Sociology 101 — The Sociological Perspective

A one-semester introduction to the principles of sociological analysis. Through a critical examination of selected topics and themes, this course will develop a sociological perspective for the interpretation and understanding of cultural differences, age and sex roles, discrimination, the family and the workplace, bureaucracies, the problems of poverty. Four credits.

Sociology 111 — Social Problems and Social Policy

Critical analysis of social institutions and the formation and resolution of social problems. A range of problem areas is considered, including individual forms of deviance such as drug

abuse, homosexuality, alcoholism, delinquency, divorce and mental illness and societal problems such as poverty, racism, sexism, aging and violence. In each area policy responses are discussed. Four credits.

Intermediate Courses

Open to all students who have taken one introductory course. There is one exception: Sociology 255 has no prerequisite.

Sociology 203 — Race and Ethnic Relations

An examination of (i) various processes of racial and cultural contact between peoples, especially in regard to the origin and development of American minority groups, (ii) various theories of racial and ethnic oppression, and (iii) minority responses to oppression. Four credits.

Sociology 204 — Sociology of Black Americans

The study of blacks as a minority group in American society. Enslavement, migration, white-on-black attitudes, and interracial conflict are covered briefly, but the principal focus is on the experience of blacks in various institutional sectors — the economy, politics, education, religion, and the arts. Four credits.

Sociology 205 — Structures of Social Inequality

Examination of major forms of structural inequality: caste, class and status differentials in the patterns of work, power and quality of life. Topics include theories of stratification, ideologies of equality and inequality, causes and consequences of changing patterns of social class, and the varieties of human experience with social inequality. Four credits.

Sociology 206 — Population

Issues and problems of population change; overpopulation; zero population growth. Population growth, composition and distribution in the U.S. and worldwide. Trends in fertility and mortality; migration; population theory, and population policy. Basic tools of demographic analysis. Four credits.

Sociology 208 — Immigration

Immigration as a determinant of the character of American culture. Patterns of immigration to the Americas accompanied by comparison to immigration elsewhere in the world. Internal migration with special reference to racial distribution. The immigrant experience: of conflict, adjustment and assimilation. Four credits.

Sociology 210 — Social Change in Latin America

The course introduces the study of social change, examines the explanations for development and underdevelopment, critically analyzes different models for breaking out of underdevelopment, and contrasts the different national experiments in social transformation (e.g., the Cuban, Chilean and Nicaraguan cases).

Sociology 215 — Sociology of Law

A study of the development, implementation and enforcement of law. Topics to be discussed include the sources of law, its role as an institution of social control, and an intensive treatment of the various stages of the legal process. Four credits.

Sociology 217 — Criminology

The study of crime and society. Areas of focus include the nature of law, patterns of criminal behavior, theories of crime causation, and the administration of criminal justice. Four credits.

Sociology 219 — Deviant Behavior

An introduction to the study of social deviance. Topics to be discussed include the patterns of belief, behavior and attributes that have come to be disvalued, the careers of deviant individuals, and the major theories proposed to explain the causes and nature of non-conformity. Four credits.

Sociology 223 — Methods of Social Research

An introduction to the logic and procedures of social scientific research. Readings, lectures, and laboratory exercises are directed toward the development of skills in theory

construction, research design, operationalization, measurement, data collection, analysis and interpretation. Four credits.

Sociology 235 — Community

Sociological perspectives on the local community in American society. Topics include the urbanization of community life, contemporary forms of community (central cities, suburbs, small towns, etc.), the social construction of neighborhood, and community imagery. Emphasis is on community research, including field study of Worcester. Four credits.

Sociology 241 — Development of Social Theory

A descriptive and critical study of the 19th and early 20th century social thought which informs contemporary sociological theory. Some attention is given to historical influences on emerging sociological theory. Emphasis is placed on four major theorists — Marx, Durkheim, Weber, Simmel — and on the 20th century developments in functionalism, symbolic interactionism and the sociology of knowledge. Four credits.

Sociology 242 — Contemporary Sociological Theory

An analysis of a variety of contemporary approaches to the explanation of social behavior. The course seeks to assist the student in developing an ability to analyze social structures systematically. Four credits.

Sociology 255 — Social Psychology

A survey of the interdisciplinary field of social psychology. Students are acquainted with: (i) the nature of the field and its range of topics, including person perception, attitudes, attraction, social interaction, and social influence processes; and (ii) the theories, models, and methods used to understand human social behavior. Four credits.

Sociology 256 — Self and Society

The course explores the social processes central to the formation of the self. Development of self will be traced through childhood, adolescence, young adulthood and middle age. The course explicitly examines the individual's experience of everyday life — her/his confrontation with a variety of social institutions and the continually changing psychological, physiological and socio-historical contexts. Four credits.

Sociology 257 — Aging and Society

A thorough introduction to the sociological study of people's experience of late life. The course strives to increase awareness of the social, cultural, and historical variability of aging by examining people's own accounts of old age, social psychological adaptations, changing institutional involvements, and the confrontation with dying and death. Four credits.

Sociology 260 — American Culture

An introduction to the sociological study of the dominant beliefs, values, and ideologies of American culture: e.g., individualism, agrarianism, racism, etc. Special emphasis on the historical and social production of popular belief, the social sources of cultural diversity, and popular culture and the mass media. Four credits.

Sociology 261 — Sociology of Religion

An analysis of religion as a socio-cultural product. Emphasis will be placed on the inter-relationship between religion and society in a cross-cultural perspective. Major topics include the social functions of religion, the organization of religious practice and the impact of social change on religion. Four credits.

Sociology 263 — Medical Sociology

A critical study of the institution of modern medicine. Special attention will be paid to socio-cultural and socio-political factors influencing susceptibility, diagnosis and treatment. Topics include the social meaning of disease, patienthood, the medical profession and the organization of medical care. Four credits.

Sociology 264 — Sociology of Power

A critical study of social and cultural bases for political democracy and of existing constraints and limitations. Emphasis will be on major power theories, the diversity of forms and processes of power, and the consequences of these differences for the exercise and

use of power. Assessment of the problem of responsible power in contemporary society. The sociological perspective will be stressed throughout. Four credits.

Sociology 267 — Industrial Sociology

Development of industrialization. Study of complex organization centered about people at work. Bureaucracy is 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, and economic change and the future of industrialism. Four credits.

Sociology 271 — The Family

Examination of patterns in American marital and family behavior. The course strives to increase awareness of the social, cultural, and psychological facets of family life by examining kinship relations, child socialization, dating behavior, patterns of sexual activity, marital and parental decisions, family development, divorce, violence in the family. Four credits.

Sociology 272 — Intimate Relationships

This course will introduce students to the sociological study of intimacy. Intimate relationships inside and outside the family institution will be covered. Topics include the sociology of emotions, the major theories on intimacy, intimate relations and intimate relationships, the vulnerability of bonds, and a critical examination of old forms versus new forms of intimate relationships as social control. Four credits.

Sociology 275 — Gender in Society

An introduction to the dynamics and consequences of gender roles and sexual stratification in both Western and Third World cultures. Topics include mechanisms of sexual discrimination, occupational stratification and labor market analysis, and the behavior and treatment of men and women in large organizations, including industrial firms, health care and mental health services, and schools. Four credits.

Sociology 276 — Women and Society

The course examines women's status in American society and the ways in which women's subordinate status is socially created and maintained in the workplace, in the family, and in politics. Sociobiological, socialization, psychoanalytic, marxist and feminist interpretations are examined.

Sociology 277 — Sexual Deviance

Gender is a basis of social control. The complexity of the relationship between deviance and gender and sexuality is explored through such topics as: gender as a source of stigma, gender differences in deviant behavior, and societal reactions to deviant sexuality.

Advanced Courses

These courses are open to all junior and senior students who have taken 101 or 111 and the other prerequisites listed. Sociology majors are required to elect two of these courses.

Sociology 306 — Man, Environment, and Human Ecology

Seminar examines the relationship between man and environment in the context of human ecology. Studied are (i) how the environment limits and conditions the possible development of any specific society and (ii) how humans use and modify the environment. Current environmental issues serve as a springboard for much of the discussion. Prerequisites: Permission of instructor. Four credits.

Sociology 319 — Special Topics in Social Control

An in-depth analysis of selected topics in criminology, the sociology of law, and the sociology of deviant behavior. The issues addressed will be drawn from among the major contemporary developments in these substantive areas with special attention to the relevant theoretical and empirical debates. Prerequisite: Permission of instructor. Four credits.

Sociology 324 — Social Statistics with Computer Applications

An introduction to statistical methods used in the analysis of sociological data. Both descriptive and inferential statistics are covered, with most examples and problems involving

computer-aided analysis of survey data. The course does not require a knowledge of computer programming, nor does it require more than a working knowledge of elementary algebra. Four credits.

Sociology 330 — The Sociology of Place

Seminar devoted to the sociological study of people and place. Substantively investigated are different types of places: homes, neighborhoods, communities, and regions. Theoretically analyzed are how people in society construct, use and interpret places, and how places, in turn, influence social behavior. Prerequisite: Permission of instructor. Four credits.

Sociology 341 — Sociology of Knowledge

An advanced seminar in social theory. The course examines the ways in which knowledge is socially distributed and maintained. One goal of the seminar will be to cover the theoretical literature in the sociology of knowledge. Another will be to give that theory substance by examining various topical aspects of what people in society come to "know" about themselves and about their world. Four credits.

Sociology 357 — Small Group Processes

An introduction to the study of small groups. Topics include social influence processes, group development, and group structure. A major part of the class involves experience-based learning. Prerequisite: Sociology 101, 111, or 255. Four credits.

Sociology 363 — Health Care and Society

An in-depth analysis of the health-care delivery system in America, emphasizing its academic economic and political organization. Topics include academic medical empires and medical education, health-care profiteers, the death industry, and governmental policy. Prerequisites: Permission of instructor. Four credits.

Sociology 371 — Family Issues

An advanced topical course providing a critical analysis of social structural processes that foster and maintain family stresses and conflict. The course examines the bearing of sources of family diversity (e.g., culture, political economy) on such stresses as single-parenting, health, devalue relations. Four credits.

Sociology 376 — Women and Work

This seminar examines women's work from both an historical and comparative perspective. Starting with a look at women's work in colonial America, the seminar traces the changes as well as the continuities in women's work over time. Particular attention is given to the variation in the work experience of different groups of women, depending on their class, racial, ethnic, and family status. Prerequisite: Permission of Instructor. Four credits.

Sociology 390, 391 — Seminar: Selected Topics in Sociological Analysis

A critical examination of selected topics utilizing sociological theory and research methods. Topic and staff will rotate each year. Prerequisite: permission of instructor. Four credits each semester.

Sociology 394, 395 — Directed Research

Students may undertake independent research projects under the direct supervision of a faculty member. Individuals contemplating a research project should make inquiries during their junior year, since the project is usually initiated by the beginning of the senior year. Preference for sociology majors. Four credits each semester.

Sociology 396, 397 — Directed Reading

An individualized reading program generally addressing a topic in sociology not covered in course offerings. These reading tutorials are under the supervision of a faculty member in sociology, usually limited to the senior year, and arranged on an individual basis. Open to selected students with a preference for sociology majors. Four credits each semester.

Sociology 398, 399 — Special Projects

Program for individual students who wish to pursue supervised independent study on a selected topic or an advanced research project. Ordinarily projects will be approved for one semester. Open to selected junior and senior students with preference to sociology majors. Each project must be supervised by a faculty member. Four credits each semester.

Theatre

Edward J. Herson, M.A. (T), *Associate Professor*
 William J. Rynders, M.F.A., *Associate Professor and Chair*
 Lynn Kremer Babcock, M.F.A., *Assistant Professor*
 Steve Vineberg, Cand. Ph.D., *Assistant Professor*
 Mary Paula Hunter, M.F.A., *Visiting Lecturer*

This department teaches the understanding of scripts and their interpretation on stage. When we study drama, we use critical and historical approaches, together with performance to see the literature as theatre. When we learn to make theatre, we learn to stage our interpretation of the playwright's world. In dance courses we learn the discipline of modern dance and ballet technique as well as composition and dance history.

The fully equipped Fenwick Theatre houses the major productions of the Theatre Department, dance concerts and other theatrical productions. Studio 481 and The Pit house a variety of studio productions, workshops, and classes. Work on any production of the department — acting, backstage, or front of house — is open to all Holy Cross students, faculty and staff. The Theatre Department offers a major with a 12-course curriculum. The following courses are required: Theatre History; Greek Drama or any Greek literature with drama emphasis (Classics Department) Shakespearean Dramaturgy; Modern Drama (English Department) or Contemporary Drama (English Department) or Naturalism; American Drama, 1920 - Present; Basic Acting; Scene Study; and the Voice in Acting or Movement for the Actor or Scene Design. Electives are chosen from among the following: Drama Survey, Theatre of Style, Anti-Realism, Political Theatre, Contemporary American Playwrights, American Film, Political Expression in Performance, Acting Style, Acting for an Audience, Acting Recital, Managing Theatrical Production, Scene Design, Costume Design, Lighting Design, Directing, Directing Tutorial and Writing Plays.

Theatre 60 — Introduction to the Theatre

This course is an introduction to theatrical spaces, dramatic forms, the contribution of each theatre artist (guest designers and directors lecture), and theatre criticism. Emphasis is on exercises and projects to experience theatre as an art form. Class attends approximately three productions. Four credits.

Theatre 53 — American Musical Theatre

Course explores why musicals are the most popular theatrical form in this country. What attitudes the American public buys at the musical-theatre box office. The development and current state of American Musical Theatre. The nature of the collaborative efforts of a musical theatre production team and performance techniques. Four credits.

Theatre 81 — Understanding Dance

An historical background in dance as an art, and a physical experience of the work of the dancer and the craft of the choreographer. Extensive reading plus technique. Four credits.

Theatre 55 — Drama Survey

A study of representative plays from the Greeks to the present. Lectures cover historical and critical material and script analysis. About half the class meetings are devoted to in-class performance and discussion of short scenes. The goal is understanding the plays as theatre. Four credits.

Theatre 163 — American Drama 1920 to the Present

Literary and theatrical analysis of the plays in the context of the ideas and theatrical history of their times. Four credits.

Theatre 226 — Managing Theatrical Production

The course examines in detail responsibilities and duties of the technical staff for a pro-

duction during planning, pre-production, and performance phases. Practical experience in all backstage areas is part of course work. Five credits.

Theatre 250 — Writing Plays

Methods and sources for generating script ideas. Evaluation and structuring of material created. Testing of scripts through staged readings and workshop productions. Final workshop presentation of scripts for a small audience. Four credits.

Theatre 285 — Intermediate Modern Dance

Intermediate modern technique plus choreographic problems. Four credits.

Theatre 281 — Ballet I

Beginning ballet technique. Four credits.

Theatre 283 — Ballet II

Intermediate ballet technique. Four credits.

Theatre 181 — Movement for the Actor

A course which analyzes movement so that it can be practiced intelligently by the actor. Four credits.

Theatre 180 — Theatre Crew

Two hours work per week on current productions. Required for all five credit courses. No credits.

Theatre 101 — Basic Acting

This course offers, through classroom exercises, improvisations and preparation and performance of scenes from major plays, and approach to the understanding, appreciation and practice of the art of acting and theatre. Five credits.

Theatre 255 — Iconoclasts

The study of plays which confront the commonly and comfortably professed values of their times. A critical examination of the plays' assumptions, images, and forms through analysis and performance. Four credits.

Theatre 126 — Scene Design

Principles of scenic design and script analysis as they are used to create an environment for the action of the play. Includes a historical survey of scenic design, theatre architecture, and period style and drafting and rendering techniques. Work on a set for a Fenwick production provides practical experience. Four credits.

Theatre 228 — Lighting Design

A study of the properties of light and the objectives of stage lighting as used for drama and dance. Includes basic electricity and its control, lighting equipment, and drafting. Practical experience is obtained through running and designing a production. Five credits.

Theatre 40 — Political Expression in Performance

This course studies theatre as an expression of culture, political ideology, and social values and seeks to examine how socially oriented theatre has evolved historically. Students experiment with communication of political/economic issues in a theatrical context. Four credits.

Theatre 102 — Voice in Acting

Emphasis on development of the human voice, which is critical for the young actor and very useful for potential speakers in a variety of disciplines. Students learn how to correct regionalisms, support the voice with breath, and develop a flexible, healthy voice. Five credits.

Theatre 103 Scene Study

Analysis from a variety of periods, rehearsal and performance of scenes ranging from contemporary to restoration. Physical and vocal exercises from Basic Acting will be continued. Five credits.

Theatre 204 — Acting Style

This advanced class focuses on Shakespearean scene study and monologs. Students will prepare contrasting pieces that will be juried at the end of the semester. Five credits.

Theatre 151 — Shakespearean Dramaturgy

Thorough examination of the theatrical meaning of six plays through study of ways of staging Shakespeare and through rehearsal and in-class performance and discussion of selected scenes. The course is sometimes taught as part of the Interdisciplinary Studies Program, Sequence XVIII, "Shakespeare: From Text to Performance." Four credits.

Theatre 259 — Modern Drama: Staging the Text

The course focuses on how analysis, both literary and theatrical, informs production. Strong emphasis is placed on how actors analyze the text and on how they bring their analysis to bear upon rehearsal and performance. This course is sometimes taught as part of the Interdisciplinary Studies Program Sequence, "Modern Drama: From Page to Stage." Four credits.

Theatre 305 — Acting Recital

The course is designed for the individual needs of advanced acting students. Rehearsal and performance in a major production is the main basis of grading. Five credits.

Theatre 306 — Acting for Audience

A continuation of Theatre 305. Five credits.

Theatre 400 — Tutorial/Theatre

Directed study in selected theatre topics. Analyzing and conceptualizing the play, casting, rehearsal procedures, coaching the actors, visualizations, fundamentals of composition, picturization, movement, rhythm, stage business. Four credits.

Theatre 61 — American Film

This introductory course teaches the student how to "read" a movie and deals with issues of film history, genre and criticism. The syllabus includes films from 1932 to the present. Four credits.

Theatre 165 — Naturalism

An examination of naturalism (realism) as a theatrical style beginning with Zola, Ibsen, Strindberg, Shaw and Chekhov, and ending with the work of contemporary film makers. Four credits.

Theatre 261 — Film as a Narrative

This advanced course deals with narrative elements in films (point of view, time, structure, tone). Part of an interdisciplinary sequence on narrative; taught in conjunction with "What's a Story?" Literature, Narrative, Experience (English). Four credits.

Theatre 263 — Contemporary American Playwrights

The texts explored in this course change according to the current offerings of the Fenwick Theatre season. Students take a close look at the work of two to five American playwrights. Four credits.

Theatre 269 — Political Theatre

This course examines theatre and film that either espouses a political point of view or else deals with political issues. Four credits.

Theatre 45 — Directing

Essentials of the art. Focus is on developing a production concept and on working with actors. Basics of managing movement, visualizing relationships, and arranging space. Final project is a studio production of a one-act play. Four credits.

Theatre 257 — Anti Realism

Symbolism, surrealism, and absurdism in the theatre. Representative plays will be studied through analysis and performed. Four credits.

Visual Arts

Terri Priest, M.F.A., *Associate Professor and Chair*
 Cristelle Baskins, Ph.D., *Assistant Professor*
 Joan N. Italiano, M.F.A., *Associate Professor*
 Bryan V. McFarlane, M.F.A., *Assistant Professor*
 Virginia C. Raguin, Ph.D., *Associate Professor*
 Rev. John P. Reboli, S.J., Ph.D., *Associate Professor*
 Susan P. Schmidt, M.F.A., *Assistant Professor*
 Joanna E. Ziegler, Ph.D., *Assistant Professor*
 Elizabeth Dunn, M.A., *Visiting Lecturer*
 Ellen Lawrence, M.A., *Visiting Lecturer*

The Visual Arts Curriculum is designed as an integral part of the liberal arts program of the College. Its aim is to increase student sensitivity to the arts, to refine the powers of critical analysis and to provide the student with means of creative expression. A program of visiting artists and critics allows all students to develop an understanding of fundamental historical and contemporary issues. The department also works closely with the exhibition program of the College's Cantor Art Gallery and that of the Worcester Art Museum. Introductory courses are open to all students without prerequisites. Art majors are expected to take their courses in a proper sequence as developed by the student and department advisor.

Requirements

There are two major concentrations in the Visual Arts Department: (1) Art History and (2) Studio.

The Art History major requires a minimum of 10 courses. This includes Studio Fundamentals, an additional studio elective, two semesters of Survey of Art and six electives in art history, three of which must cover the area requirements of Ancient/Medieval, Renaissance/Baroque and Modern. The Concentration seminar is mandatory and fulfills one of the six electives.

The Studio major also requires a minimum of 10 courses. This includes two semesters of Survey of Art, Studio Fundamentals and Drawing I. The remaining six (and maximum of 10) courses are selected from upper-level courses in Drawing, Painting, Printmaking, Design and Sculpture, forming a coherent progression in concepts and skills. In addition, Studio majors are required to attend the Visiting Artists programs and scheduled critique sessions.

VISUAL ARTS HISTORY

Introductory

Visual Arts History 101 and 102 — Survey of Art I and II

These two courses are the standard introduction to the discipline and stress the acquisition of basic visual skills as well as a comprehensive understanding of the major style periods in the history of art. Survey I begins with the prehistoric era and extends to the Gothic period. Survey II begins with the Renaissance and ends with the beginning of abstract art before World War I. Intensive use of the collections of the Worcester Art Museum, including faculty conducted tours, is an integral part of these courses. The courses may be taken as separate units or in sequence.

Intermediate

Most intermediate courses require Survey I or II. This requirement may also be fulfilled, pending the discretion of the instructor, by experience acquired by personal study. Intermediate courses are divided into two types of inquiry: Historical Periods and Criticism and Themes.

HISTORICAL PERIODS

Visual Arts History 201 — Greek Art

Greek art covers the architecture, painting, sculpture and pottery of the Aegean world from 1500 to 200 B.C. The arts of Crete, Greece and the Hellenistic Empire are included. Prerequisite: Survey I or permission of the instructor. Four credits.

Visual Arts History 202 — Roman Art

Roman art studies the varied works of the Etruscans and the Romans to the beginning of the Christian era and the reign of Constantine. Several specific themes are stressed: the influence of Greek art, the Roman development of realistic portraiture, wall paintings, architectural innovations such as the arch and the vault, and political and religious subject matter. Prerequisite: Survey I or permission of the instructor. Four credits.

Visual Arts History 203 — Ancient Art

This survey of architecture, sculpture, and painting from 3000 B.C. to 350 A.D. is designed to complement the History course. The great art works of Mesopotamia, Egypt, Greece and Rome will be seen in their historic context. Four credits.

Visual Arts History 204 — Medieval Art

This course deals with art from the beginning of a new European west under Charlemagne, 800 A.D., to the age of the great cathedrals in the 13th century. Architecture, manuscript illumination, stained glass, and sculpture are included. A strong element of Christian symbolism should be expected. Prerequisite: Survey I or permission of the instructor. Four credits.

Visual Arts History 205 — Italian Renaissance Art

Italian Renaissance Art begins with the work of Giotto in the 13th century and continues through the 16th century with the art of Leonardo, Michelangelo and Raphael. Architecture, sculpture and painting in Florence, Rome, and Venice are included. Prerequisite: Survey II or permission of the instructor. Four credits.

Visual Arts History 206 — Northern Renaissance Art

The Renaissance in the North extends from the 14-16th centuries in Germany, Belgium, England and France. The panel paintings of Van Eyck, Van der Weyden, and Hugo van der Goes are studied in detail. The art of printmaking, as exemplified by the works of Durer, is included. Prerequisite: Survey II or permission of the instructor. Four credits.

Visual Arts History 207 — Baroque and Rococo Art

This course studies the diverse styles that emerged in European painting, sculpture and architecture during the 17th and 18th centuries. The era begins with the "High" Baroque art of the Counter Reformation, contrasted with the developments of Realism and the revival of Classicism. These styles enter a new phase in the eras of the Rococo and the French Revolution. Prerequisite: Survey II or permission of the instructor. Four credits.

Visual Arts History 209 — Nineteenth Century Art

This course concentrates on the 19th century with emphasis on French developments, Neo-classicism, Romanticism, Realism, Impressionism, and Post Impressionism. Prerequisite Survey II or permission of the instructor. Four credits.

Visual Arts History 210 — Twentieth Century Art

Beginning with the development of Expressionism and Abstraction just before World War I, this course traces the development of modern ideas in painting and sculpture up to the present day. Prerequisite: Survey II or permission of the instructor. Four credits.

Visual Arts History 211 — History of Oriental Art

This course is designed as a complement to the College's Asian Studies Program or as a continuation of intermediate studies in the history of art. The course will be taught with a strong emphasis on the collection of Asian art of the Worcester Art Museum and will alternate its focus between Chinese or Japanese art, according to exhibition schedule. Prerequisites are some background in Asian history or culture or Survey of Art I or II. Four credits.

CRITICISM AND THEMES

Visual Arts History 230 and 231 — Architectural Studies I and II

These courses examine the history of architecture from pre-history to the present. The focus is on major monuments and developments in the history of architectural styles, building technology and urban planning. Both courses question the relationship between social, political and economic history and the internal progress of architecture as a phenomenon independent of historical context. There is strong emphasis on critical reading, class discussions and preparation of one major research paper. Four credits.

Visual Arts History 232 — Sculpture since the Renaissance

This course analyzes major sculptural concepts beginning in the Renaissance but with emphasis placed on the modern world. Prerequisite: Survey II. Four credits.

Visual Arts History 233 — Sculpture Seminar

This course entails in-depth study of individual works of sculpture. Students also learn aspects of museology, such as the research and writing of a catalogue. Prerequisite: permission of the instructor. Four credits.

Visual Arts History 234 — The Painter in the Modern World

The development of painting as the central medium of visual expression in the 19th and 20th centuries is investigated. The painters studied range from Goya to Picasso, and artists will be considered in terms of the development of their careers, their contribution to the art of painting, and their influence on the cultural and social ideas of Western society. Prerequisite: permission of the instructor. Four credits.

Visual Arts History 235 — Sacred Spaces

This course examines the evolution of sacred architecture (temples, churches, mosques, etc.). The course is thematic rather than historical, with close attention given to the imagery and intent of spatial design. Prerequisite: permission of the instructor. Four credits.

Visual Arts History 260-299 — Special Topics in Art

Special topics in art history, architecture and criticism are offered regularly by all professors. The courses respond to special interests evidenced by students, outgrowths of topics addressed in an intermediate course, or research interests of the faculty. The courses are often interdisciplinary in nature and sometimes are offered without prerequisites. A gallery seminar taught by the director of the College's Cantor Gallery is offered every other semester and has involved students research of the collection and organization of exhibitions. Examples of recent Special Topics are:

Nineteenth Century Realism

The course examines the various meanings that "realism" had in nineteenth-century art. Courbet and Manet are used as focal points but a wide variety of artists are studied. Traditional and new critical approaches to define realism of this period are investigated. Prerequisite: Survey of Art II and Nineteenth-Century Art.

Seminar: The Literate Image

The course can be described as "Reading Italian Renaissance Narrative Painting." The course studies the adaptation of literary models for pictorial narratives in Italian Renaissance art. Readings include works of Ovid, Virgil, Dante, and Boccaccio, among others. No art history prerequisite, but experience in literature suggested.

American Art and Architecture

Students are introduced to American decorative arts (silver and furniture), painting, and architecture of the eighteenth and nineteenth centuries by a close study of objects, paintings, and buildings at Holy Cross, the Worcester Art Museum, and the Worcester area. The course emphasizes oral presentation by students.

Seminar: Architectural Criticism

This course examines writings about architecture. Students will explore the various ways in which written texts interact with (criticizing supporting) architectural practice, building and urban planning. Writings are drawn from the nineteenth and twentieth centuries and

address such topics as specific architects, urbanism, style and theories of architecture. Prerequisite: Architectural Studies I and II. Four credits.

Exhibition Seminar

A seminar leading to an exhibition to be held in the Iris and B. Gerald Cantor Art Gallery. (Exhibition will not necessarily be held in the same year.) Students will participate in as many phases of the exhibition program as possible from selection of works to preparation of catalogue entries. Topics will vary from year to year but will ordinarily focus on some aspect of 20th century art. Prerequisite: juniors and seniors only and permission of the instructor.

Advanced

Visual Arts History 301 — Concentration Seminar

This course, designed for majors and concentrators, provides a critical examination of issues and methods in the literature of the history of art. Debates over the role of social and economic history in the study of art will be explored as will the more traditional approaches, such as formalism, stylistic and iconographical analysis. Prerequisite: permission of the instructor.

Visual Arts History 320-350 — Tutorials

Tutorials relate to all areas covered by VAH 200 courses.

VISUAL ARTS STUDIO

Students with extensive previous experience in studio art, or with specific program needs, may be allowed to move directly to intermediate level courses, pending the discretion of the instructor.

Majors in Studio Art are required to attend regular Departmental Critiques and to develop a portfolio of their own work. During the senior year, this portfolio is reviewed with attention by members of the faculty.

Introductory

Visual Arts Studio 101 — Studio Fundamentals

This course is the basic introduction to all aspects of the studio program. Exercises in drawing, painting, design, and three dimensional construction are included. Drawing and painting from the still life and the model, slide lectures showing the work of contemporary artists, and regular class critiques and discussion insure the beginning student a solid introduction to the creative process. Emphasis is on participation and sensitivity to issues, not on skill-level. This course is a prerequisite for all intermediate courses. Four credits.

Visual Arts Studio 110 — Basic Ceramics

This course is an introduction to the basic techniques of hand building, wheel work, glazing, decorating and firing. Stress will be on the technique of throwing on the wheel, with some time on clay and glaze preparation and processing. Four credits.

Intermediate

Visual Arts Studio 200, 201, 202 — Painting I, II and III

The primary objective of this course is to teach the fundamental techniques of oil painting as a means of expression. Students will be exposed systematically to the use of such art materials as oil paint and/or acrylic. They will explore traditional and contemporary concerns. They will derive subject matter for painting from organic and man-made objects such as still life, animal, plant life and architecture. An individualistic and imaginative approach will be highly encouraged. Participation and effort are mandatory and hold priority over talent. Importance is placed on acquiring an ability to make choices and to determine the direction of one's work by formulating opinions and developing a critical ability to justify those opinions. Prerequisite: Studio Fundamentals. Four credits.

Painting II

Introduces students to the more advanced concepts of color composition as a two dimensional surface. The expressive use of oil and acrylic paint will be explored. Students will also study the works of major painters dealing with traditional and contemporary concerns in terms of style and content out of which personal direction and styles will be highly encouraged. Readings from periodicals, magazines and writings on art criticism will be encouraged. Visits to museums and galleries in the Worcester and Boston area are required with the probability of one trip to New York City. Students are also required to be present at all class critiques. Prerequisite: Painting I. Four credits.

Painting III

Emphasizes student responsibility for the selection of subject matter, medium and style. The instructor serves as a supportive resource responsive to the individualized direction selected by the student. Prerequisite: Painting II. Four credits.

Visual Arts Studio 205 and 206 — Drawing I and II**Drawing I**

Drawings from the figure, portrait, still life, landscape and imagination. Emphasis on charcoal, with other drawing materials explored. Personal involvement with your work and participation in group critiques is essential. Prerequisite: Studio Fundamentals. Four credits.

Drawing II

Drawings from life, still life, landscape, and imagination. Various media including charcoal, ink, and monotype will be explored. In addition to class work, students will develop an individual project during the second half of the semester, leading to a final series of drawings. Personal involvement with your work and participation on group critiques is essential. Prerequisite: Drawing I. Four credits.

Visual Arts Studio 210 and 211 — Printmaking I and II**Printmaking I**

This course covers a range of techniques, always emphasizing printmaking as a means of personal expression. Printmaking I concentrates on intaglio printing including etching, aquatint, soft ground, sugar lift, and printing in color. Students also explore monotypes — single images made from paintings on plexiglass. Prerequisite: Studio Fundamentals. Four credits.

Printmaking II

This course covers a range of techniques, always emphasizing printmaking as a medium of personal expression. Printmaking II concentrates on lithography, printing images from drawings on stones. Students will prepare the surfaces of stones and learn the craft of processing and printing a lithograph. Students will also explore monotypes, single images made from paintings on plexiglass. The course also includes introductory intaglio printing and advanced level intaglio for those who have taken Printmaking I. Prerequisite: Printmaking I. Four credits.

Visual Arts Studio 215 and 216 — Design I and II**Design I**

Involves a study of elements of visual organization first encountered in Studio Fundamentals. Color theory and composition will be studied as tools for the creation of concepts of movement, depth, and structural clarity in both two and three-dimensional designs. Prerequisite: Studio Fundamentals. Four credits.

Design II

Allows the student to develop further his or her sensitivity to the manipulation of line, color, texture, and composition in both two and three-dimensional forms. Prerequisite: Design I. Four credits.

Visual Arts Studio 220 and 221 — Sculpture I, II and III

Sculpture I

Sculpture I explores the elements of three-dimensional expression in projects of varied media. Students are exposed to sculptural issues via slide presentations on past and present works in sculpture. Class critiques allow students to refine both concepts and expression to create a personal synthesis. Prerequisite: Studio Fundamentals. Four credits.

Sculpture II

Allows the student to continue in-depth work in selected materials of sculptural expression. Prerequisite: Sculpture I. Four credits.

Sculpture III

Allows for advanced work in a medium already studied in Sculpture II. Prerequisite: Sculpture I. Four credits.

Visual Arts Studio 225 — Ceramics II

This course is a continuation of the techniques introduced in Basic Ceramics, with emphasis on experimentation and individual projects. Prerequisite: Basic Ceramics. Four credits.

Visual Arts Studio 230-250 — Special Topics in Studio

These courses study special techniques or concepts outside the present course listings.

Advanced

Visual Arts Studio 301 — Same as Visual Arts History 301

Concentration Seminar. This course is restricted to seniors and is taught by both Studio and Art History staff. The emphasis is on contemporary issues.

Visual Arts Studio 320-350 — Tutorials

Tutorials relate to all areas covered by VAS 200 courses.

The Campus

Located on the southwest edge of the city on one of Worcester's seven hills — Mount Saint James — Holy Cross has a terraced, 174-acre campus whose buildings are a picturesque blend of traditional red brick and newer structures. Its grounds personnel have won some half-dozen national awards for the maintenance and appearance of the campus. Two-dozen major buildings dot the campus, including:

Libraries

The College's library system provides the main library, Dinand; the O'Callahan Science Library; and the Music Library.

Dinand Library presently houses a collection of 430,000 volumes and about 2,100 professional and scholarly journals. The library has shelving capacity for 500,000 volumes and seating for over 800 readers. There are private study rooms for faculty and students, an expanded area for audio-visual operations, and selected areas for rare books and special collections.

Two new wings are dedicated in memory of Joshua and Leah Hiatt and all the victims of the Holocaust. A special Holocaust collection is being developed.

The main reading room contains the Library of Congress dictionary card catalog, three on-line terminals to access library materials, major reference works, and accommodations for research and reading. The second floor contains our Reserve Book Room, the Inter-Library Loan Department, and audio-visual operations, which include microfilms, microfiche, and audio and video capabilities.

The serials and newspaper departments offer multiple research indices to journals in art, humanities, social sciences, theology, philosophy and economics. More than 50 newspapers are received. The New York Times from 1851 to the present is on microfilm.

Students are instructed in the use of the library and are also informed about the instruments and methods of research. There are 11 professional librarians on the staff ready to offer assistance. The library is open for operations 112 hours per week. The Browsing Room and Lounge afford an area of comfort and relaxation for leisure reading.

The Catalogue Department operates three OCLC Terminals on-line with Ohio for the cataloguing of books, searching for inter-library loans and acquisitions plus the execution of the retrospective conversion project, which will eventually place our entire collection of journals and monographs on-line. Both Dinand and O'Callahan libraries offer on-line searching of computerized data bases.

The library is a member of a group of 14 area libraries (academic, private, public) known as WACL (Worcester Area Cooperating Libraries) under the aegis of the Worcester Consortium. This organization publishes a Union List of Serials, sponsors library projects and studies, operates a twice-daily shuttle service for inter-library loans among the libraries, and affords its members a book reservoir of more than 3,000,000 volumes.

The Special Collections consist of incunabula (books printed prior to 1500), 16th and 17th century Jesuitana, Americana (books published in America prior to 1820), Newman letters and first editions, Louise Imogen Guiney correspondence and books, the Senator David I. Walsh and James M. Curley collections, the John Deedy Collection of Cardinal Wright correspondence, and a Holocaust collection.

The library holds memberships in the following organizations: American Library Association, Association of College and Research Libraries, and the New England, Massachusetts, Catholic and Music Library Associations.

The O'Callahan Science Library, which is located in Swords Hall, contains an excellent collection of 45,000 books and journals in the disciplines of biology, chemistry, mathematics and physics. This new library, with 10,000 square feet, has seating accommodations for 120. The Music Library, which is located in the east end of Fenwick Hall, has a collection

of 5,000 sound recordings, 400 compact discs, 2,800 books and 3,700 music scores. The music/visual arts librarian also supervises the 40,000 slides in the Visual Arts Department.

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, student organization and administrative offices, the College bookstore, a cafeteria, pizza parlor, pub, private dining rooms, ballroom and party rooms, notion shop, duplicating center, and record library. In addition, day-student facilities are provided to accommodate the needs of non-resident students.

There is a Campus Center Board of Directors that represents all members of the College — students, faculty, administrators and staff — and advises the director in the operation of the Campus Center.

In its program, the Campus Center is committed to fostering educational experiences 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 are the primary goals of the Campus Center.

Residence Halls

Five dormitories are located on the upper level of the campus, in line with the Hogan Center, and are the newest residences. Two others are located at opposite ends of a quadrangle on the lower terrace, and the remaining two are adjacent to Dinand Library.

The Chapel

Midway up Mount Saint James and at the end of campus is St. Joseph Memorial Chapel, a pillared structure with the separate Memorial and Mary Chapels on different floors. Each has a seating capacity of 900 and is used daily for Masses and other liturgical services. The magnificent new Taylor and Boody tracker organ, designed in the tradition of 16th century Dutch and north German organs, was installed in the upper (Memorial) chapel in 1985.

Fenwick and O'Kane Halls

Attached together at right angles, Fenwick and O'Kane, with their soaring spires, housed the entire College in its early years. Today, they contain administrative and faculty offices, classrooms, psychology laboratories, art studios and music library. The Iris and B. Gerald Cantor Art Gallery, which displays changing exhibits, is located on the first floor of O'Kane Hall. In the Data Processing Center, located in the basement of Fenwick Hall, are IBM 4381 and Digital VAX 8600 computers for administrative, faculty and student use. In addition to these mainframe computers and related equipment in the Fenwick Data Processing Center, about 250 satellite terminals and personal computers are located throughout the campus.

Hart Recreation Center

Completed in 1975, this contemporary structure contains a 4,000 seat basketball arena and a separate, 1,200-seat ice hockey rink; an Olympic-size swimming pool; handball and squash courts; a crew practice tank; and locker rooms.

Loyola Hall

Located behind the chapel, Loyola opened in 1965 and provides living quarters for campus Jesuits and houses the departments of psychology and sociology, the College infirmary and a faculty lounge and dining area.

Haberlin, O'Neil and Swords Halls

This complex includes a \$10.5 million addition between O'Neil and Haberlin Halls, Swords Hall, which was completed in the winter of 1985. Among facilities are laboratories; classrooms and offices for biology, chemistry, mathematics and physics; lounges for faculty and students; the O'Callahan Science Library; and a greenhouse and facilities for aquatic research on the roof of Swords Hall.

Edith Stein Hall

Completed in January 1988, this five-story building contains 35 classrooms and two large lecture halls for the departments of economics, modern languages and literatures and religious studies, and facilities for the audio visual department and language laboratory.

Admissions

Holy Cross seeks students who are intellectually curious, appreciative of humanity's creative sense, and committed to the realization of each person's potential. Admission to Holy Cross is highly selective; therefore, the Board of Admissions gives preferential consideration to those candidates who have demonstrated their ability to perform well in a rigorous intellectual endeavor. Although there are no specific secondary school subject requirements for admission, candidates are urged to complete the most challenging college-preparatory program available in their schools. A curriculum of this nature should emphasize study in English, mathematics, foreign language (ancient or modern), laboratory sciences, and social sciences. A variation from such preparation, however, may not necessarily disqualify a candidate for admission. Evidence of superior achievement in analytical reading and writing is of particular importance to the Board of Admissions.

All candidates must submit official results of the Scholastic Aptitude Test (SAT) and three Achievement Tests directly from the appropriate office of the College Board. The English Composition Achievement Test is required of all applicants and if possible should be taken in December of the senior year. The other two may be of the candidate's choosing, preferably in subject areas in which she or he plans to study at Holy Cross. They may be taken at any testing date that is convenient and appropriate for the candidate, but not later than January of the senior year.

Since Holy Cross seeks students who will contribute to the College both academically and personally, the Board of Admissions takes specific note of the individual talents and qualities of candidates as well as the extent of extracurricular involvement. Such information is conveyed to the Board through recommendations from counselors and teachers, through an optional (but recommended) personal interview in the Admissions Office, and through the candidate's statements on the application.

Holy Cross limits the number of students accepted to the biology, economics and economics/accounting majors and the premedical/pre dental sequence. Candidates interested in these academic areas are encouraged to indicate this preference at the time of submitting an application. Students are first evaluated for admission to the College and later for approval for specific programs.

The deadline for filing an application is February 1. Applicants will be notified of the Board's decision in early April. Application for admission to Holy Cross is encouraged of all academically qualified candidates regardless of religious affiliation, race, sex or national origin.

Holy Cross College supports the efforts of secondary school officials and governing bodies to have their schools achieve regional accredited status to provide reliable assurance of the quality of the educational preparation of its applicants for admission.

Campus Visits

Visitors are always welcome at Holy Cross and will find their time spent on campus to be most productive when the College is in session. Personal interviews in the Admissions Office are scheduled Monday through Friday except during February and March. We suggest that they be arranged several weeks in advance.

Group information sessions are held on several Saturday mornings during the fall. These sessions include an audio-visual presentation, a discussion period and a student-guided tour of the campus.

Weekday guided tours, conducted by student volunteers, are given when classes are in session. Tours begin at the Admissions Office several times throughout the day.

Overnight visits may be arranged for students. These visits may include a tour of the campus and the opportunity to audit classes and to meet informally with our students and faculty members. Student visitors may enjoy meals in the College's Dining Hall and

reside in the dormitories. This is an excellent opportunity to experience Holy Cross as our own students do.

To arrange any of the above, please write or call the Admissions Office (508-793-2443).

Interviews

Personal interviews in the Admissions Office are scheduled Monday through Friday *except during February and March*. We suggest that they be arranged well in advance since our interview schedule is usually filled by December 1.

Alumni interviews are available in most metropolitan areas to those students unable to interview on campus. To facilitate scheduling, please check the appropriate box on the application form and submit it no later than January 6.

To arrange any of the above, please write or call the Admissions Office (508-793-2443).

Early Decision

To superior high school seniors who have selected Holy Cross as their first choice, the College offers an Early Decision Program. The Board of Admissions assumes that all students who apply under this program will accept an offer of admission, provided it includes adequate financial aid if such is needed. Holy Cross offers two notification dates to Early Decision candidates. Students who file by November 1 will be notified of the Board of Admissions' decision by December 15. Those who file by January 15 will be notified by February 15. Early Decision candidates may file applications for regular admission to other colleges, but upon notification of acceptance to Holy Cross, these applications must be withdrawn immediately and a validating, non-refundable tuition deposit of \$200 be submitted.

The Early Decision candidate must submit the required College Board scores by November for December consideration and by December for February consideration. A personal interview is also required of all Early Decision candidates and should be arranged well in advance. Should the Admissions Board be unable to grant acceptance, the application will be deferred and will receive full consideration at the regular time. The candidate must have an official transcript of seventh semester grades sent to the College.

Financial Aid applications for Early Decision candidates will be mailed directly by the College to those applicants who indicate they are seeking assistance.

Advanced Placement

Holy Cross participates in the Advanced Placement Program of the College Board. Each academic department establishes criteria for awarding placement and credit.

Granting College Credit

Holy Cross will grant college credit for courses taken in high school provided: (a) they are taken at an accredited college or university (i.e. on the campus); or (b) they are taught at the high school by a full-time faculty member of an accredited college or university.

Verification of either criterion must be submitted in writing to the class dean at Holy Cross by the secondary school principal or headmaster.

A final grade of "B" or better is required and the courses must be similar in rigor and content to those normally offered at Holy Cross. Complete descriptions of each course for which the student is requesting credit must be forwarded to the class dean. Approval for credit rests with the appropriate department chair at Holy Cross.

Students may request acceptance of any or all of the college-level courses completed while in high school. This request should be made in writing to the class dean at Holy Cross prior to November 15 of the student's freshman year. The grades for courses accepted for credit will be calculated in the Quality Point Index at Holy Cross except for semester and graduation honors.

A maximum of eight semester courses will be accepted in transfer for the incoming freshman. They will apply toward graduation if the equivalent of either one or two full semesters is accepted, i.e. four or eight courses. Courses accepted for credit that do not constitute

a full semester (four courses) will apply toward graduation only if they are used to remove a deficiency. Students with fewer than four courses (the equivalent of a full semester) accepted for credit may as freshmen have the opportunity to elect upper-division courses at the discretion of the department chair.

Incoming freshmen who have been given credit for fewer than four college-level courses but who have Advanced Placement Examination credits awarded by Holy Cross in several subjects may request early graduation on the following supportive grounds:

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

(b) 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 ordinarily will not be considered after the end of freshman year. Final approval will not be granted until sometime after the completion of freshman year. Students should submit requests through the office of the class dean. A final decision in the matter of early graduation rests with the dean of the College.

Early Admission

Through its program of Early Admission, the College will consider the application of superior high school juniors who have attained a high degree of personal maturity and social adjustment. All required entrance exams must be taken during the junior year, and a personal interview is mandatory.

Transfer Students

Each semester Holy Cross accepts a limited number of transfer students to the sophomore and junior classes. Because of the competition, candidates for transfer must present evidence of strong academic achievement at the college level. The application deadline is December 1 for the spring semester and May 1 for the fall semester. A personal interview is required of all transfer candidates. Because of departmental limitations, transfer students are not admitted as biology or accounting majors, and only a few spaces are available in the pre-medical/pre dental sequences.

Admission of Special Students

A special student is one who is not enrolled as a candidate for a degree. An application form for admission as a special student may be obtained by writing to the Office of the Registrar. The application must be completed prior to August 15 for the fall semester and prior to January 1 for the spring semester. The decision to accept an applicant as a special student will be based on the applicant's reason for seeking special student status, the evidence of a strong record in prior academic work and favorable recommendations from two professors. Applicants should understand that many courses have limited enrollments and that preference in registration is ordinarily given to degree candidates. Normally, special students are limited to two courses in a semester.

Freshman Orientation

A special program of orientation for new students is arranged by various campus offices and organizations prior to the start of classes in the fall. Information concerning the orientation program is forwarded to the students during the summer.

Further Information

Inquiries concerning admissions should be addressed to:

Admissions Office
College of the Holy Cross
Worcester, Mass. 01610
508-793-2443

Expenses (1988-1989)

Tuition	\$11,500	Audit, per credit.....	360
Room and Board	4,700	Graduation Fee.....	70
Infirmiry Service	125	Transcript	1
Student Activities Fee	110	I.D. Card (freshmen	
Application Fee	40	and juniors)	5
Leave of Absence Fee,		Health	
each semester.....	30	Insurance	Optional charge

Acceptance Deposits

Candidates are usually notified of acceptance from January to April, and are obliged to forward a partially non-refundable reservation deposit of \$200 by May 1. The amount deposited is credited toward 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. This deposit will be credited at the rate of \$50 per semester toward room charges. Entering freshmen who have paid an acceptance deposit of \$200 do not have to pay this room deposit.

Books and Personal Expenses

A fair estimate of the average personal and incidental expenses for the school year is \$960. Books and supplies average about \$400 for the year.

Payment of Bills

Semester bills will be issued in July and December and are due and payable by the date indicated on each statement. Payment is to be made by check or money order, payable to the COLLEGE OF THE HOLY CROSS, and sent to the Bursar, College of the Holy Cross, P.O. Box 4069, Worcester, Mass. 01610. A student Medical Insurance Plan is available and descriptive pamphlets are mailed to each student with the premium stated therein.

At this time, the College works exclusively with several outside banks and commercial firms to handle monthly installment plans. Information regarding the particulars of each plan are sent to current, as well as prospective students on a yearly basis. Students may also obtain pamphlet information on the plans directly from the Bursar's Office.

To avoid problems with student registration, the semester bill is due and payable as specified on the tuition statement. Whenever necessary, the College will cooperate with parents in arranging for any loan plan.

Refunds of Tuition, Board and Room

During the first five weeks of each semester, there will be a proportional refund of tuition; after five weeks there will be no refund. Rooms are contracted for and occupied on a semester basis. A percentage proportion of this fee is refundable if and only if the room is re-occupied by another eligible Holy Cross student. Board fees for students who withdraw or move off campus are also refunded on a percentage basis. Information concerning the details of this refund policy may be obtained by contacting the Bursar's Office.

Policy Change

The charges made by the College are subject to change at any time by the formal action of the College administration. Changes will be enumerated in the 1989-1990 catalog.

Financial Aid

The College of the Holy Cross has a financial aid policy that is supportive of its academic and spiritual goals as a Jesuit, undergraduate, liberal arts college. Holy Cross will meet the demonstrated need of all students accepted for admission and enrolled in the College. This need is determined using a rigorous but fair application of the needs analysis procedures agreed upon by the more than 2,000 members of the College Scholarship Service Assembly. The Financial Aid Committee expects families to provide their share of support to the student from income and assets. The financial aid program at Holy Cross is generous and therefore all students, regardless of their socio-economic background, who want to attend the College are encouraged to apply and investigate all means of financial assistance.

A financial aid statement is required of both natural parents in cases where there is a separation or divorce. The Committee understands that the actual amount of help offered at any income level will vary according to special circumstances, savings, investments, medical bills and educational costs of other children in college. Families should likewise recognize that Holy Cross' financial aid program is aimed at making it financially possible to attend the College, not financially easy.

Financial aid packages are provided in the form of scholarships, loans and employment either singly or in combination. Assistance is based on demonstrated need, academic promise and fulfillment of the citizenship requirements for financial aid established by the federal government. A new needs analysis is conducted each school year before financial aid packages are renewed.

Freshmen

To apply for assistance, an incoming student need only indicate on the admissions application that he or she would like to be considered for financial aid. There is space provided for this purpose on the application form. Should an incoming student fail to indicate such a wish on the admissions application and later decide to initiate a request for financial aid, he or she must do so in writing with the Financial Aid Director. The only other requirement for application is to submit a Financial Aid Form (FAF) as soon after January 1 as possible but before February 1. The FAF should be submitted to the College Scholarship Service, Princeton, N.J., indicating that Holy Cross should receive a report. This form is available at the applicant's secondary school and is used to collect family financial information used by the College in determining the amount of assistance a student may need to attend the College for the coming year.

An aid candidate will be notified of his or her financial aid award not later than April 15. Students who enroll and who have been tendered financial assistance will be required to submit notarized copies of both parent and student federal income tax returns for the immediately preceding year before final action is taken on their award. Alternate documentation is required in instances where a tax return is not filed by either party.

Upperclassmen and Renewal Awards

Each year Holy Cross students who receive College-administered financial assistance must file a new FAF, a Holy Cross financial aid application, and notarized copies of the federal income tax returns for the immediately preceding tax year. Forms are available after February 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 that they are first-time applicants. New awards to upperclass students are based on demonstrated need for assistance, the availability of funds and academic performance up to that point. March 15 is the preferred closing date for submission of all credentials for renewal of awards and new requests for assistance from upperclass students. It is the responsibility of the student

financial aid applicant to assure that all the necessary documents are in the hands of the Financial Aid Committee in time for processing of awards. Notifications of renewal are usually mailed out by late June, and notification of award in the case of a new request is made by August 15.

Scholarships

Each year, more than 200 entering freshmen are awarded Holy Cross Scholarships with stipends ranging from \$200 to \$11,500, depending on the student's financial need. Each applicant is considered for all awards for which she or he may be eligible, including many endowed and restricted scholarships. No special application other than the FAF is necessary to be considered for these awards. In general, scholarship assistance will be renewed each year provided the student continues to demonstrate need for such assistance. Stipends, however, may be adjusted if a family's resources and financial strength change significantly.

Many students will receive scholarship assistance from corporations, foundations, civic groups, parent and school associations, and service clubs, in addition to awards made from College funds. 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, Maine, Massachusetts, New Jersey, Pennsylvania, Rhode Island or Vermont to apply for the scholarship program in their home states. Application information is available either in high school guidance offices or the appropriate state agencies that are listed below. Since each state scholarship program has its own deadline for applications, it is advisable to make application early in the academic year.

Connecticut

Connecticut Scholastic
Achievement Grant Program
Department of Higher Education
61 Woodland St.
Hartford, CT 06105

Massachusetts

Massachusetts State
Scholarship Office
150 Causeway St., Room 600
Boston, MA 02114

Pennsylvania

Higher Education Assistance Agency
660 Boas St.
Harrisburg, PA 17102

Vermont

Vermont Student Assistance
Corporation
P.O. Box 2000
Winooski, VT 05404

Maine

Department of Educational
and Cultural Services
Higher Education Services
Vickery-Hill Building
State House Station 119
Augusta, ME 04333

New Jersey

Department of Higher Education
Office of Student Assistance
CN 540
Trenton, NJ 08625

Rhode Island

Rhode Island Higher Education
Assistance Authority
Grants and Scholarships
560 Jefferson Blvd.
Warwick, RI 02886

Grants

Pell Grants:

The Pell Grant Program provides grants directly from the Federal Government in amounts ranging up to \$2,200 per year, depending upon the financial circumstances of each family. This is the largest federal student assistance program, and all financial aid applicants are required to process a Pell Grant application as a requirement of applying for other assistance at Holy Cross. To apply, a student must indicate on the FAF that the family financial information on the FAF is to be transmitted directly to the Pell processing agency. There is no cost for this additional service. Processing time is approximately six weeks, after which a Student Aid Report (SAR) is returned to the student applicant by the Pell agency. The SAR should be forwarded to the Financial Aid Office at the College for final processing of the Pell Grant.

Supplemental Educational Opportunity Grant (SEOG):

This is a limited program for students of exceptional financial need who without the grant would be unable to continue their education. The Financial Aid Director is responsible for determining and selecting eligible students in this program as well as the amount of the award.

Loans

The Guaranteed Student Loan Program (GSLP):

This is the primary source of educational loans and eligible students may borrow directly from lenders to finance educational expenses. Since this is a need-based program, each borrower must file an FAF in order to receive a determination of his or her eligibility. Student borrowers apply to a hometown bank or commercial lender, preferably one with which his or her family has done its banking. The maximum amount of loan under this need-based program is \$2,625 each year for the first two years of undergraduate study. The maximum loan increases to \$4,000 for subsequent years with a five-year undergraduate total of \$17,250. The interest rate is eight percent during the first four years of repayment. This increases to 10 percent beginning with the fifth year. Repayment begins six months after graduation from college, graduate school or termination of studies and may extend beyond 10 years. Typical repayments in the GSLP would range from \$120 - \$130 per month for 120 months on a loan of \$10,000. Deferment of repayment for up to three years for military service, Peace Corps or VISTA is permitted. Up to one year of deferment may be allowed while actively seeking but not finding full-time employment.

Perkins Loan:

Holy Cross administers a limited number of loans under the authority of this Federal program. These loans carry an interest rate of five percent simple interest. Repayment and deferment provisions are similar to the GSLP, which is described above. A student may borrow up to \$9,000 over four years in the Perkins Loan program. Up to 10 years may be allowed to repay a Perkins Loan, and a typical repayment obligation where a student has borrowed \$6,000 would be \$60.75 per month for 120 months.

Because of the limited amount of funds in the Perkins Loan program, priority for loans under this type of assistance will be extended to students from states or areas in which loans made under the GSLP are not readily available. Before approving a Perkins Loan, the College may require evidence that the student's application for funds for the GSLP has been refused.

Parent Loans for Undergraduate Students (PLUS):

This is a federal program and is in operation in most states. Parents may borrow up to \$4,000 each year but not more than \$20,000 per child. The rate of interest is variable based on the 91 Day Treasury Bill plus 3.75 percent — not to exceed 12 percent. Repayment of PLUS loans must begin within 60 days and extend up to 10 years. These loans also are limited to the difference between total costs of attending the College and any other financial assistance.

Processing a PLUS loan begins with the family bank. If the lender does not participate

the family should try another if it is possible to do so. Applicants who still need assistance in locating a lender should contact the Financial Aid Office.

The Family Education Loan at Holy Cross:

Holy Cross College provides two additional ways for parents to finance their children's education. The Family Education Loan (FEL), in conjunction with the Massachusetts Education Loan Authority (MELA), allows eligible parents to choose either:

- (1) a one-year loan program under which they may borrow up to 100 percent of the total education expenses for one academic year minus other financial aid, or
- (2) a Tuition Prepayment Plan under which tuition for the student's remaining college years may be borrowed all at once. Under this plan the amount borrowed is based on the current year's tuition, which is guaranteed to remain the same for the student regardless of future increases.

Both options may carry with them after-tax savings, with the possibility of tax deductible interest payments on a secured loan.

Under either plan parents can spread repayment over a 15-year period at a guaranteed interest rate, which is based on the interest rate for each bond issue. The borrower's rate for 1988-89 will range from 8.75 percent to 10.50 percent APR, with monthly payments of approximately \$10.50 to \$11.75 per \$1,000 borrowed.

The FEL was developed by the MELA in cooperation with a group of colleges and universities, including Holy Cross, to ease the burden of continually rising costs for tuition, room and board and other charges. The plan is funded by the sale of tax-exempt bonds and provides:

- (1) uniform terms, borrowing rates and standards of eligibility and credit for parents and students;
- (2) a fixed interest rate, and level monthly payments, tied to the interest rate earned by purchasers of the bonds; and
- (3) a centralized loan service to handle approval of credit, payment collection and record-keeping.

Instructions and applications for this program will be available in the spring, and interested families should contact the Financial Aid Office for these materials.

Employment

As part of their financial aid package, some students may be awarded a work-study authorization. The federal College Work-Study Program (CWSP) provides funds for Holy Cross to subsidize hourly wages of students who demonstrate need for assistance in meeting their educational expenses. Eligible students who are tendered employment have the opportunity to earn up to \$1,500 during the academic year. Freshmen, however, should not count on earning any substantial sum through employment if their financial aid award does not contain an authorization for CWSP.

Wages are based on an hourly rate and are paid directly to the student each week. There are miscellaneous jobs in the Worcester community, and the Financial Aid Office serves as a "clearing house" for such opportunities. A file in the Financial Aid Office is maintained to provide notice of positions that become available.

ROTC Scholarships and Stipends

The ROTC programs of the Air Force and Navy offer full tuition scholarships to selected cadets and midshipmen. An advanced (junior and senior) student receives a tax-free stipend (currently \$100 per month), whether or not the student is receiving an Air Force or Navy scholarship. Additional information can be obtained by directly contacting the Air Force or Naval ROTC offices on campus.

Army ROTC is offered at Worcester Polytechnic Institute and, through the Worcester Consortium, Holy Cross students may enroll in that program. Additional information is available by contacting the Professor of Military Science, Worcester Polytechnic Institute, Worcester, Mass. 01609.

Additional Information

Because the federal budget for 1989 was not completed at the time this material was prepared, the information published here with regard to federal student aid programs (Pell Grants, College Work-Study, Guaranteed Student Loans, Perkins Loans, Plus Loans and Supplemental Educational Opportunity Grants) could change. Please be alert for news of legislation that may affect these programs.

Answers to questions not found here or to other specific inquiries regarding the financial aid program will be provided by the Financial Aid Director or staff members. Please address correspondence to:

Financial Aid Office
College of the Holy Cross
Worcester, Mass. 01610
508-793-2265

Holy Cross 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

Martha and Peter Adams Scholarship: Established in 1984 by a gift from George S. and Peter E. Adams, Jr. in memory of their parents, Martha and Peter Adams. Income to be awarded to a worthy and needy student.

The Governor Ames Scholarship: Established in 1887 by Governor Oliver Ames.

The Benjamin and Catherine M. Andrews Scholarship Fund: Established in September 1984 by a bequest from the estate of Catherine M. Andrews. To be used for scholarships for a worthy student or students.

Anonymous: Established in February 1966 by an anonymous donor. Income to be used for scholarships to be awarded at the discretion of the President of the College.

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.

John J. Barry Scholarship Fund: Established in 1963 by a gift of Margaret Barry in memory of her husband John J. Barry, '10. Preference will be given to a needy, deserving applicant with an interest in baseball.

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.

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 James F. and Margaret A. Bresnahan Scholarship Fund: Established in November 1965 in memory of James F. and Margaret A. Bresnahan to aid worthy students from the Diocese of Springfield, Mass. Scholarship aid is to be awarded at the discretion of the President of the College from income only.

The Anne M. Brogan Scholarship: Established in 1981 by John P. Brogan, '66, in honor of his mother.

The John E. Brooks, S.J., Scholarship: Established in 1980 by Michael W. McCarthy, a 1960 Honorary Degree recipient, in honor of Father Brooks.

The Rev. Charles E. Bruke Scholarship: Established in 1895. Appointment to be made from residents of St. Francis Parish, North Adams, Mass.

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.

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 NROTC Program.

The Margaret R. Burke Scholarship: Established in 1979 by Edmund J. Burke, '24, in memory of his mother, to provide financial assistance to needy sons or daughters of widowed mothers.

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.

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.

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."

Bridget Carney Scholarship Fund: Established in 1972 by Dr. James J. Kearney in memory of his mother, Bridget Carney. The income from the fund is to provide aid to worthy and deserving students whose parents were parishioners of St. Ignatius Roman Catholic Church, Kingston, Pa.

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, Mass. 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.

The Catherine McPherson Carson Scholarship Fund: Established in 1962 by Dr. Alexander F. Carson, '19, for the purpose of furnishing scholarships to qualified students selected by the President of the College.

Challenger Memorial Scholarship: Established in 1986 by Jacob Hiatt, D.H. '73, in memory of the crew of the space-craft Challenger.

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.

William L. and Hazel B. Clifford Scholarship: Established in 1966.

The Frank D. Comerford Scholarship Fund: Established by Archibald R. Graustein in 1959.

Class of 1963: Gifts of members of the Class of 1963 to the Development Fund to be used to establish a scholarship.

Class of 1964: Gifts of members of the Class of 1964 to the Development Fund to be used to establish a scholarship.

The Connecticut Valley Alumni Scholarship: Established in 1912 by the Alumni of Connecticut Valley.

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.

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, Mass. If no such eligible candidate applies, then such a candidate who graduates from Cathedral High School shall be considered; if none such, then any application 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, Mass., and who intend to enter the priesthood.

Thomas and Mary A. Corrigan Scholarship: Established in 1972 by a bequest of Henry J.C. Corrigan.

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.

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.

The Crowley Family Memorial Scholarship II: Established in 1947 by bequest of Miss Bridget T. Crowley of Springfield, Mass. Conditions same as the Crowley Family Memorial Scholarship I.

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.

The Crusader Council Knights of Columbus Scholarship: Established in June, 1963, by a gift toward the establishment of a 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.

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.

Charles A. Dana Scholarship: Established in 1982 by a challenge grant from the Charles A. Dana Foundation. Income to be used for students of sound academic ability who have the potential for or have demonstrated desired qualities of character and leadership. Dana Scholars receive stipends based upon financial need ranging from an honorarium up to the amount of tuition.

Dr. and Mrs. Carl J. DePrizio Scholarship: Established on October 30, 1959. Income to be used for an 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 through his high school course.

Diocese of Worcester Scholarship: Established by the Most Rev. Bernard J. Flanagan, D.D., '28, Bishop of Worcester, the income of which is to be utilized for increased student aid.

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.

The James F. Donnelly '99 Scholarship: Established on May 11, 1956, by a gift from the Sylvan Oestreicher Foundation.

James P. Doran and Loretta K. Doran Fund: Established in 1985 by a bequest from the estate of Loretta K. Doran. The Fund is to be used in aiding and assisting needy students.

Michael J. & Joanna F. Daley Driscoll Scholarship Fund: Established in 1986 by a bequest from the estate of Rev. Frederick G.M. Driscoll '19, in memory of his parents.

The Charles Leo Dubois Scholarship Fund: Established in 1980 by a bequest from the estate of Charles L. Dubois, '34, in memory of his parents, Charles Leon Dubois and Mary Ellen Dubois. The annual income is to be used to aid some worthy student or students, preferably seniors, in continuing or completing their college work.

The Richard E. Duhaime Scholarship: Established in 1987 by a bequest from Richard E. Duhaime '47.

Earls Family Scholarship: Established by William T. Earls to provide scholarships for worthy young students as determined by the College.

Kevin M. Earls Scholarship Fund: Established in 1986 by friends in memory of Kevin M. Earls, 43.

The Eastman Kodak Company Scholarship: Established on September 16, 1960.

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 Worcester.

The Rev. Patrick J. Finnegan, P.R. Scholarship: Established on November 28, 1955, by a bequest from the estate of Rev. Patrick J. Finnegan. Income to be used to assist needy boys from Portsmouth, N.H.

Charles A. Fleming Scholarship: Established in 1982 by a bequest from Charles J. Fleming, '18, for scholarships to needy students with track and field ability and with good scholastic records.

William Fitman Scholarship: Established in 1983 by a bequest from Anna G. Fitman in memory of William J. Fitman. Income is to be used for a student whose domicile is in the State of Massachusetts.

William and Mary Fitman Scholarship: Established in 1983 by a bequest from Anna G. Fitman in memory of William and Mary Fitman. Income for a student whose domicile is in the State of Massachusetts.

The Desiree L. Franklin Scholarship Endowment Fund: Established in April 1977 from the estate of Desiree L. Franklin to assist any young man or woman who may be in financial need. Scholarship aid is to be awarded at the discretion of the President from income only.

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.

Fort Lauderdale Alumni Scholarship Fund: Established through a gift from Francis K. Buckley, '35.

The Francis T. Fox Scholarship Fund: Established in 1976 by the Foundation for Educational Services to assist students preparing for a career in public administration.

The Mary Gammal Scholarship: Established in 1981 by Mary Gammal to provide income to students who are suffering from a complete loss of hearing, or are profoundly hearing impaired. First preference to students from Worcester, then to those from Massachusetts.

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 E. Burke Giblin Scholarship: Founded and augmented by gifts in memory of E. Burke Giblin, a Trustee of Holy Cross from 1973 to 1980. Mr. Giblin was chairman of the Warner-Lambert Company.

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.

The Monsignor Griffin Scholarship: Established in 1895, limited to residents of St. John's Parish, Worcester, Mass.

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.

The Dale T. Gutekunst Scholarship: Established in 1981 by Mrs. Eugenia S. Gutekunst in memory of her son, Dale Thomas Gutekunst, of the Class of 1970.

The Mary Agnes Haberlin Foundation: For worthy students chosen by the President or faculty of the College.

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.

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.

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, Mass. Selection to be made from students of the public and parochial schools of Northampton, Mass., by means of competitive examinations.

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.

Father Hart Scholarship Fund: Established by the Class of 1943 as a tribute to Rev. Francis J. Hart, S.J.

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.

The Rev. Jeremiah J. Healy Scholarship II: Same as the Rev. Jeremiah J. Healy Scholarship I.

The Richard Healy Scholarship: Established in 1908 by Mr. Richard Healy of Worcester, Mass., open to competition for residents of Worcester County regardless of creed.

The Mr. and Mrs. Richard Healy Scholarship: Established in 1916 by Mr. and Mrs. Richard Healy of Worcester, Mass., for the benefit of a direct relative of donors.

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.

The Frances 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.

Francis R. Hickey Memorial Scholarship Fund: Established in 1985 by a bequest from the estate of Marion R. Hickey for students in financial need.

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.

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.

Larry Hogan Scholarship Fund: Established in 1981 by Coleman F. and Margaret M. Hogan in memory of their son, Larry. Preference to needy students from St. Michael's Parish, Exeter, N.H., and, then, from the Southeastern New Hampshire area.

The John T. Holland '17, Memorial Scholarship: Established on January 2, 1954, by a gift from Matthew M. Berman. To be used for worthy students selected by the President of the College.

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 a bequest 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, Mass.

C. Keefe Hurley Scholarship: Established in 1970 by C. Keefe Hurley, '29, 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.

The John Collins Hurley Scholarship: Established on April 28, 1953, by a bequest from the estate of Margaret M. Hurley. Income to be used for education of a worthy graduate of Durfee High School, Fall River, Mass.

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.

The "In Memoriam" Scholarship: Established in 1915 by an alumnus of the College for a deserving student.

Thomas R. and Elizabeth Johnson Scholarship: Established in 1973 by a bequest from the estate of Elizabeth E. Johnson for the education of worthy boys from Worcester, Mass., with preference given to boys within the bounds of Holy Rosary Parish.

Timothy F. Kane Scholarship Fund: Established in 1968 from the estate of Timothy F. Kane, preference to be given to a deserving student requiring financial assistance.

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.

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.

The Otto Seidenbury 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.

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.

The Rev. Michael H. Kittredge Scholarship: Established in 1917 by Rev. Michael H. Kittredge, Class of 1875.

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 of Massachusetts. Award to be made by competitive scholastic examination 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.

Eleanor Laux Memorial Fund: Established in 1974 by John C. Laux, '23, in memory of his wife.

Helen M. Lavigne Memorial Scholarship: Established in 1983 by Omer D. Lavigne, '36, and his three children, in memory of his wife Helen. Income for a deserving student, male or female, based on financial need — one who could otherwise not attend Holy Cross.

The Richard J. LaVigne, M.D., Scholarship: Founded and augmented with gifts in memory of Dr. Richard J. LaVigne, '37, Joseph W. LaVigne and Dr. E. John Mango, the income from the fund will be used annually to assist a premedical student who has demonstrated need of financial aid.

The Michael J. Lawlor Scholarship: Established in February 1949 by a 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.

Father Leahy Fund: Established in 1960 by a bequest from the estate of Joseph C. Bland for the education of needy boys entering College of the Holy Cross.

W.H. Lee Milk Company Endowment Fund: Established on September 4, 1959 with the provision that the income 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 Archibald R. LeMieux Scholarship: Established under the will of Archibald R. LeMieux for deserving students attending the College of the Holy Cross.

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 is to be made by competitive examinations.

Clemens M. Linga, Jr. Scholarship: Established in 1983 by Mr. and Mrs. Clemens M. Linga, Sr. in memory of their son, Clemens, Jr., '71. Income to be awarded to worthy and needy students from Worcester County with an interest in the field of law. Selections to be made by the President of the College.

The James B. and Catherine W. Longley Fund: Established by James B. Longley in memory of his mother and father.

The Edward C. Maher Scholarship: Founded in 1981 by Edward C. Maher, '40 for needy students from the immediate Worcester area.

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.

Dr. Francis J. Malumphy Scholarship Fund: Established through gifts from Dr. Thomas L. Malumphy.

Dr. E. John Mango Scholarship Fund: Established in memory of Dr. E. John Mango, '50, by Dr. Richard J. LaVigne, '37.

The Henry and Mary Margaret Mannix and Elmer and Helen Sperry Scholarship: Established in 1982 by John F. Mannix, '52 and Helen Ward Sperry Mannix in honor of their parents. The income is to be used to aid a member of a minority group residing in the State of Connecticut.

The Marfuggi Memorial Fund: Established in 1974 in memory of Mr. and Mrs. Anthony P. Marfuggi. Scholarships to be awarded at the discretion of the College.

The Henry Vincent McCabe Scholarship: Established in 1916 by the late Mary McCabe of Providence, R.I., for a deserving student.

The Rev. Dennis F. McCaffrey Scholarship: Established on September 29, 1953 by a bequest from the estate of Rose A. McCaffrey.

McCahill-Harvey-Slottman Memorial Fund Scholarship: Established by Richard E. Harvey, '42, in 1967 with income only to be awarded at the discretion of the President of the College.

William F. McCall, Jr. Scholarship Fund: Established in 1986 by friends to honor William F. McCall, Jr., '56. The Fund is to be used to aid a student from the Boston area.

The Eugene and Margaret McCarthy Scholarship: Established in July 1962 by a bequest from the estate of Margaret McCarthy. Income to be used to aid a worthy student with preference to be given to a resident of Springfield, Mass.

The Peter McCord Scholarship: Established by Mary Lambert McCord for a deserving student.

The Reverend John F. McDonnell Scholarship: Established in June 1967 in memory of Rev. John F. McDonnell, '00. Income to be used for the education of deserving and needy students. Selection to be made by the President of the College.

The Rev. David F. McGrath Scholarship I: Established in 1907 by the Rev. David F. McGrath, Class of 1870, 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.

The Rev. David F. McGrath Scholarship II: Established in 1920 by the Rev. David F. McGrath, Class of 1870; conditions same as the Rev. David F. McGrath Scholarship I.

The Rev. David F. McGrath Scholarship III: Established in 1920 by the Rev. David F. McGrath, Class of 1870; conditions same as the Rev. David F. McGrath Scholarship I.

The Frank J. McHugh and Kathleen B. McHugh Scholarship Fund: Established on June 14, 1968 by a bequest from the estate of Frank J. McHugh, Jr. '38.

The Dr. Frederick J. McKechnie Scholarship: Established in December 1962 by a bequest from the estate of Mary I. Dunn.

The Monsignor John W. McMahan Scholarship: Established in 1938 under provisions of the will of Rt. Rev. Msgr. John W. McMahan, '67, to give scholarship aid to a Holy Cross student to be designated by the Reverend Pastor of St. Mary's Parish, Charlestown, Boston, Mass., preference being given to students coming from St. Mary's Parish.

The Katherine McQuade Scholarship: Established in June 1967 by a bequest from the estate of Katherine McQuade.

The Charles E.F. Millard Scholarship: Established by John F. Power, Sr., '28, to honor Charles E.F. Millard, '54. Selection to be made by the President of the College, who shall

give first preference to children of employees of the Coca-Cola Bottling Company of New York, Inc.

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.

Mary F. Mourin Memorial Scholarship Fund: Established in 1975 from the estate of Mary F. Mourin to aid in the financial assistance of students who the Board of Trustees deems worthy and in need of financial aid residing in Worcester or Worcester County.

The Patrick J. Murphy Scholarship: Established in 1944 by Mrs. Ellen M. Murphy as a memorial to her husband, the late Patrick J. Murphy, of Worcester, Mass.

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 Rt. Rev. Msgr. Richard Neagle of the Class of 1873, to assist boys qualified, in the opinion of the faculty, who otherwise could not afford such an expenditure as would be necessary to enjoy the education and religious advantages of the College of the Holy Cross.

John F. O'Keefe Memorial Scholarship: Founded in 1984 and augmented with gifts in memory of John F. O'Keefe, '51, Vice President for Business Affairs and Treasurer of the College from 1970 to 1984. Income to be awarded to an incoming freshman, preferably a Worcester-area student.

The Dennis F. and Lorretto Radle O'Connor Scholarship: Established on May 26, 1955 by Dr. Dennis F. O'Connor, '93, to be used for a worthy student to be selected by College authorities.

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.

The O'Driscoll Scholarship: Established in 1874, for a student (limited to residents of Worcester), who is a candidate for the priesthood and is selected by the Bishop of Worcester or his delegate.

The May and Sylvan Oestreicher Scholarship: Established on December 30, 1957 by a gift from Sylvan Oestreicher.

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.

The Rev. Daniel H. O'Neill Scholarship I: Established in 1895, limited to residents of St. Peter's Parish, Worcester, Mass.

The Rev. Daniel H. O'Neill Scholarship II: Established in 1908; limited to residents of Worcester.

Penhall-O'Rourke Scholarship: Established on September 9, 1958 by a bequest from the estate of Dr. James J. O'Rourke, '09, to be used for scholarships in aiding a deserving student.

Reverend Lawrence F. O'Toole Scholarship: Established in May 1966 in memory of Rev. 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, Mass., and second, to anyone in the Diocese of Worcester.

The Joseph A. & Dorothea H. Perrotta Memorial Scholarship: Established in 1986 by a bequest from the estate of Dorothea H. Perrotta, widow of Joseph A. Perrotta, '28, Secretary to the President of the College from 1933 to 1972.

Reverend Michael G. Pierce, S.J. Scholarship Fund: Established by gifts from Robert H. McCooey, '52.

The Reverend Michael G. Pierce, S.J. Scholarship: Established in 1983 by a bequest from George F. Duffy. Preference for a young man from the St. Mary of the Hills Parish, Milton, Massachusetts. Selection by the President of the College on the basis of scholarship, character and need.

The Rev. Dr. Patrick B. Phelan Scholarship: Established in 1917 by Rev. Dr. Patrick B. Phelan, Class of 1869; open to competition for graduates of the Sacred Heart School, Holyoke, Mass.

The David H. Posner and Mary Murphy Posner Foundation: Established on July 1, 1957 by a bequest from the estate of Mary M. Posner. Income to be used toward tuition of worthy students.

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.

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.

The Mary A. Prendergast Scholarship: Established in 1945 under the will of the late Mary A. Prendergast for deserving orphan students.

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: Established in June 1963 by the staff of the yearbook, "The Purple Patcher," Class of 1963 and augmented by the staffs of the Classes of 1964, 1965, 1966 and 1967.

The "Quid Retribuam" Scholarship: Established in 1907 by a friend of education in gratitude for divine favors; if not filled by founder, competitive examinations will be held.

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, Mass.

The Patrick W. Rafferty Scholarship: Established in 1920 and open to competition among deserving students of Worcester.

In Memory of Dennis M. and Josephine R. Reardon Scholarship: Established on January 11, 1952 by a bequest from the estate of Josephine F. Reardon. Income to be used to aid a worthy student preparing for the holy priesthood.

Matthew W. Reedy Scholarship: Established in 1983 by a bequest from Anna G. Fitman in memory of Matthew W. Reedy. Income for a student whose domicile is in the State of Massachusetts.

Reverend Maurice F. Reidy, S.J. Scholarship: Established in 1984 by a gift from Mr. and Mrs. George Paletta, parents of George A. Paletta, Jr., '84, in memory of the Reverend Maurice F. Reidy, S.J. Income to be awarded to a needy student who participates in a minor sport, preferably lacrosse, and who has achieved a strong scholastic record. Selection to be made by the President of the College of the Holy Cross.

The John Reid Scholarship: Established in 1894, limited to residents of Worcester, Mass.

The Catherine F. Reilly Scholarship: Established on June 1, 1955 by a 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.

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.

The Reilly Memorial Scholarship: Established in 1922 by the late Joseph J. Reilly, '04.

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.

The Rev. William H. Rogers Scholarship: Established in 1918 by Rev. William H. Rogers, Class of 1868.

Patrick and Mary McCauley Ronayne Scholarship: Established in 1973 by a bequest from the estate of Elizabeth E. Johnson for the education of worthy boys from Worcester, such boys to be selected by the Trustees of the College.

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.

The Hon. John E. Russell Scholarship: Established in 1907 by a Friend of the College.

The Mr. and Mrs. John A. Ryan Family Scholarship Fund: Established in 1967 by Miss Mabel C. Ryan.

Clarence G. Schilling Scholarship: Established in 1982 by a bequest from Clarence G. Schilling, a member of the Department of Mathematics faculty from 1945 to 1951. Income to be used for partial scholarships for students of character, ability and ambition.

The Scholler Foundation Scholarship: Established on October 24, 1955.

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.

The Monsignor Seiter Scholarship: Established by a bequest in 1981 from the estate of Monsignor Aubrey R. Seiter, '23. Income to be used for a worthy student from St. Michael's Parish, Rome N.Y.

The James J. Shea, Sr., and Barbara Shea Brennan Scholarship Fund: Established in 1979 by a gift from Edward J. Brennan, Jr., '52, to honor James J. Shea, Sr., a recipient of an Honorary Degree from Holy Cross in 1968. Mr. Shea was Board Chairman of Milton Bradley Company of Springfield, Mass. Augmented by a gift in 1985 in memory of Barbara Shea Brennan.

Timothy A. Shea Scholarship Fund: Established by bequests 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 Worcester and awarded on a competitive basis.

Audrey Sheldon Memorial Fund for Music and the Arts: Established in 1982 by the Merlin Foundation. Income is designated for the Dana Scholars Program.

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.

The Dr. John J. Slattery Scholarship Fund: Established in 1985 by a bequest from the estate of Dr. John J. Slattery, '24, for the purpose of aiding needy and worthy students who are desirous of obtaining a pre-medical education.

The Elizabeth Spang Scholarship: Established in 1936 by the will of Elizabeth Spang of West Haven, Conn. 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."

The Garrett H. Spillane, III Scholarship: Established in 1986 by Garrett H. Spillane and Frances C. Spillane in memory of their son, Garrett H. Spillane, III, '80.

The Francis J. Steele, M.D., Scholarship: Established in 1981 by a bequest of Helen E. Steele in memory of her husband, Dr. Francis J. Steele, '28.

The Monsignor John E. Sullivan Scholarship Fund: Established in 1984 by a bequest from Msgr. John E. Sullivan, '26. First preference to students from St. Camillus' Parish, Arlington, Massachusetts.

Frances Hannon Sweeney Memorial Scholarship Fund: Established in 1986 by a bequest from the estate of Robert L. Sweeney, 29.

Michael H. Sweeney Memorial Scholarship Fund: Established in 1986 by a bequest from the estate of Robert L. Sweeney, 29.

Robert L. Sweeney Memorial Scholarship Fund: Established in 1986 by a bequest from the estate of Robert L. Sweeney, 29.

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.

In Memory of Helen M. and John F. Tinsley Scholarship: Established on November 20, 1953 by a bequest from the estate of John F. Tinsley. Income to be used to assist worthy students selected by the President of the College.

The R.J. Toomey Co. Scholarship: Established by gifts from John A. Toomey, '28, Lawrence T. Toomey, '30, and Richard J. Toomey, '23.

The Frank W. and Violet Towey Scholarship Fund: Established by a bequest from the

estate of Frank W. Towey, '16. The income to be used for financial aid to students in accordance with standards determined by the Trustees of the College.

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.

The Clune J. Walsh, Jr. Scholarship: Founded by The Home Life Insurance Company and augmented by gifts to honor Clune J. Walsh, Jr., '52. Priority consideration to be given to students pursuing a career in life insurance sales and marketing.

The Honorable David I. Walsh Scholarship Fund: Established by a gift from George J. Feldman with scholarships to be awarded to students whom the donor and College authorities judge to be in need of financial assistance.

The Rev. Robert Walsh Scholarship: Established in 1895, limited to residents of the Immaculate Conception Parish, Worcester, Mass.

The Stephen W. Wilby Scholarship: Founded by the Naugatuck Valley Alumni Association and friends in Connecticut.

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.

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.

Worcester Federal Savings and Loan Association Educational Fund: Established on April 1, 1960.

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:

Eastern Connecticut Holy Cross Club, Holy Cross Alumni Club of Worcester, Holy Cross Club of Boston, Holy Cross Club of Maine, Holy Cross Club of Long Island, Holy Cross Club of New York, Holy Cross Club of Rhode Island, Holy Cross Club of Merrimack Valley, Holy Cross Club of New Hampshire, Holy Cross Club of Rochester and Holy Cross Club of Pioneer Valley.

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 that have aided students of their selection by financial contributions toward tuition costs.

The Office of the College Chaplain

As a Catholic and Jesuit college, Holy Cross is committed to scholarship, academic excellence and the deepening of the human and religious lives of everyone in the College. To be true to its heritage, Holy Cross must allow and encourage all its members to recognize their own values, mature as individuals within a community, and grow in relationship both with other men and women and with God. As a vital part of the living tradition of this College, the Office of the College Chaplain seeks to serve all those who are part of this community through a ministry of care and concern; pastoral counseling; spiritual direction; religious education; the celebration of the Church's liturgy; the proclamation of the Gospel; Christian witness to the critical issues of today — poverty, injustice, hunger, peace, reverence for life; retreats; and independent mediation between various campus groups; in short, the coordination of the various expressions of and energies for religious life on campus. Our work, then, is to foster and bring to new life our Christian tradition and commitment in the latter part of the twentieth century.

The Chaplains are concerned with individuals: while always concerned that the Catholic members of Holy Cross may experience a deeper commitment to Christ and to the community that is Church, the Chaplain's Office seeks also to maintain close contact with the non-Catholic members of the College, with due respect for their tradition and their freedom of conscience. Members of the Holy Cross community who adhere to faiths other than the Catholic faith should feel most welcome to attend any campus liturgical service or program provided by the Chaplain's Office to which they are inclined. Opportunities can be created for students to meet local ministers of their faith.

At Holy Cross, the Chaplain's Office is not a marginalized part of the institution; it is at its center. The Chaplains are not "answer men and women." They rely on the creative efforts and energies of other members of the community to make the religious presence at Holy Cross a living and growing thing.

The Committee on Social Concern

The Committee on Social Concern originated in 1984 as part of the College's commitment to educate men and women to the service of faith and the promotion of justice. Since the mid-1970s, to the traditional hallmarks of Jesuit education — a striving for academic excellence, concern for the whole person, moral and spiritual development of character — a new dimension has been added: a commitment to justice. The Committee on Social Concern is one part of the College's effort to educate for justice; the Committee seeks to develop programs and policies in all spheres of campus life to combat racism, sexism and classism. Through its endeavors, the Committee hopes to coordinate and strengthen the College's education of "men and women for others." The members of the Committee on Social Concern are appointed by the president of the College.

Student Services

Dean of Students

The dean of students coordinates student life in non-academic areas, including health services, counseling and career planning, student activities, residence life and student conduct. 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 person. 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.

Health Services

The College Health Services exists for the purpose of providing acute care to all students, members of the Jesuit community, and employees when injured on duty. The Health Services are organized to meet the immediate needs of all students during the academic year.

The College physicians are board certified, practicing internal medicine specialists. In addition, there are full and part-time registered nurses staffing the Health Services on a 24-hour-a-day basis during the academic year.

The Health Services consist of an Ambulatory Care Unit and an In-patient Care Unit. A brochure of services is available to all students and parents. Many students can have their problems assessed and cared for by the registered nursing staff on duty. The College physicians have office hours Monday through Friday. They are available via phone 24 hours a day during the academic year. Health Services personnel work collaboratively with the Office of the College Chaplain and the Counseling Center.

The Advisory Program

Holy Cross provides each freshman with a faculty advisor who assists the student with curriculum planning and course selection. The assignment of the advisor is made in the summer prior to enrollment by a course pre-registration. The advising relationship continues throughout the four years — although the advisor may change, depending on the student's needs and the needs of the major department.

Counseling Center and Career Planning Office

Students in college sometimes encounter personal problems that make their lives more difficult than they need to be. These problems can affect a student's ability to achieve personal, career and academic goals. The psychologists and professional staff at the Counseling Center and Career Planning Office provide a variety of services to assist students in resolving problems, learning about themselves and others, and promoting personal and intellectual growth and development. Among the services offered are:

- **Individual counseling** directed toward the resolution of personal problems
- **Educational and career counseling and testing** to promote the identification and implementation of appropriate academic and career goals
- **Development groups** designed to address common student concerns such as assertiveness, personal growth, relationships, family problems, and eating disorders
- **Lectures and open discussions** on topics related to human development that are of interest to students
- **The College Venture Program**, which offers opportunities for worthwhile work experiences for students who elect to take a leave of absence from the College. Venture jobs are challenging, temporary, full-time positions in a wide variety of fields and locations

- **Career resources** incorporating occupational information, graduate school catalogs, listings of internship and employment opportunities, and directories of alumni willing to assist students with career planning
- **Workshops and programs** preparing students to identify appropriate employment and graduate school opportunities, to write resumes and related correspondence, and to interview successfully
- **Credential files** for documents required for graduate school admission or employment
- **On-campus interview opportunities** for students to meet potential employers and representatives from graduate and professional schools.

The counseling services offered at the Center are open to all current full-time students and are confidential. Students interested in making an appointment may call the Center (793-3363) or come in (Hogan 207) from 9 a.m. to 5 p.m.

Residence Life

Much of the campus life at Holy Cross is centered around the residence hall in which a student lives. While the 10 residence halls vary in size, tradition and facilities, all are coeducational by floor and integrated by class. A budget is allotted to each house, allowing the elected house council members to arrange social and cultural activities for the residents.

The whole area of residence life is under the supervision of the Dean of Students' staff. The halls are administered by a staff of resident assistants who are upperclassmen selected for their maturity, responsibility and leadership qualities. Each resident is expected to regard the rights of others, respect the physical surroundings and uphold the values of the College. An atmosphere of friendly cooperation and mutual consideration assures that the hall will be an enjoyable place to live and a quiet place to study and relax.

In addition to the resident assistants, the houses have faculty associates who attempt to enhance student-faculty relationships on an informal level by becoming involved in house activities.

Many students find their experiences in residence hall living to be among the most memorable of their college days. Activities such as informal get-togethers with faculty members, house parties and cookouts, intramural basketball and softball games between corridors, as well as other more spontaneous activities have been successful and enjoyable ways to bring people together in a learning and growing experience through residence life.

Student Activities

Student Government Association (SGA)

The Student Government Association serves as the primary student voice on campus, dispenses student activities fees, and coordinates various student activities and committees.

The SGA has more than 75 members in the following categories: officers of SGA, student members of the Faculty Meeting, student representatives of two faculty committees (not members of the Faculty Meeting), student representatives to six college committees (not members of the Faculty Meeting), and optional representation from each active college organization.

The SGA has the power to grant recognition to student organizations on behalf of the student body, to establish procedures for the creation of a Student Judicial Board and to establish committees and commissions which may be necessary to investigate, assess and recommend action on particular areas of concern to the student government. In addition, the SGA determines, with the consent of the college, the student activities fee and through the Student Activities Fees Committee (SAFC) allocates funds among the student organizations with the approval of the Director of Student Activities.

Clubs and Organizations

The more than 70 student groups fall into four major categories — co-curricular, extra-curricular, performing arts and communications media. Among co-curricular groups are societies devoted to sciences, foreign languages, management, law and literature, while extra-curricular organizations include Students for Life, the Women's Organization, B.J.F. Debating Society, Black Student Union, and clubs for such interests as racquetball, photography and chess. Performing arts groups include the Fenwick Theatre Company, Alternate College Theatre, Senior Class Show, College Choir, St. James Chamber Orchestra, Jazz Ensemble, Marching Band, Wind Ensemble and Modern Dance Club. Among the major instruments of campus communication are *Agora*, an opinion journal; *The Crusader*, the weekly student newspaper; *The Purple*, a literary magazine; *The Purple Patcher*, the yearbook; *The Cross Product*, a science magazine; the *Women's Organization Journal*; and WCHC-FM radio. The *Holy Cross Daily News*, a one-sheet, daily publication that lists events and campus news, is written and edited by students.

Campus Events

Many departments and organizations bring to campus a wide variety of events, ranging from films and lectures to performing groups and art exhibits. Two principal organizations that sponsor cultural and entertainment activities are the Campus Center Board of Directors (CCB of D) and the Cross and Scroll Society. The CCB of D provides activities in the Hogan Campus Center, including entertainment programs in the pub and pizza parlor, dances, concerts and recreational events. Cross and Scroll promotes the cultural interests of the College, arranging for the appearances on campus of nationally known speakers.

Athletics and Recreation

Men and women interested in athletics find much to choose from at Holy Cross, from pick-up softball games to intramural volleyball to various intercollegiate men's and women's sports played at the Division I or II, NCAA level.

The College sponsors about 30 intercollegiate teams and clubs. Intercollegiate sports for men are football, baseball, basketball, soccer, cross-country, outdoor and indoor track, golf, hockey, swimming, rugby, fencing, tennis, lacrosse, and crew. The women Crusaders compete in field hockey, basketball, swimming, fencing, lacrosse, rugby, softball, soccer, crew, volleyball, tennis, indoor and outdoor track and cross country. And, the men and

women crew together at intercollegiate regattas as members of the Holy Cross Yacht Club.

Most varsity sports compete in the Metro Atlantic Athletic Conference, while the Division I-AA football team is a member of the recently formed Colonial League, comprised of Bucknell, Colgate, Davidson, Lafayette, and Lehigh, as well as Holy Cross. The squad also plays several games each year against Ivy League opponents. Besides intercollegiate teams and clubs, the College provides an active intramural program.

Athletic facilities at Holy Cross include Fitton Field, with a baseball diamond and recently renovated football stadium; more than a dozen tennis courts, intramural and practice fields, including a lighted Omniturf field and surrounding eight-lane running track; a fieldhouse with basketball courts, a running track, gymnastic equipment, and weightlifting and Nautilus facilities; and the Hart Center, which includes basketball courts, ice rink, swimming pool, squash, handball and racquetball courts, locker and shower facilities, and a crew practice tank. The Hart Center serves as the home of the Holy Cross basketball and hockey teams as well.

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¹On Leave 1988-1989

²On Leave Fall 1988

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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 the 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.



College of the Holy Cross
Worcester, Massachusetts 01610