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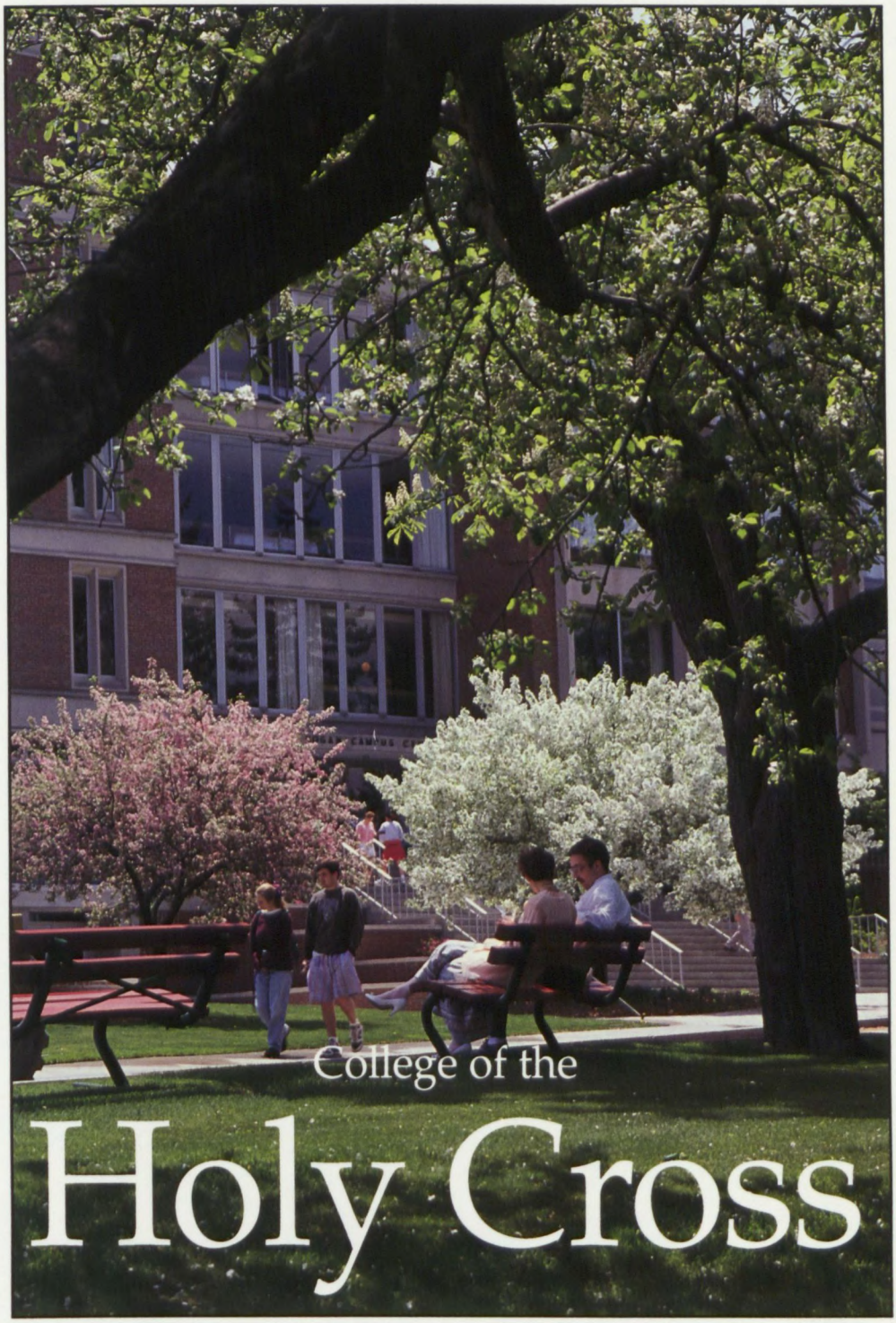

College of the

Holy Cross

College of the Holy Cross

Mission Statement

The College of the Holy Cross is, by tradition and choice, a Jesuit liberal arts college serving the Catholic community, American society, and the wider world. To participate in the life of Holy Cross is to accept an invitation to join in dialogue about basic human questions: What is the moral character of learning and teaching? How do we find meaning in life and history? What are our obligations to one another? What is our special responsibility to the world's poor and powerless?

As a liberal arts college, Holy Cross pursues excellence in teaching, learning, and research. All who share its life are challenged to be open to new ideas, to be patient with ambiguity and uncertainty, to combine a passion for truth with respect for the views of others. Informed by the presence of diverse interpretations of the human experience, Holy Cross seeks to build a community marked by freedom, mutual respect, and civility. Because the search for meaning and value is at the heart of the intellectual life, critical examination of fundamental religious and philosophical questions is integral to liberal arts education. Dialogue about these questions among people from diverse academic disciplines and religious traditions requires everyone to acknowledge and respect differences. Dialogue also requires us to remain open to that sense of the whole which calls us to transcend ourselves and challenges us to seek that which might constitute our common humanity.

The faculty and staff of Holy Cross, now primarily lay and religiously and culturally diverse, also affirm the mission of Holy Cross as a Jesuit college. As such, Holy Cross seeks to exemplify the longstanding dedication of the Society of Jesus to the intellectual life and its commitment to the service of faith and promotion of justice. The College is dedicated to forming a community which supports the intellectual growth of all its members while offering them opportunities for spiritual and moral development. In a special way, the College must enable all who choose to do so to encounter the intellectual heritage of Catholicism, to form an active worshipping community, and to become engaged in the life and work of the contemporary church.

Since 1843, Holy Cross has sought to educate students who, as leaders in business, professional, and civic life, would live by the highest intellectual and ethical standards. In service of this ideal, Holy Cross endeavors to create an environment in which integrated learning is a shared responsibility, pursued in classroom and laboratory, studio and theater, residence and chapel. Shared responsibility for the life and governance of the College should lead all its members to make the best of their own talents, to work together, to be sensitive to one another, to serve others, and to seek justice within and beyond the Holy Cross community.

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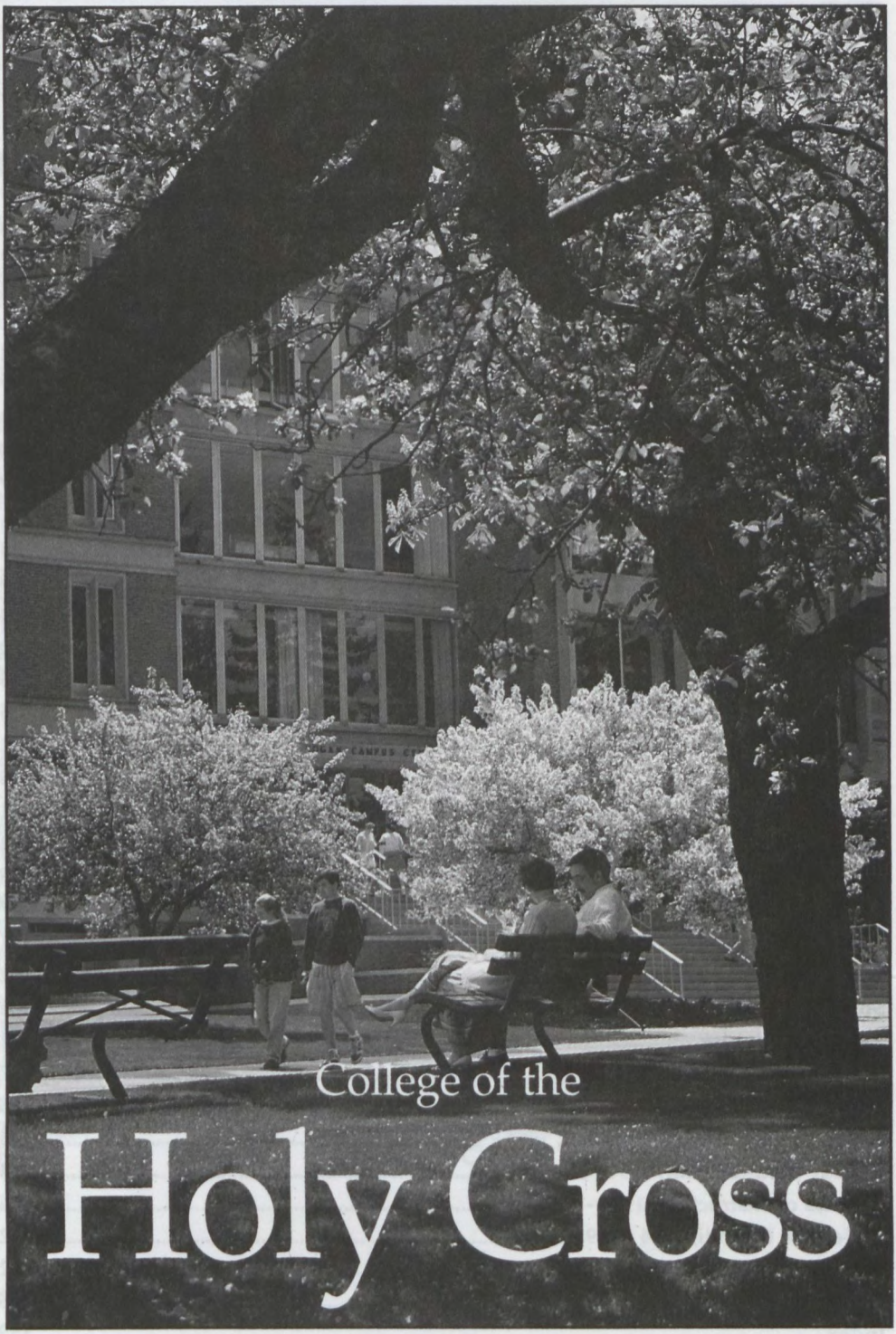

College of the Holy Cross

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Academic Calendar

1995-1996

Fall Semester

Saturday	August 26	First-year students arrive Mass of the Holy Spirit
Sunday	August 27	Orientation
Monday	August 28	Upperclass Registration 10:00 A.M. to 4:00 P.M. First-Year Students A.M. Advising P.M. Registration
Tuesday	August 29	**CLASSES BEGIN**
Monday	September 4	Labor Day; **CLASSES WILL BE HELD**
Friday	September 8	Last day to add/drop courses
Friday	September 15	Last day to declare a course as pass/no pass
Monday	October 9	Columbus Day; no classes
Tuesday	October 10	No classes
Tuesday	November 7	Last day to obtain a W
Tuesday	November 21	Thanksgiving recess begins after last class
Monday	November 27	Classes resume
Tuesday	December 5	Study period begins
Friday	December 8	Final examinations begin
Friday	December 15	Final examinations end

Spring Semester

Monday	January 15	Advising and registration
Tuesday	January 16	Classes begin
Friday	January 26	Last day to add/drop courses
Friday	February 2	Last day to declare a course as pass/no pass
Friday	March 8	Spring vacation begins after last class
Monday	March 18	Classes resume
Tuesday	March 26	Last day to obtain a W
Wednesday	April 3	Easter recess begins after last class
Tuesday	April 9	Classes resume
Tuesday	April 30	Study period begins
Friday	May 3	Final examinations begin
Friday	May 10	Final examinations end
Thursday	May 23	BACCALAUREATE EXERCISES
Friday	May 24	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; it is also exciting. This excitement is one 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 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, creative performances, recordings, and exhibitions. Almost all of the nearly 250 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.

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 is vital and that scholarly research is meaningful. It is the faculty that leavens the whole and is largely responsible for the reputation of Holy Cross as an excellent liberal arts college.

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

- Grants totaling $1.25 million from IBM and the Andrew W. Mellon, W.M. Keck, 3M, Charles E. Culpeper, and Arthur Vining Davis Foundations to develop a state-of-the-art Multimedia Resource Center and a guided, self-paced foreign language instruction program.
- Membership in the New England Consortium for Undergraduate Science Education, a group of the region's strongest undergraduate science institutions working toward strengthening undergraduate science instruction with the aid of grants from the Pew Memorial Trust.
- A Luce Professorship in Religion, Economic Development and Social Justice supported by a $750,000 grant from the Henry Luce Foundation.
- A Kraft-Hiatt Professorship in Comparative Religion to create an endowed chair in Judaic Studies at the College of the Holy Cross and in Christian Studies at Brandeis University and to involve the two schools in joint academic activities designed to foster mutual understanding and respect among Christians and Jews.
- A grant of $900,000 from the National Science Foundation for renovations to enhance chemistry laboratories which support faculty research and research-training.
- A grant of $500,000 from the Kresge Foundation for the purchase of new scientific instrumentation. As part of the award, Holy Cross has established a $2 million endowment for the modernization, replacement, and repair of its scientific equipment.
- Two grants totaling $1.5 million from the Howard Hughes Medical Institute to support: (1) stipends for Holy Cross students in summer science research programs; (2) instrumentation for the biological psychology concentration, the biochemistry concentration, and for courses in molecular biology; (3) advanced training for Holy Cross science faculty; (4) summer and year-long retraining programs for science and mathematics teach-

ers in the Worcester Public Schools; and (5) programs of science instruction for 6th, 7th, and 8th grade minority students from the Worcester Public Schools.

- A $500,000 challenge grant from the Davis Educational Foundation and a $400,000 challenge grant from the Kresge Foundation for renovations to the Music Department and to convert Fenwick Chapel to the state-of-the-art John E. Brooks, S.J., Center for Music.

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 students for specific occupations, but to inform the mind, to foster clear thought and expression through the balanced study of the arts and the sciences.

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 22. The atmosphere this community of scholars creates 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

Holy Cross offers a curriculum leading to the Bachelor of Arts (A.B.) degree with majors in 18 fields. The successful completion of 32 semester courses in eight semesters of full-time study is required for graduation.

To qualify for a degree from the College, at least one half of a student's courses, including the two full semesters of the fourth 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 Center for Interdisciplinary and Special Studies in the first semester of their fourth year.

Each student's curriculum consists of distribution requirements, a language requirement, a major, and free electives.

Language Requirement

All students must demonstrate competence in a classical, modern foreign, or American Sign language. Competence is demonstrated in one of the following ways: scoring 570 or higher in a College Board Achievement Test, getting a 3 or better in an Advanced Placement Test, passing one of the qualifying examinations that are administered each semester by the Departments of Classics and Modern Languages and Literatures, or successfully completing the second semester of an intermediate-level language course at Holy Cross. Students who intend to satisfy the language requirement by continuing a language studied in high school or by beginning a new language are urged to complete the necessary course work early in their academic program. Students should plan to satisfy the language requirement by the end of their second year.

Distribution Requirements

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

The Arts and Literature

The arts 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.

Requirement: 1 course in the arts; 1 course in 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 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 is included in this distribution area 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 fulfill the requirements of a major which must be declared before the preregistration period preceding the third year. A major normally consists of a minimum of ten 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, visual arts: history, and visual arts: studio. Information on Multidisciplinary Majors appears in the section of the Catalog on the Center for Interdisciplinary and Special Studies. Students are expected to confirm their plans for the fulfillment of major and degree requirements with the designated faculty advisor.

Double Major

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, academic advisor, and Class 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 ten courses in each major, whichever is higher.

Advanced Placement

Holy Cross participates in the Advanced Placement Program of the College Board. Each academic department establishes criteria for awarding placement and credit. Placement and credit awards for 1994-95 are as follows:

Subject		Score	Units	Placement	Distribution
Biology		5	1¼	Yes	Natural Science
		4	1¼	No	Natural Science
Classics		5	1	Yes	Literature
		4	1	Yes	Literature
		3	0	Yes	No Distribution
Economics		5	0	Yes	No Distribution
		4	0	Yes	No Distribution
		3	0	Yes	No Distribution
English	*Literature*	5	1	No	Literature
		4	1	No	Literature
	Language & Composition	5	1	No	No Distribution
		4	1	No	No Distribution
History		5	2	Yes	Historical Studies
		4	2	Yes	Historical Studies
Mathematics *Only one exam may receive credit*	*AB EXAM*	5	1	Yes	Mathematical Studies
		4	1	Yes	Mathematical Studies
		3	1	Yes	Mathematical Studies
	BC EXAM	5	2	Yes	Mathematical Studies
		4	2	Yes	Mathematical Studies
		3	2	Yes	Mathematical Studies
Computer Science *Only one exam may receive credit*	*A EXAM*	5	1	Yes	Mathematical Studies
		4	1	Yes	Mathematical Studies
		3	1	Yes	Mathematical Studies
	AB EXAM	5	2	Yes	Mathematical Studies
		4	2	Yes	Mathematical Studies
		3	1	Yes	Mathematical Studies
Modern Languages	*Language*	5	1	Yes	Cross-Cultural Studies
		4	1	Yes	Cross-Cultural Studies
		3	0	Yes	No Distribution
	Literature	5	1	Yes	Literature
		4	1	Yes	Literature
		3	0	Yes	No Distribution
Music		5	0	Yes	No Distribution
		4	0	Yes	No Distribution
		3	0	Yes	No Distribution
Physics *B Exam may not be used in conjunction with C Exams*	*B EXAM*	5	1	No	Natural Science
		4	1	No	Natural Science
	C EXAM — Mechanics	5	1	Yes	Natural Science
		4	1	No	Natural Science
	C EXAM — Electricity & Magnetism	5	1	Yes	Natural Science
		4	1	No	Natural Science
Political Science	*American Government*	5	0	Yes	No Distribution
Visual Arts		5	1	Yes	Art
		4	1	Yes	Art

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, and c) they satisfy degree requirements of the College. College courses taken during high school may be used to remove deficiencies incurred during the student's enrollment at Holy Cross.

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.

A maximum of eight semester courses will be accepted in transfer for the incoming first-year student. At the student's request these may be used to advance standing up to a maximum of two semesters. Students with transfer credit may also have the opportunity to elect upper-division courses at the discretion of the Department Chair.

Early Graduation

Incoming first-year students who have been given credit for at least one but fewer than four college-level courses and who have Advanced Placement Examination credits awarded by Holy Cross 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 the first year.

Requests for an accelerated degree-program may be submitted at any time during the first 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 the first year. Final approval will not be granted until sometime after the completion of the first 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.

Summer-Session Courses

Summer-session courses will be accepted in transfer only if they satisfy degree requirements, that is, only if they are used to remove deficiencies or to fulfill major, distribution, or language requirements.

1. Summer-session courses may not be used to advance in class standing.
2. Summer-session courses must be approved in advance by the appropriate department chair.
3. Only grades of C or better, earned in summer-session courses at an accredited institution, will be accepted by the College.

Students who anticipate taking summer-session courses for credit must obtain a Permit to Attend Another Institution from the Registrar.

The Advisory Program

Holy Cross provides each student 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.

Student Attendance at Class

Students registered in a course are expected to attend class regularly and to fulfill all obligations of the course as outlined by the professor. During the first week of the semester, professors generally announce, orally or by distributed outlines, the course requirements and methods of evaluation. If this information is not given, students should request it.

Foreseen necessary absences should be arranged in advance with the professor. Although students are not failed in a course exclusively on the basis of absence from class, their

attendance and participation obviously have bearing on the professor's assessment of their academic progress.

Examinations

In-Course Examinations: The number of exams a student takes in a single day should not exceed a total of two. The word exam here refers to mid-term exams and to those major in-course tests which cover several week's material and take a whole period or major portion of a period to administer. It does not include routine quizzes based on day-to-day assignments and lasting only part of the period.

Students with more than two in-course exams on a single day may obtain permission from the appropriate Class Dean to make-up the exam or exams in excess of two. This permission must be requested in advance of the scheduled examinations.

Students who have missed an in-course test for a serious and verifiable reason (such as personal illness, death in the family, or family emergency) have the right either to a make-up test or an exemption without penalty from the original test, the choice left to the discretion of the professor. Exemption without penalty requires the reweighting of other tests and assignments in the course of the semester.

Only the appropriate Class Dean will authorize in writing a student's absence from an in-course exam, only for serious and verifiable reasons, and only for those who have presented their cause within a reasonable time. Only the professor can provide exemption without penalty from the original test.

Final Examinations: Ordinarily, end-of-course examinations are written exams. Schedules of times and places of such exams are established by the Registrar.

Absentee Examinations: Absentee examinations at the end of a course will be permitted by the instructor and the Class Dean if students, for serious and verifiable reasons, are unable to attend the regularly scheduled final exam. Absentee examinations are scheduled by the Registrar.

Retention and Return of Graded Materials

Unless the nature of the examination precludes returning it to the student, all non-final examinations are to be returned with corrections. Students have the right to review any non-final examination which is retained by the professor. Such a review must take place at the time of an appointment made by the student to confer with the professor and should occur shortly after the time when the student receives the grade for the examination.

Final examinations may be returned to the student if the professor is willing and if return is feasible. However, when the final examination is not returned, it shall be retained by the professor until the end of the subsequent semester, so that a student may see and review the examination and discuss any questions concerning its evaluation. Final examinations of professors who will not be at the College in the subsequent semester (because of separation or leave) will be deposited with the Department Chair, who will make the arrangements necessary to allow students to review their final examinations. Any papers or other graded materials not returned to the student are subject to the same provisions as are indicated for final examinations.

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 semester. Late registration and changes of course schedule are permitted during the period designated by the Registrar. First-year students are permitted to change courses in the registration period of the fall semester only with the approval of the Class Dean. Withdrawal from a course will be permitted during the first ten weeks of the semester with the grade of W. The W grade is not included in the calculation of the GPA.

Failure to comply with the procedures specified by the Registrar for registration, changes of course schedule, 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 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, the final examination, etc.

There is no official College translation of percentage 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
4.00	A	Excellent
3.70	A-	
3.30	B+	
3.00	B	Good
2.70	B-	
2.30	C+	
2.00	C	Satisfactory
1.70	C-	
1.30	D+	
1.00	D	Low Pass
0.00	F	Failure
	IP	In Progress
	W	Withdrawal without Prejudice
	AU	Audit
	AB	Absence from Final Examinations
	I	Incomplete
	P	Pass
	NP	No Pass (Failure)
	J	(Grade not submitted)

The grade AB is changed to F unless the absentee examination is 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 Class 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 Class Dean initiates the request.

Withdrawal from a course, with the approval of the Class Dean, after the add/drop period will be graded W during the first ten weeks of the semester. Withdrawal from any course after the tenth week leads ordinarily to an F.

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."

Quality Points: Each of the grades from A to F is assigned a multiplier, as indicated, which weights the grade in computing averages. Multiplying this weighting factor by the number of semester units assigned to the course gives the quality points earned in it.

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

Grade Point Average: Dividing the total number of quality points achieved in all courses by the number of units assigned to these courses determines the grade point average (GPA). The semester GPA is calculated on units and quality points earned in a single semester; when all the student's units and quality points to date are used, the calculation yields the cumulative GPA.

Only those grades earned in Holy Cross and Worcester Consortium courses are calculated into a student's grade point average.

Final Grade Review Policy: Every student has the right to a formal review of a disputed final grade. The initial attempt of a student to resolve a disputed final course grade must be made with the faculty member involved. If a student believes a satisfactory grade explanation has not been obtained from the faculty member, who is at the time teaching at the College, then the student may request a formal grade review through the appropriate Class Dean. This request for a formal review of a final course grade must be written and submitted to the appropriate Class Dean no later than the conclusion of the fifth full week of classes in the semester subsequent to the issuance of the grade.

The written statement must include a description of all attempts made by the student to resolve the disputed grade with the faculty member involved and the reason(s) for requesting a formal grade review. The Chair of the department of the faculty member involved shall receive a copy of the student's written request from the Class Dean and review it with the faculty member.

If, after this review, the faculty member believes that the grade should not be changed, within three weeks of receipt of the request for a formal grade review a written statement will be submitted to the student, to the Department Chair, and to the appropriate Class Dean which explains the final course grade as issued and responds to the specific reason(s) for which the student has requested a review.

A request for a formal review of a grade given by a Chair in that individual's own course shall be forwarded by the Class Dean to a tenured faculty member of the Chair's department, if available, or, if not available, to a tenured faculty member in a related field, and the same review procedure will pertain. A request for a formal review shall be forwarded to the Department Chair if the faculty member is no longer teaching at the College.

A student request for a formal review of a final course grade issued by a faculty member who, because of leave, is not teaching at the College in the semester subsequent to the issuance of the grade must be filed in writing with the appropriate Class Dean no later than the fifth week of the following semester. If possible, the review procedure should be concluded by the end of that semester. If the nature of the faculty member's leave makes this impossible, the review procedure should be concluded no later than the third full week of classes after the faculty member has resumed teaching responsibilities.

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 GPAs: *First Honors:* A semester GPA of 3.70 or above, and Second Honors: a semester GPA of 3.50 to 3.69.

Graduation Honors — Summa Cum Laude: A cumulative GPA of 3.87 or above; Magna Cum Laude: A cumulative GPA of 3.70 to 3.86; and Cum Laude: A cumulative GPA of 3.50 to 3.69.

In calculations of the GPA for the Dean's List or for graduation honors, only those units and quality points earned at Holy Cross are included.

Pass/No Pass — The grades of P and NP are the "Pass/No Pass" grades. The option of Pass/No Pass grading is in effect only for those students taking five courses in a semester.

Following are the qualifications for the Pass/No Pass Option:

1. Students who wish to take a course on a Pass/No Pass 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/No Pass basis. A special Pass/No Pass 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/No Pass option.

2. The teacher involved will know the names of all students who have registered for a course on a Pass/No Pass basis. The grades P or NP will be assigned to the students by the teacher.

3. Pass/No Pass courses can not be used to remove deficiencies.

4. Courses taken on a Pass/No Pass basis may be used to satisfy College language and distribution requirements.

5. Pass/No Pass courses may be taken within the student's major field but can not be used to fulfill the requirements of a major.

6. Pass/No Pass grades will not be averaged into a student's GPA but will be placed on the student's record.

7. 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/No Pass registration in the fifth course will be converted automatically 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 for the removal of a course deficiency. In the latter case, the fifth course must be taken for a letter grade.
3. Students must have a cumulative GPA of at least 2.00 in order to register for a fifth course.
4. First-year students must obtain permission from the appropriate Class Dean before registering for a fifth course.
5. A fifth course taken for a letter grade will be included in the calculation of the cumulative average.

Auditing Courses

Degree students may elect to audit a course only if they are registered in four other courses for credit in a semester. They must fill out the official audit form in the Registrar's Office before the end of the add/drop period of each semester. The audit will appear on the transcript but no academic credit will be given nor may the audit be converted later into a grade with credit. An audited course cannot fulfill distribution or language requirements.

In order to receive an audit, students must fulfill attendance requirements and all other conditions set forth by the instructor. Auditing is not permitted in studio art courses or in similar courses where significant individual attention is required.

Degree students are not charged for auditing a course. Special students are charged the same tuition as special students registering for credit.

Academic Probation

Academic Probation is not a penalty, but a warning and an opportunity for improvement. Probationary status is determined by a student's low cumulative average (GPA) at the end of the preceding semester.

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:

First Year. Any first-year student having a cumulative average of 1.75 but less than 2.00 at the end of the first year will be on probation for the first semester of the second year.

• Second Year. A second-year student with a cumulative average of 1.85 but less than 2.00 at the end of the first semester will be on probation for the second semester of the second year.

Transfer Students. A transfer student with a GPA of 1.75 but less than 2.00 at the end of the first semester at Holy Cross will be on probation for the second semester. Thereafter, transfer students must achieve the cumulative average required of their class year.

A student who fails to maintain a cumulative 2.00 GPA at the end of all semesters after the third will be suspended in the first instance and dismissed in a subsequent instance.

Students who are eligible for suspension or dismissal because of a low cumulative GPA but whose appeal has been upheld by the Committee on Academic Standing are automatically placed on probationary status.

Probationary status is ordinarily removed by the achievement, the next semester, of the cumulative average required for that semester.

Removal of Deficiency

A deficiency may be removed by Advanced Placement credit, 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. Courses taken on a Pass/No Pass or Audit basis may not be used to remove deficiencies.

Students are expected to satisfy a deficiency in the semester (or summer) immediately following the one in which it is incurred. Students who have more than one deficiency at the beginning of the second or third year or who have any outstanding deficiencies at the end of the third year may lose class standing.

The units attempted in a course in which a student incurs a deficiency will remain on the student's transcript; if the deficiency is a result of course failure, the F will continue to be used in calculating the GPA.

Academic Suspension and Dismissal

A student will be suspended 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 GPA of less than 1.75 after the second semester (end of first year), of less than 1.85 after the third semester, and of less than 2.00 after the fourth semester (end of second year) or any subsequent semester.

A transfer student will be suspended after the first semester at Holy Cross if the GPA is less than 1.75; thereafter, transfer students are subject to the limits of suspension stipulated for their class year.

Course failures will contribute to an academic suspension as outlined above, even though the deficiencies may have been removed by attendance at a summer-session or the use of Advanced Placement credits.

A first suspension is for one academic year. After the one-year suspension, readmission is automatic, contingent upon receipt of a written request for readmission by the Class Dean.

A second suspension results in academic dismissal, which is ordinarily considered final separation from the College.

A student will also be dismissed for a second instance of academic dishonesty.

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 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 Class Dean of their intention to withdraw.

Readmission to the College

Students who have withdrawn in good standing and who wish to be readmitted to the College must apply to the appropriate Class 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 Class Dean may require) must be received by the Class 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.

Leave of Absence Policy

A student at the College may request permission to be absent from the campus for a period of one or two semesters. In exceptional circumstances (e.g., military service, health) the leave may be granted for a longer period of time. A leave must be renewed prior to its

expiration before it can be extended, otherwise the student will be withdrawn from the College when it expires. Students anticipating a Leave of Absence should consult with the Office of Financial Aid regarding the status of loans during the period they are on leave.

A Leave of Absence is granted with the following conditions:

1. The request for a Leave of Absence ordinarily is made during the semester prior to the proposed leave, and usually begins at the end of a regular semester. A Health Leave of Absence may be requested at any time.

2. A student must be in good academic standing at the end of the last semester before the leave is to begin.

3. A student is required to file in writing with the appropriate Class Dean his or her reason for requesting or renewing a Leave of Absence.

4. A student on Leave of Absence must leave the campus community and ceases to be entitled to campus activities.

5. A student on a leave, upon written notification to the appropriate Class Dean of his or her intent to return to the College will be readmitted automatically.

6. A student on a Leave of Absence will be required to pay a fee of thirty dollars ($30) for each semester on leave.

7. A student may not advance in class standing by taking courses at other institutions while on leave from the College.

Academic Exceptions Policy

Students may ask for a temporary postponement of academic responsibilities (incompletes, late withdrawals from one or more courses, or extensions) for personal and health reasons. Students request postponements from the Class Dean. The Class Dean makes a decision about the request which may include conditions which must be met in order for the student to complete courses or register for courses in a subsequent semester. These conditions are communicated to the student in writing. The Class Dean may consult with faculty members or professional staff in appropriate campus offices (e.g., Residence Life, Counseling Center, Health Services) in designating conditions and monitoring the student's compliance.

Conditional Leave of Absence (e.g., Health)

In addition to the terms stated in the Leave of Absence Policy, the following procedures apply to Conditional Leaves. The student submits a written request for a Leave to the Class Dean along with a letter from a physician or therapist documenting the student's condition. In addition to discussing the request with the student, the Class Dean may consult with others (e.g., the student's family, health professionals) before making a decision about the request, the duration of the leave, and the conditions for re-enrollment should the leave be granted.

To re-enroll, the student must present evidence to the Class Dean that the problem no longer precludes safe attendance at the College and that he or she is ready to resume studies. If another office (e.g., Counseling Center, Health Services) has been involved in determining the conditions for re-enrollment, the Class Dean will consult with that office to ascertain if those conditions have been fulfilled. All decisions regarding a Conditional Leave of Absence, including time limits and conditions for re-enrollment, will be communicated to the student in writing.

Involuntary Leave of Absence

Students who the College has reason to believe may harm or threaten to harm themselves or others, and who do not seek a voluntary leave of absence, may be asked to leave the College involuntarily. Circumstances of such leaves include but are not limited to:

a. Actions which result or might potentially result in injury to the student or others, or serious destruction of property.

b. Statements which threaten the safety of that student or which threaten the safety of others.

Before making a decision, the Vice President for Student Affairs or a designee will investigate the incident(s), interviewing the student and/or other individuals deemed appropriate (e.g., other students, family members, health professionals).

When the Vice President for Student Affairs decides to place a student on Involuntary Leave of Absence the reasons for the decision, the length of time for the leave, and the

conditions for re-enrollment will be communicated in writing to the student and the student's Class Dean, who will notify the Registrar.

An Involuntary Leave of Absence is effective immediately and the student may be required to leave the campus immediately, even if he or she appeals the action. A student placed on Involuntary Leave of Absence is subject to all provisions of the Leave of Absence Policy of the College.

To satisfy the conditions of an Involuntary Leave of Absence, the student must present evidence to the Vice President for Student Affairs that the problem no longer precludes safe attendance at the College and that he or she is ready to resume studies. If the student is to be re-enrolled, the Vice President for Student Affairs communicates this decision to the Class Dean and the Registrar.

If a campus office has been involved in recommending conditions for re-enrollment, the Vice President for Student Affairs shall consult that office in evaluating the student's request for re-enrollment. The Vice President may also consult with one or more other professionals regarding the student's request and the evidence presented and may require that the student be interviewed by a professional associated with the College.

Appeal of Involuntary Leave of Absence

A student on an Involuntary Leave of Absence has ten business days to appeal the decision.

Appeals are directed to the President of the College or a designee and must be in writing and state the reasons for the appeal and the desired resolution. The appeal will be considered within five business days of the request.

The decision of the President of the College is final.

Registration after Academic Exceptions or Conditional Leave of Absence

The following conditions for re-enrollment may include, but are not limited to:

1. For conditional leaves, completion of the recommended time for leave of absence. Ordinarily one full semester, but possible two, must pass before the student may request re-enrollment following a grant of leave.
2. Successful completion of remedial expectations determined in consultation with relevant professionals regarding remedial goals and progress.
3. A recommendation for re-enrollment to the Class Dean from a college professional staff member who has reviewed the pertinent information and interviewed the student.

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. Transcript requests will not be accepted by telephone. 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 for current students is two dollars per copy; for former students the fee is three dollars. An official transcript may be withheld by appropriate college officials in cases where a financial obligation remains.

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 acknowledgment, 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 him or 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, *The Little Brown Handbook* and the *Harbrace College Handbook*).

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.

The 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 be placed in the student's file until graduation, at which time it shall be removed and destroyed unless a second offense occurs. The Class Dean shall inform the student promptly 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 a previous section.

Written Expression

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. 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:

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

Similarly, faculty members should:

1. set high standards for their own use of language;
2. provide appropriate occasions for students to exercise their writing skills;
3. set minimum standards of written expression for all courses;
4. acquaint the students with those standards and inform them of their responsibility to meet them and the consequences if they do not;
5. evaluate written work in light of effectiveness of expression as well as content;
6. aid students in their development by pointing out deficiencies in their written work and assist them with special writing problems arising from the demands of a particular field of study.

Absence Due to Religious Belief

Students who are unable, because of religious beliefs, to attend classes or participate in any examination, study, or work requirement on a particular day shall be excused and provided with an opportunity to make up such examination, study, or work requirement, provided this does 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. Students are asked to contact their Class Dean in advance of an absence due to religious belief.

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.

Directory information includes: 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 such as the release of academic information to college officials whose positions justify such release of information to them, or to college committees charged with the selection of students for College and National Honor Societies. 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 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 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. Further information about this issue may be obtained by contacting the Office of the Vice President.

Honor Societies

(Consult the Student Handbook for complete 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 third and fourth-year classes primarily on the basis of broad cultural interests, scholarly achievement and good character.
Phi Sigma Tau — the national honor society in philosophy that awards distinction to students having high scholarship and personal interest in philosophy.
Pi Delta Phi — the national honor society that recognizes distinction in the study of French language, literature and culture.
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* for more complete descriptions.)
Fourth-Year Competition
The American Institute of Chemists Foundation Award is given to a fourth-year student for excellence in chemistry.
The Pedro Arrupe Medal and Prize for Outstanding Service awarded to a graduating man and woman whose faith in the gospel is made visible through their work for justice both at Holy Cross and beyond.
The Beethoven Prize awarded to a fourth-year student for the best historical or analytical essay on music or for an original composition.
The Joseph C. Cahill Fund awarded to a graduating fourth-year student majoring in chemistry.
The Frank D. Comerford Medal for excellence in public speaking.
The Flatley Gold Medal for proficiency in philosophy.
The Rev. John W. Flavin, S.J., Award in Biology, presented to a fourth-year student biology major for excellence in scientific achievement, significant humanitarian service, or contribution to the vitality of the Biology Department and the College.
The Dr. Marianthi Georgoudi Memorial Award to the outstanding psychology fourth-year student as judged by the faculty of the Psychology Department. This award is in memory of Dr. Georgoudi, who had been a member of the Holy Cross Psychology Department.
The George H. Hampsch Award for outstanding contribution to the cause of peace. This award is in memory of Dr. Hampsch who had been a member of the Philosophy Department.
The Rev. William F. Hartigan Medal for the best essay on a subject in religion.
The Hypercube Award was established in 1995 by Hypercube, Inc., a molecular modeling software company. It is given to a deserving fourth-year student who has demonstrated excellence in chemistry and who is going to graduate school in chemistry.
The Holy Cross Club of Worcester Prize for outstanding scholastic achievement by a Worcester area fourth-year student.
The Thomas P. Imse Alpha Kappa Delta Award to a fourth-year sociology major who is a member of Alpha Kappa Delta. This award is in recognition of scholarly excellence and demonstrated commitment to learning for the service of humankind.
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.
The John Paul Reardon Medal and Award was established in 1985 by John Paul Reardon,

former faculty member, in memory of the late Rev. J. Gerard Mears, S.J. This Medal and Award is given annually to a fourth-year student for excellence in studio art.
The Maurizio Vannicelli Prize in Italian Studies was established in memory of Professor Vannicelli, professor of political science at Holy Cross. The prize, gift of an anonymous 1991 alum, is given for the best essay on a theme on Italian literature or culture.
The Vannicelli Washington Semester Program Award is given for the best thesis in the Washington Semester Program.
The Varsity Club Norton Prize or Medal for an outstanding athlete.
The Wall Street Journal Student Achievement Award to honor the student who has contributed most significantly in scholarship, enthusiasm, and/or service to the Economics Department.
The Women's Studies Award in recognition of excellence in Women's studies, the development and articulation of a feminist critical consciousness, and the ability to integrate and reflect on issues of pressing concern to women.
The Carter G. Woodson Prize to a fourth-year concentrator in African American Studies for outstanding scholarly or artistic achievement in African American Studies.

Third-Year Competition
The John D. O'Connell/Arthur Anderson Prize for Accounting Excellence. Established in 1994 to honor the distinguished service of the College's preeminent accounting professor. This award honors a third-year student for continuing the traditions associated with Professor John D. O'Connell: pursuit of academic excellence, demonstrated leadership in service to the community, and demonstrated interest in and commitment to the profession of public accounting.
The Rev. John F. Redican Medal for a third-year student who makes an outstanding contribution to the quality of intellectual life.
Second-Year Competition
The Teresa A. Churilla Second-Year Book Award in Biology in memory of Teresa A. Churilla, a biology major to a second-year student of biology who best exemplifies the ideals of intellectual curiosity, academic experience, and scientific promise that characterized Teresa.
The Mrs. Kate C. Power Medal for the highest ranking student in the second-year class.

First-Year and Second-Year Student Competition
The Joseph J. O'Connor Purse for debating.

First-Year Competition
The Ernest A. Golia, M.D., Book Award to a first-year student who is a non-classics major for high achievement in a classics course.

Competition for All Students
The Academy of American Poets Prize for the best poem or group of poems submitted to the English Department.
The Elias Atamian Family Book Award to a student who has excelled in Middle Eastern Studies.
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 John J. Cummings, Jr./BAI Award for the best student essay or research paper submitted annually on a subject relating to financial institutions.

The DeValera Purse for the best essay on a subject taken from Irish history.
The Fallon Debating Purse founded in 1901 by the Rev. John J. Fallon of the class of 1880.
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 Rev. Robert F. Healey, S.J. Greek Prize to a student who has demonstrated excellence in Classical Greek.
The Walter Gordon Howe Award for excellence in percussion performance.
The Monsignor Kavanaugh Medal for the best original essay on some phase of Catholic art or Christian archeology.
The William E. Leahy Award in memory of William E. Leahy of the class of 1907, to the outstanding debater in the B.J.F. Debating Society.
The Leonard Award for proficiency in oratory, debating, or like competition.
The Markham Memorial Prize in memory of James and Honora Hickey Markham, a medal and a cash award for the best essay in a competition administered by the Department of Philosophy.
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 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 Freeman M. Saltus Prize for excellence in writing essays on labor or economics.
The Strain Gold Medal for the best essay submitted during the academic year on a subject taken from the field of philosophy.

Prestigious Awards

The Committee on Graduate Studies and Fellowships recommends students for the various prestigious awards (Fulbright, Goldwater, Marshall, Mellon, Rhodes, Truman, and Watson). Materials concerning these and other awards are available from the Office of the Graduate Studies Advisor. Students should begin planning for these competitions early in their undergraduate career. Faculty should encourage students, during the first three years, to develop the necessary projects, research initiatives, etc., which will serve as the underpinnings of a finished proposal. Interested students may meet with the Graduate Studies Advisor and use the resources of the Graduate Studies Office to assist in determining the suitability of their proposals. Interviews are held and nominations made in the first month of the academic year. Students will meet with the Committee on Graduate Studies and Fellowships for those awards which need an institutional recommendation. Faculty members are invited to recommend students to the attention of this Committee.

Special Academic Programs

The First-Year Program

Each year, 165 first-year students participate in a unique educational opportunity, the College's First-Year Program (FYP). Students who enroll in this program take one of their four courses in the FYP each semester of their first year. In addition, FYP students attend three or four co-curricular events each semester. Lastly, all 165 students in the program live in the same residence hall during their first year at Holy Cross.

The courses and co-curricular events in the FYP are built around a common theme. This year the theme is the question: *In a world bound by convention, how then shall we live?* Each of the courses in the FYP has an enrollment of only 15 students and is specially designed to introduce students to the discipline of the course's instructor while, at the same time, addressing the theme of the FYP. There are three texts each semester read by all program participants. These texts relate to some aspect of the theme and will be integrated into classroom discussions.

Students are admitted to the FYP solely on the basis of their interest in the program.

The Biological Psychology Concentration

The Departments of Biology and Psychology jointly offer an interdisciplinary concentration that concerns the study of neuroscience and behavior. The Concentration requires an understanding of various scientific fields including core areas of biology, psychology, chemistry, physics, mathematics and computer science. Concentrators major in either psychology or biology and take courses that fulfill one of the three tracts within the concentration: Behavioral Science, Organismal Neuroscience or Molecular Neuroscience. Students are exposed to original research throughout the concentration and may elect to spend a portion of their fourth year engaged in a thesis project. Admission to the concentration is competitive and is limited to eight students per class year. Interested students should consult with the Concentration Director or the Chair of the Department of Biology or Psychology prior to registering for second-year courses.

Concurrent Registration in the Worcester Consortium

Admission to Holy Cross means access to the nine institutions of the Worcester Consortium for Higher Education. Participating institutions are: Anna Maria College, Assumption College, Becker College, Clark University, College of the Holy Cross, Quinsigamond Community College, Tufts University School of Veterinary Medicine, Worcester Polytechnic Institute, Worcester State College, and the University of Massachusetts Medical School. 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. In addition to these ten colleges, a group of associate organizations participates 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, and the Worcester County Horticultural Society.

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 Class Dean.

Evening and summer courses at institutions belonging to the Worcester Consortium for Higher Education are not part of the concurrent registration program and will be accepted in transfer only if they satisfy degree requirements (see Summer-Session Courses).

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. Grades from courses taken through the Consortium are calculated into a student's GPA.

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.

Study Abroad

Second-year students are eligible to apply for the Study 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 during the third year at a number of overseas programs. Study abroad ordinarily begins in the fall semester and lasts for a full academic year. Participation in this program normally is limited to students with at least a B average (3.00 GPA) or to students with equivalent qualifications. If students intend to take courses abroad in a language other than English, they must have achieved intermediate level competency in that language 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 viewed favorably in evaluating a student's candidacy for study abroad.

The Venture Consortium

The Venture Consortium is a collaboration of eight colleges and universities to provide alternative work and study opportunities that complement liberal arts education, emphasize social responsibility and involvement, and forge links between higher education and the community at large. Member institutions include Bates College, Brown University, College of the Holy Cross, Connecticut College, Hobart and William Smith Colleges, Swarthmore College, Vassar College, and Wesleyan University. Three programs, described below, are available through the Venture Consortium. Details and applications are available from the Class Dean and the Career Planning Office.

The College Venture Program: For students who wish to take a leave of absence from the College, the Venture Program offers a wide variety of temporary, full-time job opportunities in locations throughout the United States. Recent placements have included positions in the media, environmental agencies, social services, investment corporations, parks and recreation, public relations, social and medical research, preschool and elementary education, and many more. This program affords students financial independence during the time of their leave from undergraduate study and an opportunity to explore career areas.

Venture II: The Venture Consortium assists graduating students in finding entry-level positions in the nonprofit sector through the Venture II program. These positions are appropriate for students who are interested in establishing careers in nonprofit organizations, students who wish to explore the nonprofit sector as a career option before making a commitment, and those who would like to postpone graduate study. The bank of jobs maintained by the Consortium is extensive, updated regularly, and includes positions both in the United States and abroad.

Urban Education Semester: A full semester of academic credit is awarded students accepted into Venture's Urban Education Semester. This program involves the interdisciplinary and experimental study of inner-city education through the Bank Street College of Education in New York City. Students enrolled in the program combine fieldwork in New York's East Harlem public schools with coursework at the Bank Street College during the spring semester of the second or third year.

Reserve Officers Training Program

All Holy Cross students, who are U.S. citizens, are eligible to apply for and participate in the Navy ROTC program. This is a dynamic program which prepares students for a rewarding career as officers in the Navy and Marine Corps. Navy ROTC provides stipends and financial assistance, including full scholarships, to qualified midshipmen. Detailed information regarding the ROTC program can be found in the course descriptions for Naval Science and in the section on Financial Aid.

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 are special libraries in the Office of the Graduate Studies Advisor and 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 are available. 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.

For Students Interested in the Health Professions

The premedical and predental program at Holy Cross has maintained an excellent record in preparing students for entrance to professional schools. A premedical or predental 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 mathematics 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 predental students must have completed successfully 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 Predental 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 curriculum, students are urged to include in their four years courses which develop the following skills: reading comprehension, oral and written expression, critical understanding of the human institutions and values with which the law deals, and creative thinking. Perhaps the most important skill for prelaw students is the effective command of oral and written English. To this end courses with emphases on language composition and rhetoric are strongly recommended. At the same time, any course that trains the student to observe accurately and think objectively is invaluable. For 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 a sound, rigorous liberal arts program is an excellent preparation for graduate schools of business and management. 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 possible, in applied mathematics. At least an introductory computing course is strongly recommended. 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 stipulate these courses as actual requirements, they recognize them as strongly desirable.

The Five-Year BA/Master in Business Administration or BA/Master in Health Administration Option

Students may elect to participate in the Five-Year BA/MBA Program or the Five-Year BA/MHA Program jointly sponsored by Holy Cross and the Clark University Graduate School of Management. These programs make it possible to complete both the BA and MA degrees in five rather than six years. Ideally suited for economics and economics-accounting majors, the BA/MBA and the BA/MHA programs are open to all Holy Cross students.

The programs allow students to take a fifth course, tuition free, at Clark University in each semester of the third and fourth years. These courses may be applied to the MBA or MHA. In addition, as many as seven of the 19 courses required for the MBA or the MHA can be satisfied by elective courses taken during the four years at Holy Cross.

Students take the GMAT examination and apply for admission to Clark's Graduate School of Management in their third year at Holy Cross. Upon graduation, students accepted into the graduate program complete the degree requirements at Clark University.

At Clark, students may choose a course of general study or may concentrate in a number of attractive specialties, including Health Care Management, Accounting, and International Management.

Additional information may be obtained from the Five-Year Program Advisor at Holy Cross.

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 Columbia University in New York City; Dartmouth College in Hanover, N.H.; or Washington University in St. Louis.

At the conclusion of this program, students receive both a bachelor of arts degree from Holy Cross and a bachelor of science degree in engineering from the appropriate institution. Students interested in this program are advised to major in mathematics or a physical science at Holy Cross, since they must complete at least one year each of physics and chemistry and two years of mathematics before transferring to the engineering program. They must also demonstrate proficiency in one computer language in order to prepare properly for the engineering courses.

Any student who fulfills these requirements with a B average is guaranteed admission to Columbia, Dartmouth, or Washington. 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 third year. However, interested students are urged to consult with the 3-2 Advisor as early as possible in their college career in order to plan their courses. Further information is available from the 3-2 Advisor.

The Center for Interdisciplinary and Special Studies

Stephen C. Ainlay, Ph.D., *Director*
Gary P. DeAngelis, Ph.D., *Associate Director*
Christina Bi Chen, M.A., *Assistant Director*
Diane Bell, Ph.D., *Henry R. Luce Professor of Religion, Economic Development, and Social Justice*
Patricia Bizzell, Ph.D., *Director, Honors*
B.Eugene McCarthy, Ph.D., *Director, African American Studies*
Selma Botman, Ph.D., *Director, International Studies*
David J. O'Brien, Ph.D., *Loyola Professor and Director, Peace and Conflict Studies*
Susan Elizabeth Sweeney, Ph.D., *Director, Women's Studies*
Andrew Futterman, Ph.D., *Director, Gerontology Studies Program*
Judy Freedman Fask, M.E.D., M.Ed., *Coordinator, American Sign Language and Deaf Studies*

Founded in 1971, the Center for Interdisciplinary and Special Studies is responsible for promoting interdisciplinary teaching and scholarship at the College. It seeks to be a catalyst for innovation and experimentation in the curriculum through a series of academic programs and grant opportunities. The Center's programs fall into four categories: 1) interdisciplinary academic concentrations which complement departmental majors and help students address important contemporary issues with the methods and perspectives of multiple disciplines; 2) special programs which offer students and faculty opportunities to teach and study selected topics based on an interdisciplinary approach; 3) off-campus educational opportunities which link learning and living, combining rigorous academic coursework with community-based internship and service opportunities; and 4) student designed programs which reward student initiative with unique coursework and independent research opportunities.

Concentrations

The Concentrations provide students with an opportunity to organize some of their electives around a coherent plan of study related to areas of social and academic significance. Concentrations in African American Studies, International Studies, Peace and Conflict Studies, and Women's Studies enable students to take five or six courses offered through CISS and a range of departments. Extracurricular events and programming make up an important part of the concentration experience. Students are expected to apply to be concentrators before the end of the first semester of their third year. Concentration related courses are also available through the Worcester Consortium.

African American Studies

The African American Studies Concentration offers students an academic and experiential program in African American, Caribbean, and African subjects. The experience of African Americans in the United States provides a point of departure in the required, multidisciplinary introductory course. Emphasis is also placed on the rich history and cultures of the peoples of Africa and the African Diaspora, including study of literature, music, and the arts. The concentration's electives give students an opportunity to explore the complex nature of U.S. race relations, racial identity, and the political movements of African and African American peoples. The concentration serves as a forum for all Holy Cross students, regardless of race, to study together their diverse heritages and common concerns as Americans.

International Studies

As students prepare themselves for the complex international, interdependent world where they will spend their lives, International Studies offers students a broad avenue for discovering the cultures, histories, and languages of the world. Students concentrating in International Studies focus their courses in one particular area, such as regional studies in

Africa, the Middle East, Asia, Latin America, or Russia/Eastern Europe, or in Global Perspectives, which allows students to study issues with world wide application or across various regions. International Studies concentrators all pursue regular majors and take the concentration as an interdisciplinary supplemental experience. Holy Cross offers a full range of modern language instruction; especially relevant to concentrators in International Studies is coursework in Spanish, Chinese, and Russian. All students concentrating in International Studies complete a minimum of six courses from diverse disciplines. International Studies sponsors a wide array of co-curricular programs each semester, from guest lectures to panel discussions, films, and slide shows. Participation in these events is an integral part of completing academic work in International Studies.

Peace and Conflict Studies

The Concentration in Peace and Conflict Studies is an interdisciplinary program for students who wish to complement their major field of study with courses focused on peace and social justice. The courses offered in the concentration help students address crucial challenges of the contemporary world. Concentrators are expected to take an introductory, team-taught course; three elective courses; and complete a capstone project. The choice of electives and projects arises from the student's interests and major. The program provides students the opportunity to develop the knowledge and skills for effective citizenship in the post-cold war world.

This program sponsors the Spring Forum on War and Peace, an annual series of public panels of faculty and students addressing such topics as common security, conflict resolution, and sustainable development. These panels also encourage students to address their own personal responsibility in the quest for human dignity.

Women's Studies

Women's Studies is an interdisciplinary program that enables students to study women's experiences from a variety of academic perspectives. By exploring how female identity is shaped by ideologies of gender, class, race, ethnicity, and sexuality, students achieve a broad understanding of culture as a social determinant, and learn to question ways in which society ignores, restricts or diminishes women's contributions. The concentration provides women and men at Holy Cross with an opportunity to integrate their academic studies with interests in gender, equality, and social justice. Indeed, as a discipline, Women's Studies emphasizes connections between students' scholarship and their actual lives, between what goes on within the classroom and outside it. Each year the program sponsors a range of co-curricular events—speakers, workshops, book discussions, films, and publication of a lively Newsletter—which focus the community's attention on issues of pressing concern to women.

The concentration includes five courses, two of which may be within the student's major. The required introductory course acquaints students with the history of women's struggle for equality, the many perspectives of contemporary feminism, and the diverse experiences of women in America and the world. Students also choose three electives (one with a cross-cultural focus). For the fifth course, students design a capstone project — which may take the form of a local internship, Washington internship, honors thesis, tutorial, or seminar — that reflects their own interests and provides a fitting completion to their Women's Studies concentration.

Special Programs

Henry R. Luce Professor of Religion, Economic Development, and Social Justice

This endowed chair, the first at the College, is supported for an initial period by a grant from the Henry R. Luce Foundation and will later be underwritten by the College. Through faculty seminars, interdisciplinary courses, public lectures, and comparative research projects, the Luce Professor offers a program to focus the College's attention and awareness on the roles that religion plays in affecting models of economic development and conceptions of justice in different cultures. In January, 1989, Diane Bell joined the faculty of Holy Cross as the Henry R. Luce Professor of Religion, Economic Development, and Social

Justice. Professor Bell, a social anthropologist, has undertaken extensive work with indigenous peoples in Australia. She brings to the Luce Professorship a combination of academic training and field experience, social-scientific expertise in the study of religion, and practical engagement in development theory and its religious and political impact on fourth-world peoples.

The College Honors Program

Highly qualified students are invited to apply for the Honors Program during the second semester of their second year. Admission to the Honors Program is limited to 25 students from the third-year class and 25 from the fourth-year class. The Honors Program requirements include two seminars on topics outside the student's major field, which are open to Honors students only and in which enrollment is limited to ten students. Independent research and oral discussion are emphasized in the seminars. In addition to the seminars, third-year students participate in the Third-Year Honors Colloquium, a series of interdisciplinary discussions on topics of current interest organized by the Honors Director.

Each fourth-year Honors student devotes one quarter of his or her time to a directed research project, usually in the student's major field, on which he or she works closely with a faculty advisor and additional faculty readers. Fourth-year Honors students also enroll in the Fourth-Year Honors Colloquium, chaired by the Honors Director. In addition to interdisciplinary discussions on topics of current interest, the Fourth-year Colloquium includes presentations of the students' research projects. The projects are presented orally to the entire College community at the College Honors Conference at the end of the academic year.

The 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 students the opportunity to take sequenced courses from two or more disciplines that have been designed to integrate content and materials. Cross-disciplinary faculty teams encourage students to apply and to compare disciplinary approaches to diverse topics.

Linking Learning And Living

Washington Semester Program

Through the Washington Semester Program, a third-year student or first semester fourth-year student can spend a semester working, studying, and carrying out research in Washington, D.C., for a full semester's academic credit. The Washington Program is designed to provide a student, regardless of major, an opportunity to 1) bring together past and current academic study with practical experience; 2) come to a better understanding of the political process and the formulation of public policy; 3) develop critical and analytical skills; and 4) pursue independent research under the guidance of a faculty sponsor. Admission to the Washington Program is highly competitive. Washington students have worked in congressional offices, research groups, federal agencies, museums, and public interest organizations.

Academic Internship Program

Academic Internships are comprised of two components: fieldwork at an internship site in Worcester or the greater Boston area and academic work in an internship seminar, such as Ethical Issues in Professional Life, Social Justice, or Legal Issues. If a seminar topic is not appropriate to the internship, tutorial work with an individual faculty sponsor may be arranged. Each student is expected to spend eight hours per week "on the job" and another three or four hours on the academic component. One unit of academic credit is granted for the Academic Internship. Admission is open to third and fourth-year students by application.

The Gerontology Studies Program

The Gerontology Studies Program is a cooperative arrangement among Worcester Consortium colleges and universities for students interested in the study of aging. The main elements of the program are courses, internships, research opportunities, and career planning. Successful completion of the program entitles the student to a Gerontology Certificate. The program addresses the aging process, the experience of older people, and the delivery of services to the elderly. Students may elect a wide range of courses drawing on the strengths of the Worcester Consortium in order to prepare for graduate study or for work in the field of aging.

Marshall Memorial Fund

Through a bequest of James J. Marshall and Ellen O'Connor Marshall, the College has established a fund to encourage the creative and intellectual involvement of students and faculty with the Worcester community. Support is available for service projects or research projects on any aspect of the historical, economic, cultural, or religious life of the city of Worcester. Funds are available on a competitive basis for any project that will enhance the quality of life in Worcester and build closer ties between the College and the community.

Student Designed Programs

The Fenwick Scholar Program

Begun in 1966-67, the Fenwick Scholar Program provides one of the highest academic honors the College bestows. From among third-year students nominated by their major departments, the Committee on Interdisciplinary and Special Studies together with the President and Academic Dean select the student(s) most worthy of this unique academic opportunity. The Scholar designs, with one or more advisors, a program of independent research or a project that will complete his or her undergraduate education in the most challenging, creative, and meaningful way. At the end of the fourth year, the Fenwick Scholar is required to give a public presentation to the college community, and to present an appropriate record of this achievement to the college library.

Multidisciplinary Major

The Committee on Interdisciplinary and Special Studies approves and administers student-designed programs that combine studies from more than one discipline. A multidisciplinary major must involve at least two disciplines and fall within the competence of the college faculty. Conceptualizing the major is the responsibility of the student. Plans should demonstrate a coherent progression of study. Students must have a record of academic proficiency in order to be approved for this program. Ordinarily, a student must have a GPA of at least 3.0 to be approved for the multidisciplinary major.

The student should present a written proposal for the multidisciplinary major no later than the beginning of the third year. The 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. The proposal should be written in consultation with the Director of CISS and two faculty members based in departments related to the proposed major. Faculty sponsors should provide letters of support assessing the program of study.

Upon the unanimous recommendation of the Director of CISS and the faculty sponsors, the proposals will be reviewed for approval by the Committee on Interdisciplinary and Special Studies. If the plan is approved, the faculty sponsors and the Director will serve as an advisory committee responsible for approving changes in the major plan and giving guidance to the student undertaking the program.

Semester Away Program

Students who wish to engage in academic work not available at the College may submit proposals for a semester or academic year of study at another institution in the United States or Canada. For example, Holy Cross students have participated in the Sea Semester Program, co-sponsored by Boston University and the Woods Hole Oceanographic Institute. An exciting new option in the Semester Away Program allows students to study at an

Historically Black College or University. Applications to the Semester Away Program must be received no later than one week before the beginning of the pre-registration period for the semester in which a student plans to study away from the College. It is recommended that students have a GPA of 3.0 or higher.

Student Grant Program

Funds are available from the Center for Interdisciplinary and Special Studies to support student research and participation in academic programs and national, regional, and state academic meetings. Travel to special libraries, archives, performances or exhibitions is also supported. Funds are awarded on a competitive basis by the Committee on Interdisciplinary and Special Studies.

Biology

Robert I. Bertin, Ph.D., *Professor*
William R. Healy, Ph.D., *Professor and Chair*
George R. Hoffmann, Ph.D., *Professor*
Mary Lee S. Ledbetter, Ph.D., *Professor*
Banadakoppa T. Lingappa, Ph.D., *Professor Emeritus*
Susan L. Berman, Ph.D., *Associate Professor*
Kornath Madhavan, Ph.D., *Associate Professor*
Peter Parsons, Ph.D., *Associate Professor*
Kenneth N. Prestwich, Ph.D., *Associate Professor*
Mary E. Morton, Ph.D., *Charles A. Dana Faculty Fellow, Assistant Professor*
Brian C.L. Shelley, Ph.D., *Assistant Professor*
Madeline Vargas, Cand. Ph.D., *Instructor*
Peter J. Lemay, M.S., *Senior Laboratory Supervisor*
Lynn A. Cooke, M.S., *Laboratory Supervisor*

The biology curriculum is designed to acquaint students with the broad scope of the biological sciences at several levels of functional organization. Its courses include molecular, cellular, organismal, ecological, and evolutionary aspects of biology. Departmental course offerings also prepare biology majors for advanced study in graduate or professional schools and 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 that introduce nonmajors to basic biological concepts and 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), Biology 61 (Genetics with laboratory), and at least five other courses (three with laboratory) from the Department's total offerings. They must also complete Chemistry 1, 21, 22, 31 (all with laboratory); Mathematics 31, 32, or the equivalent (Mathematics 33, 34; Mathematics 36; or appropriate Advanced Placement); and Physics 21, 22 (both with laboratory). Biology students normally complete the chemistry sequence before the beginning of their third year. A student must have a combined average of C or better in Biology 31 and 32 to continue in the major.

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 upper-division 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 courses, the Department offers qualified students an opportunity to conduct 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 biological literature (Biology 205, 206). Students in the College Honors Program must elect Biology 207, 208.

Biochemistry Concentration

The Departments of Biology and Chemistry jointly offer a concentration that focuses on the study of the chemistry underlying biological structure and function. Concentrators must be enrolled as either biology or chemistry majors. Participants take Biology 31, 101, and 102 with laboratories; Chemistry 1, 21, 22, 31, and 55; and one additional biology course with an associated biochemistry-oriented laboratory, in addition to the usual courses required of their major. Concentrators also complete a two-semester thesis project in their fourth year involving research on some aspect of biochemistry. Admission to the Concentration is competitive and occurs in the second semester of the second year. Interested students should contact the chair of either department.

Biological Psychology Concentration

The Departments of Biology and Psychology jointly offer an interdisciplinary concentration that concerns the study of neuroscience and behavior. The concentration requires an

understanding of various scientific fields including core areas of biology, psychology, chemistry, physics, mathematics, and computer science. Concentrators major in either biology or psychology and take courses that fulfill one of three tracks within the concentration: Behavioral Science, Organismal Neuroscience, or Molecular Neuroscience. Students are exposed to original research throughout the concentration and may elect to spend a portion of their fourth year engaged in a thesis project. Admission to the concentration is competitive and is limited to eight students per class year. Interested students should consult with the Concentration Director or the Chair of the Biology or Psychology Department prior to registering for second-year courses.

Courses

Biology 14, 15 — Topics in Biology *Annually*
Consideration of diverse subjects in the biological sciences. Course format and subjects vary from year to year; the specific subject matter for each course is announced at preregistration. Recently taught topics include evolution, vertebrate history, organismal biology, biological conservation, microbes and society, reproductive biology, vertebrate zoology, nutrition, the biology of birds, cancer, human heredity, medical detectives, exercise physiology, evolutionary genetics, environmental biology, and genetic engineering. Intended for nonmajors. One unit each semester.

Biology 16 — Laboratory Investigations in Biology *Fall, Spring*
The diversity of life and life functions investigated by an experimental approach. Students are exposed to descriptive as well as quantitative biology through the use of microscopy, spectrophotometry, chromatography, and other methods of modern biology; they also work on an interdisciplinary laboratory project. Not open to biology majors or premedical students. One lecture and one laboratory per week. One unit.

Biology 17 — Perspectives in Biology *Fall*
Selected topics on levels 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 implications of behavior, and the evolution of social behavior. Preference is given to psychology majors. One Unit.

Biology 20 — General Biology 1 *Fall*
Fundamental principles of biology and the diversity of life studied at all levels of organization. Intended for third-year premedical students majoring in subjects other than biology. Three lectures and one laboratory period. Prerequisites: introductory and organic chemistry. One and one-quarter units.

Biology 21 — General Biology 2 *Spring*
A continuation of Biology 20. Three lectures and one laboratory period. Prerequisite: Biology 20. One and one-quarter units.

Biology 31 — Introduction to Biology 1 *Fall*
Selected topics emphasizing biological organization from molecules to ecosystems. Designed for biology majors, this course is prerequisite for upper-division courses in the Department. Three lectures and one laboratory period. One and one-quarter units.

Biology 32 — Introduction to Biology 2 *Spring*
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. One and one-quarter units.

Biology 61 — Genetics *Fall*
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. Prerequisites: One semester of organic chemistry. One and one-quarter units.

Biology 66 — Cell Biology *Spring*
The structure and function of cells of higher organisms, both animal and plant, are considered along with aspects of metabolism and enzyme action. 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. Prerequisite: One semester of organic chemistry. Three lectures and one laboratory period. Molecular and cellular biology. One and one-quarter units.

Biology 70 — Histology *Alternate years in Spring*
A study of the microscopic and submicroscopic structure of vertebrate tissues and organs. Three lectures and one laboratory period. Organismal biology. One and one-quarter units.

Biology 75 — Biological Statistics *Alternate years*
An introduction to the handling, analysis, and interpretation of biological data. Topics include descriptive statistics, probability distributions, goodness of fit tests, hypothesis testing, analysis of variance, regression, and correlation. Three lectures. Prerequisites: Biology 31, 32, a semester of college mathematics. One unit.

Biology 80 — General Ecology *Fall*
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. Ecological and evolutionary biology. One and one-quarter units.

Biology 83 — The Theory of Organic Evolution *Spring*
Analysis of the 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. Ecological and evolutionary biology. One unit.

Biology 85 — Sociobiology *Alternate years in Fall*
A comparative overview of the diversity of animal social systems. The course stresses the evolution of insect and vertebrate societies but also offers a critical evaluation of the use of sociobiology to understand our own species. Social behaviors are examined through the lens of modern evolutionary theory. Mathematical approaches (population genetics, optimality, and game theory) are discussed and applied to the evolution of social systems. Related topics are the inclusive fitness concept, altruism, parent-parent and parent-offspring interactions, and communication. Ecological and evolutionary biology. One unit.

Biology 87 — Ethology and Behavioral Ecology *Alternate years in Fall*
Animal behavior outside the dynamic of societal interactions. Behaviors are examined in terms of both proximate (neuroendocrine mechanisms and simple behavioral interactions) and ultimate (evolutionary) mechanisms. Topics include methodologies, behavioral genetics, neurobiological models of behavior, communication, economic decisions, competition, and mating systems. Straightforward mathematical modeling (neural networking, games, and optimality theories) are introduced and used to examine behavior. Ecological and evolutionary biology. One unit.

Biology 90 — Animal Physiology *Spring*
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 neuroendocrine mechanisms. Three lectures and one laboratory period. Prerequisites: Chemistry 1 and 31, Physics 21. Organismal biology. One and one-quarter units.

Biology 92 — Immunology *Spring*
An introduction to the science of immunology. Course content includes the basic structure of the immune system, structure and function of antibodies, immune receptors and messengers, tolerance, hypersensitivity, autoimmunity and immunodeficiency. Prerequisites: Chemistry 1 and 21. Three lectures and one laboratory period. Molecular and cellular biology. One and one-quarter units.

Biology 101 — Biochemistry 1 *Fall*
A detailed study of the chemistry of biological molecules. Topics include the structural chemistry of the major classes of biological compounds, enzymic and coenzyme catalysis and regulation, bioenergetics, Krebs Cycle, mitochrondial electron transport, and photosynthesis. Prerequisites: Chemistry 1, 21, and 22. Molecular and cellular biology. One unit.

Biology 102 — Biochemistry 2 *Spring*
A continuation of Biology 101. Topics include the chemistry, enzymology and regulation of lipid, protein and carbohydrate metabolism, muscle contraction, DNA replication, transcription, and translation. This laboratory is taken as a fifth course; while figured into the GPA, it does not count as one of the 32 courses required for graduation. Prerequisite: Biology 101. Molecular and cellular biology. One unit.

Biology 103 — Biochemistry 1 Laboratory *Fall*
This is the laboratory course to accompany Biology 101 and introduces experimental methods for the characterization of biological molecules, including electrophoresis, column chromatography, enzyme kinetics, and the measurement of respiration and photosynthesis. Prerequisite or concurrent course: Biology 101. Molecular and cellular biology. One-half unit.

Biology 104 — Biochemistry 2 Laboratory *Spring*
This laboratory accompanies Biology 102. It introduces principles and methods of molecular biology, including DNA isolation, PCR, DNA sequencing, and molecular modeling. Prerequisite or concurrent course: Biology 102. Molecular and cellular biology. One-half unit.

Biology 113 — Comparative Chordate Morphology *Fall*
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. Organismal biology. One and one-quarter units.

Biology 123 — Microbiology *Fall*
A comprehensive introduction to microbiology. This course provides an overview of microorganisms, including their physiology, ecology, genetics, taxonomy, and evolution. The laboratory emphasizes pure culture methods, diagnostic microbiology, and physiology. Three lectures and one laboratory period. Molecular and cellular biology. One and one-quarter units.

Biology 130 — Developmental Biology *Alternate years in Spring*
The development of eukaryotic organisms from a molecular biological point of view. Emphasis is placed 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 the elucidation of such processes as gastrulation, regeneration, and metamorphosis. Both plants and animals are considered. Three lectures and one laboratory period. Organismal biology. One and one-quarter units.

Biology 133 — Aquatic Ecology *Fall*
A detailed introduction to freshwater ecosystems. The laboratory combines field work on two ecosystems — a lake and a stream — with laboratory work characterizing the physical and chemical environment of these ecosystems and their biological communities. Three lectures and one laboratory period. Ecological and Evolutionary Biology. One and one-quarter units.

Biology 141 — Vertebrate Endocrinology *Alternate years*
The anatomy and physiology of endocrine glands and internal secretion in representative vertebrates. Emphasis is placed on functional interrelationships of the endocrine organs, cellular effects of hormones, and hormonal mechanisms of action (receptors, second messengers, etc.). The functional morphology of the endocrine system of vertebrates is compared with that of invertebrates. Organismal biology. One unit.

Biology 151 — Cellular and Molecular Neurobiology *Fall*
The molecular and cellular mechanisms of neuronal function. Topics include structure-function relationships of voltage-gated ion channels, mechanisms of signal transduction, membrane potential, gating currents, and synaptic transmission. The laboratory emphasizes techniques in neuropharmacology, neurobiochemistry, and molecular neurobiology. Prerequisites: Biology 17 or 31, Biology 66, Chemistry 21 and 22. Molecular and cellular biology. One and one-quarter units.

Biology 190 — Bioethics *Alternate years in Spring*
The biological background of selected ethical and social issues arising from advances in biology and consideration of the morality and feasibility of public policy as they apply to these issues in a pluralistic society. Topics concern such matters as environmental ethics, evolutionary ethics, reproduction, population control, and the evolution of moral systems. One unit.

Biology 201, 202 — Undergraduate Research *Annually*
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. Prerequisite: permission of instructor. One and one-quarter units each semester.

Biology 203, 204 — Problems in Biology *Annually*
Courses at an advanced level on selected subjects in the biological sciences, accompanied by intensive reading of original scientific literature. Recently taught topics include genetic engineering, cellular physiology, electrophysiology, advanced ecology, ornithology, field botany, epidemiology, toxicology, scanning electron microscopy, and the physiology of movement. Prerequisite: permission of instructor. Distribution area depends on subject. One unit each semester.

Biology 205, 206 — Directed Reading *Annually*
An in-depth literature study of a topic of interest to the student under the tutorial supervision of a member of the faculty. Prerequisite: permission of instructor. One unit each semester.

Biology 207, 208 — Honors Research *Annually*
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. One and one-quarter units each semester.

Biology 213, 214 — Problems in Biology: Laboratory *Occasionally*
This is a laboratory course that accompanies Problems in Biology (Biology 203, 204) in semesters in which it is offered with a laboratory component. This laboratory is taken as a fifth course; while figured into the GPA, it does not count as one of the 32 courses required for graduation. Corequisite: Biology 203, 204. Distribution area depends on subject. One unit.

Chemistry

Paul D. McMaster, Ph.D., *Professor*
Robert W. Ricci, Ph.D., *Professor*
Richard S. Herrick, Ph.D., *Associate Professor and Chair*
Ronald M. Jarret, Ph.D., *Associate Professor*
Michael G. McGrath, Ph.D., *Associate Professor*
Frank Vellaccio, Ph.D., *Associate Professor*
Alice A. Deckert, Ph.D., *Clare Boothe Luce Assistant Professor*
Deborah J. Campbell, Ph.D., Assistant Professor
Timothy P. Curran, Ph.D., *Assistant Professor*
Jane M. VanDoren, Ph.D., *Assistant Professor*
Glenn C. Jones, Jr., 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. Introductory courses in general and organic chemistry are based on a guided inquiry approach. Fundamental concepts are first encountered in the laboratory; lecture sessions are used to discuss and elaborate on the laboratory experience.

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 second year. With the permission of 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 1 and 21 to continue in Chemistry 22 and 31 or 32. Furthermore, a grade of C or better in Chemistry 22 and 32 is required to continue in the major. The Chemistry Department offers several academic-year research programs for upper-class majors. A limited number of summer research opportunities with monetary stipends are available on a competitive basis.

The Chemistry Major

All chemistry majors are required to take at least ten chemistry courses. These must include: Atoms and Molecules, Organic 1, Organic 2, Introduction to Equilibrium and Reactivity, Instrumental Chemistry, Physical Chemistry 1, Physical Chemistry 2, and Advanced Inorganic Chemistry. Advanced laboratory courses (Analytical Methods 1 and 2 and Physical Chemistry Labs 1 and 2) are required and must be taken as overload courses. They do not count toward the 32 courses required for graduation. Chemistry majors must also take two semesters of General Physics **with lab,** and Calculus through Math 32, 34 or 36. Students are strongly encouraged to take Math 41 in preparation for Physical Chemistry.

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 1 and 21 in the first or second year. Chemistry 22 and 31 complete the chemistry courses normally taken by biology majors and premedical students not majoring in chemistry.

Biochemistry Concentration

The Departments of Biology and Chemistry jointly offer a concentration that focuses on the study of the chemistry underlying biological structure and function. Concentrators must be enrolled as either biology or chemistry majors. Participants take Biology 31, 101 and 102 with laboratories; Chemistry 1, 21, 22, 31 and 55; and one additional biology course with an associated biochemistry-oriented laboratory, in addition to the usual courses required of their major. Concentrators also complete a two-semester thesis project in their fourth year involving research on some aspect of biochemistry. Admission to the concentration is competitive and occurs in the second semester of the second year. Interested students should contact the chair of either department.

Courses

Chemistry 01 — Atoms and Molecules: Their Structure and Properties *Fall*
This introductory course leads students to explore in depth the scientific method through the formulation and testing of hypotheses in the laboratory. Laboratory experiments (using modern instrumentation) lead students to discover basic principles, i.e., stoichiometric relationships, electronic configuration and molecular structure. Lectures will explain and expand upon laboratory results. This course assumes no prior background in chemistry and is suitable for students seeking to satisfy the science distribution requirements. It is also the first course in the sequence for science majors and premedical students. One and one-half units.

Chemistry 10 — Methods of Chemistry *Fall*
This course is designed to reinforce problem solving methods that are used in Atoms and Molecules, Organic 1, Organic 2, and Introduction to Equilibrium and Reactivity. The quantitative aspects of chemistry are emphasized. This course is not a prerequisite for any other chemistry course but will be helpful for those with a limited background in the sciences who plan to complete the four-semester introductory chemistry sequence (Chem 1, 21, 22, and 31). One unit.

Chemistry 21 — Organic Chemistry 1 *Spring*
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 aliphatic hydrocarbons, alkenes, alkynes, benzene, and alkyl halides is introduced. Radical substitution, addition and elimination mechanisms are studied in detail. Emphasis is placed on stereochemistry. One four-hour laboratory session per week is included. Students learn various techniques of separation, purification, and identification (chemical and spectroscopic) of organic compounds in the laboratory. There is an emphasis on one-step synthetic conversions which introduce the reactions to be studied in the lecture course. Prerequisite: Chemistry 1. One and one-half units.

Chemistry 22 — Organic Chemistry 2 *Fall*
A continuation of Chemistry 21. Alcohols, ethers, aldehydes, ketones, amines, carboxylic acids and their derivatives are studied. Nucleophilic substitution, acyl transfer and carbonyl condensation reactions are developed. The mechanistic implications and synthetic applications of these organic reactions are evaluated. One four-hour laboratory session per week is included. Microscale synthetic techniques are included. Prerequisite: Minimum of C in Chemistry 21. One and one-half units.

Chemistry 31 — Introduction to Equilibrium and Reactivity *Spring*
The course introduces non-chemistry majors to the basic principles of Physical Chemistry. Laboratory experiments lead students to discover concepts including gas laws, chemical equilibria, heats of reaction, buffer capacity, and chemical kinetics. Lectures explain or expand upon lab results. Prerequisites: Chemistry 21, 22 (with a C average or higher); one semester of college calculus is a prerequisite. One and one-half units.

Chemistry 41 — Environmental Chemistry *Alternate years*
The course relates historical and contemporary problems of air and water pollution to both natural and anthropogenic chemical compounds. Sources, sinks and interactions of these compounds are discussed within a framework of the conversion of chemical energy to mechanical or electrical energy. Prerequisite: High school chemistry or permission of instructor. One unit.

Chemistry 43 — Chemistry: Bane or Boon *Fall*
An elective for non-science majors that 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. One unit.

Chemistry 44 — Chemistry and Society *Fall, Spring*
The course acquaints non-science majors with chemistry as a human endeavor and helps them acquire some appreciation of the benefits and limitations of science. Readings from

the current popular and scientific literature are 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. One unit.

Chemistry 45 — The Chemistry and Physics of Matter *Fall*
A unique opportunity to learn about the atomic and molecular model of matter through a hands-on approach. The weekly laboratory component gives students an opportunity to develop and test their own models of molecular structure. In addition, students learn that physics and chemistry are not identical. They gain real insight into the differences in interests, approaches, and laboratory techniques of these two disciplines. Two lectures and one laboratory period per week. One unit.

Chemistry 55, 56 — Physical Chemistry 1 and 2 *Annually*
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. One unit each semester.

Chemistry 57, 58 — Physical Chemistry Laboratory 1 and 2 *Spring, Fall*
This laboratory course is designed to complement Physical Chemistry 55, 56 and to encourage ability in research. In the laboratory students test the more important physical and chemical laws and in doing so acquire the habit of exact chemical techniques and quantitative interpretation. Experiments in spectroscopy, thermochemistry, electrochemistry, colligative properties, chemical and phase equilibria, kinetics and inorganic synthesis are performed. One four-hour laboratory per week. Overload. One-half unit each semester.

Chemistry 65 — Instrumental Chemistry *Fall*
The field of chemical analysis has undergone very dramatic changes within recent years due to rapid advancements in instruments which have replaced classical gravimetric and volumetric methods. This course introduces students to the theoretical and practical considerations which affect the design of modern analytical instrumentation. Instruments covered include those for the study of atomic and molecular spectroscopy, the separation of ions and/or molecules, and the measurement of electrochemical properties. One unit.

Chemistry 67, 68 — Analytical Methods *Fall, Spring*
In this laboratory students acquire first-hand operating experience with the following equipment: atomic absorption, fluorescence, infrared, ultraviolet, and visible spectrophotometers and proton magnetic resonance spectrometers; gas and high pressure liquid chromatographs; and electrochemical instrumentation. One four-hour laboratory per week. Overload. One-half unit each semester.

Chemistry 100 — Chemical Thermodynamics *Occasionally*
The laws of thermodynamics: the study of energy and order-disorder, and their connections with chemical changes and chemical equilibrium, are covered. 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. One unit.

Chemistry 101 — Advanced Inorganic Chemistry *Spring*
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. One unit.

Chemistry 102 — Advanced Organic Chemistry *Alternate years*
Topics of interest from the current organic literature are discussed. Topics chosen in the past have been oxidations, photochemistry, organometallic chemistry, Woodward-Hoffmann

Rules, configurational and conformational analysis and the chemistry of phosphorous, boron and sulfur. Prerequisite: Chemistry 56. One unit.

Chemistry 103 — Advanced Physical Chemistry *Alternate years*
The course aims to acquaint the student with 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. One unit.

Chemistry 104 — Synthetic Organic Chemistry *Spring*
Provides students of advanced organic chemistry with an understanding of the scope, limitation and stereochemical consequences of selected groups of organic reactions. Individual topics are discussed in the light of specific syntheses taken from the chemical literature. Students are expected to give a seminar based on a specific synthesis or a general synthetic method. One unit.

Chemistry 106 — Undergraduate Investigation in Chemistry *Both semesters*
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. Students will be required to participate in the departmental seminar program. 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 credit: Students must register for Undergraduate Investigation as a fifth course on an "in-progress" basis during the fall semester. During the spring semester it should be registered as a fourth course for a letter grade. One unit.

Chemistry 108 — General Honors Research *Four semesters*
Selection: Students interested in participating in the departmental honors program will be invited to apply to the departmental honors committee prior to their 3rd 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 fourth year. The thesis will be defended before the chemistry faculty. The student will be required to participate in the departmental seminar program. Requirements: Each student's record of performance will be evaluated each semester by the committee. Any participant whose research or academic performance is inadequate will be dismissed from the program. Participants are expected to maintain an overall GPA of 3.00 and a minimum of a grade of B in major courses. Course credit: Students must register for Honors Research as a fifth course on an "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. One unit.

Chemistry 109 — Spectroscopy *Spring*
This course focuses 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 techniques) to elucidate molecular structure. The course is conducted with a "problem solving" approach and student participation is expected. Prerequisite: Chemistry 22. One unit.

Chemistry 110 — Bioorganic Chemistry *Alternate years in Fall*
This course focuses on chemistry of the major biochemical macromolecules: carbohydrates, proteins and nucleic acids. Topics discussed include structure determination and enzyme mechanisms relevant to chemical reactions involving these macromolecules. In

addition, through the use of student presentations, the chemistry underlying the interaction of medicinal agents with these macromolecules is explored. Prerequisite: Chemistry 22. One unit.

Chemistry 113 — Atmospheric Chemistry *Alternate years*
This course will examine the complex chemistry of Earth's atmosphere through case studies of current environmental problems including global warming, stratospheric ozone depletion, air pollution, and acid rain. The course will emphasize problem solving through active classroom discussion and assignments. Understanding, analysis and evaluation of both the technical and popular literature pertaining to these problems (and potential solutions) will be stressed. Prerequisite: Chemistry 55. One unit.

Chemistry 115 — Advanced Analytical Chemistry *Alternate years in Spring*
Considerations relevant to developing and evaluating an analytical procedure are covered. Students use the current literature to examine recently developed analytical techniques. One unit.

Chemistry 116 — Natural Products *Occasionally*
The chemistry of selected naturally occurring compounds is discussed. This includes classical methods of structure determination and biogenetic theory. Emphasis is placed on mechanisms of biochemical significance. Prerequisite: Chemistry 22. One unit.

Classics

Thomas R. Martin, Ph.D., *Jeremiah W. O'Connor Professor*
Blaise J. Nagy, Ph.D., *Professor and Chair*
Ann G. Batchelder, Ph.D., *Associate Professor*
John D.B. Hamilton, Ph.D., *Associate Professor*
Kenneth F. Happe, Ph.D., *Associate Professor*
William J. Ziobro, Ph.D., *Associate Professor*
Patricia J. Johnson, Ph.D., *Assistant Professor*
John M. Kearns, Ph.D., *Assistant Professor*
D. Neel Smith, Ph.D., *Assistant Professor*
Geoffrey Sumi, Ph.D., *Visiting Assistant Professor*
Edward J. Vodoklys, S.J., Ph.D., *Lecturer*

The curriculum of the Classics Department affords students the opportunity to study the Greek and Roman sources of Western culture. For the major and nonmajor alike, there are courses in Greek and Roman history, politics, philosophy, religion, archaeology, mythology, and literature. Courses are also available in Greek and Latin at the introductory, intermediate, post-intermediate, and advanced levels. It is the aim of the Department to enhance the cultural development and the language skills of all its students through a variety of instructional methods, including the Perseus Project, a computerized teaching program for which Holy Cross faculty are contributors and which has won national recognition for software development. Courses in the Classics Department are taught by ten full-time faculty, including Thomas R. Martin, the Jeremiah W. O'Connor Professor of Classics.

For the student who chooses classics as a major, the Department offers a wide selection of courses, seminars, and tutorials, which provide a liberal and comprehensive view of the ancient world through first-hand contact with the 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 subtleties and intricacies 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 which are the roots of Western civilization. In addition, the classroom experience can be enhanced by participation in one of the several year-abroad programs in Greece, Rome, or England to which the Department sub-

scribes. Recent classics majors have pursued advanced degrees at several of the finest institutions of higher learning in the country, as well as careers in journalism, law, business, medicine and banking, among others.

A minimum of ten courses is required for a major in classics; these can be distributed among Latin, Greek and courses in English which are appropriate to a student's primary interests. To satisfy the minimum requirements of the classics major, a student must take at least one semester of an author-level course in one of the two languages and advance through the intermediate level in the other language. Normally, majors take no fewer than eight courses in the original languages (courses listed under Greek and Latin). Adjustments to the minimum language requirements can be approved by the Chair of the Department. The Department offers two merit scholarships annually, — the Henry Bean Classics Scholarship, — to graduating high-school students 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, College of the Holy Cross, Worcester, MA 01610. The application deadline is February 1.

Latin

Latin 1, 2 — Introduction to Latin 1, 2 *Annually*
A grammar course introducing the student to the Latin language and its literature. One unit each semester.

Latin 5 — Intensive Introduction to Latin *Spring*
Latin grammar and a limited amount of reading for students with no previous training in Latin with a view toward preparing the student for Intermediate Latin after only one semester. One unit.

Latin 13, 14 — Intermediate Latin 1, 2 *Annually*
For students who have completed two years of pre-college Latin or Latin 1 and 2, or 5. This course includes a brief grammar review and selected readings from Latin authors. One unit each semester.

Latin 115, 116 — Readings in Latin *Annually*
A survey of Latin Literature from its early remains to the Silver Age. Selected authors are read in the original with analysis and discussion of each text. One unit each semester.

Latin 120 — Sallust and Livy *Occasionally*
Extensive readings from the works of Sallust and Livy. Study of the sources and methods of Roman historiography. One unit.

Latin 121 — Tacitus, Major and Minor Works *Occasionally*
Concentrates on the Annales of Tacitus. Consideration is given to the Historiae, Agricola and Germania. One unit.

Latin 122 — Cicero's Speeches *Occasionally*
Selected orations of Cicero are read in the original. Emphasis is placed on rhetorical analysis and interpretation of historical and political developments of the first century B.C. One unit.

Latin 123 — Roman Letter Writers *Occasionally*
Selected letters of Cicero and Pliny are read in the original Latin. Supplementary reading of selected Senecan letters in English. Historical background. Development of letter writing as a literary form. One unit.

Latin 124 — Juvenal *Occasionally*
A detailed study of selected satires of Juvenal. Although emphasis is placed on the literary analysis of satire, some attention also is given to Juvenal's opera as a source of understanding of first century A.D. Rome. One unit.

Latin 125 — Petronius *Occasionally*
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 are considered as well as the influence of Petronius on later literature and art. One unit.

Latin 134 — Lucretius *Occasionally*
An extensive examination of the poetic and philosophic message of Lucretius' Epicurean gospel, the De rerum natura. One unit.

Latin 135 — Seneca *Occasionally*
A study of Roman Stoicism through examination of selected letters and dialogues of Seneca. One Senecan tragedy is included, with attention to the author's use of drama as a vehicle for philosophical indoctrination. One unit.

Latin 136 — Cicero's Philosophical Works *Occasionally*
A study of Cicero's position in the Graeco-Roman philosophical tradition through an intensive examination of selections from his essays. One unit.

Latin 143 — Horace *Occasionally*
Selected poems from the four books of Odes are read in the original. Emphasis is placed on literary analysis and interpretation. In addition, students read a sampling of Horace's other poetic works in the original. One unit.

Latin 144 — Catullus *Occasionally*
A literary study and analysis of all the poems of Catullus. One unit.

Latin 150 — Early Christian Literature *Occasionally*
Reading in the original of selected works from the Patristic period. Cross registered with Religious Studies 275. One unit.

Latin 158 — Vergil: Aeneid *Occasionally*
A study of Vergil's epic with emphasis on its literary artistry. Six books of the poem are read in the original Latin. One unit.

Latin 159 — Vergil: Eclogues and Georgics *Occasionally*
The development of pastoral and agricultural poetry, as exemplified in Vergil's two poetic masterpieces, *Eclogues* and *Georgics*. One unit.

Latin 163 — Roman Comedy *Occasionally*
Selected plays of Plautus and Terence read in Latin combined with a study of Greek sources of Roman comedy. One unit.

Latin 166 — Ovid's Metamorphoses *Occasionally*
A close examination of the literary artistry of a number of individual stories in the *Metamorphoses*. One unit.

Latin 167 — Elegiac *Occasionally*
A study of the elegiac tradition in the Roman poetry of Propertius, Tibullus and Ovid. Special emphasis is placed on the conventions of the love elegy. One unit.

Latin 301, 302 — Tutorial Seminar *Annually*
Designed for selected students with approval of the professor and Department Chair. This work may be done for one or two semesters (one or two units of credit) and takes the form of either a survey of selected authors or a specialized study of a single author, genre, theme or period. One unit each semester.

Greek

Greek 1, 2 — Introduction to Greek 1, 2 *Annually*
A first course in Greek language involving a systematic investigation of Attic or Homeric Greek through a logical and intensive study of grammar, syntax, and vocabulary. One unit each semester.

Greek 5 — Intensive Introduction to Greek *Spring*
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. One unit.

Greek 13, 14 — Intermediate Greek 1, 2 *Annually*
Readings and textual study of Greek prose and poetry. Offered mainly for students who have completed Greek 1 and 2 or 5 or have had two years of pre-college Greek. One unit each semester.

Greek 126 — Plato: Selected Dialogues *Occasionally*
A study of selected Platonic Dialogues. One unit.

Greek 130 — Greek Lyric Poetry *Occasionally*
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 is presumed. One unit.

Greek 132 — Homer *Occasionally*
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. One unit.

Greek 138 — Plutarch *Occasionally*
Translation and textual analysis of extensive selections from Plutarch's *Parallel Lives*. Emphasis centers 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 Twelve Caesars*. One unit.

Greek 140 — Herodotus *Occasionally*
An examination of selected passages from Herodotus' account of the Persian Wars. One unit.

Greek 141 — Thucydides *Occasionally*
A survey in depth of Thucydides' *History of the Peloponnesian War*. Extensive sections of historical and literary significance are read in the original Greek. One unit.

Greek 150 — Hesiod/Homeric Hymns *Occasionally*
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 condition of Greek peasant life is discussed. One unit.

Greek 151 — Attic Orators *Occasionally*
Selected speeches from the Attic Orators such as Antiphon, Andocides, Lysias and/or Demosthenes are 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. One unit.

Greek 152 — Patristic Greek *Occasionally*
From the first four centuries of the Church's literature, a special author or group of authors are studied in detail with special attention to the political, religious and literary context of the period. One unit.

Greek 160 — Aeschylus *Occasionally*
A detailed study of the *Agamemnon* and other dramas of Aeschylus in the original. One unit.

Greek 161 — Sophocles *Occasionally*
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. One unit.

Greek 162 — Euripides *Occasionally*
An analysis of two plays in Greek, with special attention to Euripides' dramatic technique. One unit.

Greek 163 — Aristophanes *Occasionally*
Selected plays are read in the original. Historical backgrounds, literary interpretation and study of the genre, comedy, are emphasized. One unit.

Greek 301, 302 — Tutorial Seminar *Annually*
Designed for selected students with approval of the professor and Department Chair. This work may be done for one or two semesters (one or two units of credit) and takes the form

of either a survey of selected authors or a specialized study of a single author or period. One unit each semester.

Classics (In English)

Classics 127 — Ancient Greek Literature and Society *Fall*
An integrated study of the literature, cultural achievements, history, and society of Classical Greece from the time of Homer to the age of Plato. One unit.

Classics 128 — Ancient Roman Literature and Society *Spring*
Study of Roman literature and civilization from approximately 200 B.C. to A.D. 130, which traces Rome's journey from flourishing Republic, through the trauma of revolution, to the reigns of the emperors. One unit.

Classics 131 — Classical America *Fall, Spring*
A study of the influences of the classical tradition on the educational system, the political philosophy, and the art and architecture of early America. One unit.

Classics 134 — Greek and Roman Epic *Alternate years*
Readings in Homer, Apollonius, and Vergil. One unit.

Classics 135 — Greek Literature to 480 B.C. *Occasionally*
A study of 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. One unit.

Classics 137 — Greek Myths in Literature *Fall*
Comparison of classical and modern versions of several ancient Greek myths. The relationships between myth and literature are considered, as well as reasons why these myths have endured through the centuries. Emphasis is on dramatic versions of the myths; narrative poetry and other genres such as music and cinema may also be explored. One unit.

Classics 139 — Classical Comics *Fall, Spring*
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. One unit.

Classics 146 — Roman Letter Writers *Occasionally*
A study of three distinct types of Latin epistolography, as exemplified in the letters of Cicero, Seneca and Pliny. One unit.

Classics 150 — Introduction to Roman Archaeology *Spring*
A survey of the archaeology, art, and history of Etruria, Rome and the Roman Empire from the eighth century B.C. until the fourth century A.D. with special attention to the monuments of the Roman emperors. Cross registered in the Department of Visual Arts as Visual Arts History 244. One unit.

Classics 151 — Mythology *Fall, Spring*
An exploration of the significance of myths, their meanings and functions in the cultures of Greece and Rome. Special attention is given to more recent developments in the study of myths and their relation to rituals and folk tales. Babylonian, Egyptian, Hindu and American Indian mythology may be used for comparative purposes. One unit.

Classics 152 — Introduction to Greek Archaeology *Fall*
A study of the Bronze Age sites of Minoan Crete and Mycenaean Greece and of archaic, classical, and Hellenistic Greece, with special attention given to the ancient city of Athens. Cross registered in the Department of Visual Arts as Visual Arts History 243. One unit

Classics 153 — Ancient Sculpture *Occasionally*
An examination of the techniques, material, meaning and function of ancient sculpture, both free-standing works and sculpted reliefs. Most attention is given to the sculpture of ancient Greece and Rome but, in different years, the sculpture of the ancient Near East and Egypt also is studied. Cross registered in the Department of Visual Arts as Visual Arts History 245. One unit.

Classics 157 — History of Greece *Fall*
A study of Greek history from the beginnings to the death of Alexander. Cross registered in the Department of History as History 31. One unit.

Classics 158 — History of the Roman Republic *Fall*
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 History as History 33. One unit.

Classics 159 — History of the Roman Empire *Spring*
A survey of Roman imperial civilization from the Principate of Augustus (27 B.C.) to the death of Diocletian (305 A.D.). The course concentrates on the sources for this period. Cross registered in the Department of History as History 34. One unit.

Classics 160 — Ancient Biography *Occasionally*
The development of the biographical genre among the Greeks and Romans. Close scrutiny of selected *Lives* composed by the Greek Plutarch and the Roman Suetonius. One unit.

Classics 161 — Athenian Democracy *Fall*
An analysis of the institutions, literature, and political thought inspired by the democracy of fifth and fourth-century Athens. One unit.

Classics 173 — The Art of Ancient Rhetoric *Occasionally*
The course attempts to study the effect of oratory or public speaking from the judicial and legislative system of Ancient Greece and Republican Rome as well as upon other verbal arts. One unit.

Classics 192 — Ancient Sanctuaries and Religion *Occasionally*
A detailed study of the archaeological remains from ancient sanctuaries. The buildings and monuments are studied in connection with other evidence for religious behavior in the different ancient cultures. The emphasis is on the cults and shrines of Ancient Greece and Rome but, in different years, the ancient Near East and Egypt also are considered. Cross registered in the Department of Visual Arts as Visual Arts History 297. One unit.

Classics 217 — Seminar in Greek Drama *Occasionally*
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. For nonmajors only. One unit.

Classics 220, 221 — Classical Theatre Seminar *Annually*
A study of the beginnings of theatre for beginners in theatre; this course leads to both the Ancient Greek theatre and to the modern theatre and their actual practices backstage and on. An ancient play is closely perused in class and then performed by members of the seminar for the general public. The influence of that play on later European drama is also explored. One unit each semester.

Classics 301, 302 — Tutorial Seminar *Annually*
Designed for selected students with approval of the professor and Chair. Particular areas of classical civilization and/or literature may be studied for one or two semesters. One unit each semester.

Economics

John R. Carter, Ph.D., *Professor*
John F. O'Connell, Ph.D.,*Professor*
David J. Schap, Ph.D., *Professor*
Charles H. Anderton, Ph.D., *Associate Professor*
Walter Block, Ph.D., *Associate Professor*
Thomas R. Gottschang, Ph.D., *Associate Professor*
George Kosicki, Ph.D., *Associate Professor and Chair*
John D. O'Connell, M.B.A., C.P.A., *Associate Professor*
Nicolas Sanchez, Ph.D., *Associate Professor*
Scott Sandstrom, M.S., J.D., C.P.A., *Associate Professor*
Nancy R. Baldiga, M.S.T., C.P.A., *Assistant Professor*
David R. Buffum, Ph.D., *Assistant Professor*
David K.W. Chu, Ph.D., *Assistant Professor*
Kolleen J. Rask, Ph.D., *Assistant Professor*
Miles B. Cahill, Ph.D., *Assistant Professor*
Laurie C. Tarpey, M.B.A., C.P.A., *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 the economics-accounting major is limited. Students may apply for this major during the admission process or subsequently in the spring of their first or second year. Introductory and intermediate-level courses are also available for nonmajors. 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.

Economics courses that may be taken to satisfy major requirements are numbered 01-69, 101-169, 201-269, and 301-369. The normal order of courses for a student majoring in economics is: Mathematics 25 and 26 (Calculus) and Economics 11 and 12 (Principles) during the first year; Economics 155 and 156 (Micro and Macro Theory) and Economics 149 (Statistics) during the second year; anywhere from a minimum of four to a maximum of nine economics electives are taken during the second through fourth years. At least three of the economics electives must be upper-level courses having as prerequisites Economics 155 (Microeconomics), Economics 156 (Macroeconomics), or both. These courses are numbered between 201 and 269. For students interested in graduate work in economics, it is recommended that Mathematics 31 and 32 (Analysis) be substituted for Mathematics 25 and 26. Further, it is recommended that Economics 206 (Econometrics), Economics 213 (Mathematics for Economists), and additional courses in mathematics and computer science be taken.

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 largest 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 nonprofit 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 principles of accounting (2 semesters), intermediate (2 semesters), cost and advanced accounting, income taxes, auditing, business law (2 semesters), statistics, principles of economics (2 semesters), and college calculus (2 semesters). 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 that may be taken to satisfy major requirements are numbered 70-99, 170-199, and 270-299. The normal order of courses for a student majoring in economics-accounting is: Mathematics 25 and 26 (Calculus) and Economics 71 and 72 (Financial and Administrative Accounting) during the first year; Economics 177 and 178 (Asset and Equity) and Economics 11 and 12 (Principles) during the second year; Economics 289 (Cost Accounting), 292 (Federal Income Taxes), 149 (Statistics), and one elective in the third year; and Economics 287 and 288 (Business Law), 291 (Auditing), 290 (Advanced Accounting) and additional electives during the fourth year.

It is strongly recommended that accounting majors choose their electives from the following: Economics 117 (Money and Banking), Economics 126 (Operations Research), Economics 155 (Microeconomics), Economics 173 (Topics in Accounting: Accounting Information Systems/Nonprofit Accounting), and Economics 175 (Corporation Finance).

Departmental Honors Program

This program is limited to approximately four third-year and four fourth-year economics majors. Students apply for the program as first semester third-year students and must complete Economics 149, 155, and 156 by the end of that semester to be eligible for the program. During the second semester of both the third and fourth years, honors students participate in a methodology seminar; during the first semester of the fourth year, the thesis is written under the direction of a faculty advisor. The honors course sequence is: Economics 360 (Research Methods 1) during spring of the third year; Economics 362 (Directed Research) during fall of the fourth year; and Economics 361 (Research Methods 2) during spring of the fourth year.

Economics 360 (Research Methodology 1) is a one-unit course that counts as the equivalent of a lower-level economics elective. Economics 361 (Research Methodology 2) is a half-unit overload which may be taken pass/no pass. Economics 362 (Directed Research) counts as the equivalent of an upper-level economics elective.

The Economics Minor

The economics minor is designed to provide students with a coherently structured, substantive introduction to the discipline. The minor allows a student majoring in another field to add a strong foundation in economics, even if the interest in economics is not discovered until the second or third year. The minimum requirement for the minor is six semester courses in economics and a year of college calculus or its equivalent. The normal economics minor sequence is Economics 11 and 12 (Principles), Economics 155 (Intermediate Micro), Economics 149 or Economics 156 (Statistics or Intermediate Macro), and two electives. At least one elective must have intermediate theory as a prerequisite.

Nonmajors

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).

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

Courses

Economics 11, 12 — Principles of Economics *Annually*
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. One unit each semester.

Economics 71, 72 — Financial and Administrative Accounting *Annually*
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 accounting majors only. One unit each semester.

Economics 81, 82 — Financial and Administrative Accounting *Annually*
Same as Economics 71, 72. Intended for students other than accounting majors. One unit each semester.

Economics 115 — Economic History of the United States *Alternate years*
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. One unit.

Economics 116 — Origins of Economic Analysis *Alternate years*
Considers the 18th and 19th century roots of the analytical tradition in economics. Concentrates 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. One unit.

Economics 117 — Money and Banking *Spring*
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. One unit.

Economics 118 — Urban Economics *Fall*
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 location and growth of cities, poverty and urban labor markets, social welfare and externalities, and policy formation for urban development. Prerequisites: Economics 11, 12. One unit.

Economics 121 — Economic Development of Modern China *Alternate years*
Aims 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. One unit.

Economics 124 — Economics of Natural Resources *Alternate years*
The application of economic principles to the use of natural resources is stressed. Topics 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. One unit.

Economics 125 — Public Finance *Occasionally*
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 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. One unit.

Economics 126 — Operations Research *Alternate years*
Acquaints the student with decision-making, the application of mathematical and statistical techniques to economic and business problems. Emphasizes the optimization of an objective, subject to constraints upon available action. Linear optimization models are treated in depth. Prerequisites: Economics 11, 12. One unit.

Economics 127 — Economics, Ethics and Religion *Spring*
Explores the various issues raised by popes, bishops, ethicists, and theologians that pertain to economics. Topics include the preferential option for the poor, the priority of labor over capital, the ethical and economic status of union-management relations, the dignity of the human person, environmentalism, stewardship over the earth, racial and sexual discrimination, poverty, welfare, charity, and positive and negative rights. Prerequisites: Economics 11, 12. One unit.

Economics 149 — Statistics *Fall, Spring*
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. One unit.

Economics 155 — Microeconomics *Fall, Spring*
Analyzes 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 11, 12. One unit.

Economics 156 — Macroeconomics *Fall, Spring*
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. One unit.

Economics 173 — Topics in Accounting:
Accounting Information Systems/Nonprofit Accounting *Fall*
The accounting information systems module Examines the interrelationship of computerized information systems and the accounting process. Topics include computer processes and information analysis in each of the major accounting cycles, especially receivables/revenues, inventory/cost, and general ledger/financial statements. Spread sheets and accounting application software are utilized. Internal control and ethics in a computerized environment are discussed. The nonprofit accounting module develops the basic tenets and processes of accounting in the context of nonprofit organizations. Actual financial statements are analyzed for various kinds of nonprofit organizations, including government, health care institutions, colleges and universities, and charities. Prerequisites: Economics 71, 72 or 81, 82. One unit.

Economics 175 — Corporation Finance *Fall, Spring*
Topics 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. One unit.

Economics 177, 178 — Asset and Equity Accounting *Annually*
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 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 or 81, 82. One unit each semester.

Economics 202 — Industrial Organization and Public Policy *Spring*
The first half is a study of the theoretical and empirical relationships between market structure, conduct and performance in American industry. The knowledge gained therefrom is then used to evaluate U.S. antitrust policy. A number of industry case studies and landmark court decisions are read. Prerequisite: Economics 155. One unit.

Economics 203 — Economics of Human Resources *Fall*
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. One unit.

Economics 204 — Law and Economics *Fall*
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. One unit.

Economics 205 — Economic Growth and Development *Fall*
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 developing nations. Prerequisites: Economics 155, 156. One unit.

Economics 206 — Econometrics *Fall*
Studies 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 149, 155, 156. One unit.

Economics 207 — Theory of International Trade *Fall, Spring*
Examines 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. One unit.

Economics 208 — International Monetary Theory and Policy *Occasionally*
Examines 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 eurocurrency markets, devaluation, the optimum currency area, the international monetary system, and LDC debt problems. Prerequisites: Economics 155, 156. One unit.

Economics 209 — Comparative Economic Systems *Alternate years*
The first segment develops an analytical framework for the comparison of economic systems. In the second segment this framework is used to examine and compare the economic systems of various countries including the United States, Germany, France, Japan, China, the former Soviet Union and other East European states. Prerequisites: Economics 155, 156. One unit.

Economics 210 — Experimental Microeconomics *Spring*
This course emphasizes the interplay between theoretical models and laboratory observation in the development of microeconomics. Topics might include experimental methods,

preference and choice, risk and uncertainty, expected utility maximization, game theory, industrial organization, search, bargaining, auctions, asset markets, asymmetric information, public goods, and voting. A number of classroom experiments are conducted. Prerequisites: Economics 149, 155. One and one-quarter units.

Economics 211 — Welfare Economics *Occasionally*
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. One unit.

Economics 212 — Monetary Theory *Fall*
Provides a thorough understanding of the role of money in the economy. 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 is explored. Concludes with an examination of issues in monetary policy. Prerequisites: Economics 155, 156. One unit.

Economics 213 — Mathematics for Economists *Spring*
The object is to provide a mathematical background to students interested in pursuing a quantitative approach to economics or business. Considers 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. One unit.

Economics 215 — Public Choice and Political Economy *Spring*
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. One unit.

Economics 216 — Economics of Peace, Conflict, and Defense *Fall*
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. One unit.

Economics 256 — Advanced Topics in Macroeconomics *Occasionally*
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. One unit.

Economics 287, 288 — Business Law
(Based on the Uniform Commercial Code) *Annually*
Required of all students majoring in accounting. Includes contracts, agency, sales, negotiable instruments, the legal aspect of business associations, insurance and property, both real and personal. Prerequisites: Economics 71, 72 or 81, 82. One unit each semester.

Economics 289 — Cost Accounting *Spring*
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 71, 72 or 81, 82. One unit.

Economics 290 — Advanced Accounting *Spring*
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 177, 178. One unit.

Economics 291 — Auditing *Fall*
Considers 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 289. One unit.

Economics 292 — Federal Income Taxation *Fall*
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 11, 72 or 81, 82. One unit.

Economics 300 — Directed Readings in Economics *Occasionally*
A program in reading and research open to majors with a minimum GPA of 3.25. Permission of the instructor is required. One unit.

Economics 360 — Research Methodology Seminar 1 *Spring*
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 fourth year. One unit.

Economics 361 — Research Methodology Seminar 2 *Spring*
This is the same as Economics 360. Fourth-year 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. One-half unit.

Economics 362 — Honors Directed Research *Fall*
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. One unit.

Education

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

The Department of Education offers a limited number of courses in education to second, third, and fourth-year students. These courses are intended to introduce students to the concerns and issues of secondary education. The College is in the initial stages of developing a curriculum that would lead to secondary teaching certification in several subject areas. Students should contact the Chair of the Department for further information. 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.

Courses

Education 62 — Principles of Guidance *Spring*
Students are introduced 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. One unit.

Education 67 — Educational Psychology *Fall*
The student is introduced to relationships existing between psychology and education. Growth and development, the nature of the learner, measurement and evaluation, motivation, the teaching-learning process, and the role of the teacher are studied. New and innovative approaches to education will be discussed. One unit.

Education 68 — Philosophy of Education *Fall*
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. One unit.

Education 75 — Principles and Methods of Secondary School Teaching *Spring*
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. One unit.

Education 200 — Special Topics in Education *By arrangement*
Tutorial and research projects designed by students and faculty members. Admission determined by evaluation of proposal. One unit.

English

Patricia L. Bizzell, Ph.D., *Professor*
Robert K. Cording, Ph.D., *Professor*
Maurice A. Geracht, Ph.D., *Professor*
Thomas M.C. Lawler, Ph.D., *Professor*
Richard E. Matlak, Ph.D., *Professor and Chair*
John T. Mayer, Ph.D., *Professor*
B. Eugene McCarthy, Ph.D., *Professor*
Rev. Gerard Reedy, S.J., Ph.D., *Professor and President of the College*
Eve Shelnutt, Ph.D., *Professor*
Patrick J. Ireland, Ph.D., *Associate Professor*
James M. Kee, Ph.D., *Associate Professor and Acting Dean of the College*
William R. Morse, Ph.D., *Associate Professor*
Rev. Philip C. Rule, S.J., Ph.D., *Associate Professor*
Susan Elizabeth Sweeney, Ph.D., *Associate Professor*
Helen M. Whall, Ph.D., *Associate Professor*
John H. Wilson, Ph.D., *Associate Professor*
Rev. Richard G. Carson, C.S.C., Ph.D., *Assistant Professor*
Sarah Stanbury, Ph.D., *Assistant Professor*
Margaret Wong, Ph.D., *Assistant Professor*
Rev. James J.Miracky, S.J., *Instructor*
Jennifer Campbell, Ph.D., *Visiting Assistant Professor*
Joshua Gidding, Ph.D., *Visiting Assistant Professor*
Anne Bernays and Justin Kaplan, *Distinguished Lecturers*
Elizabeth McHenry, *Visiting Assistant Professor and College of the Holy Cross/W.E.B. Dubois Institute Fellow*
Christopher Merrill, William H. Jenks *Chair in Contemporary American Letters*

The study of English is fundamental to a liberal education. It deals not only with literary works of the imagination — poems, plays, novels, short stories, non-fiction — 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, and language, and to increase mastery of written expression. Courses in the Department help students to become better readers, writers, and even speakers, and thus have the added benefit of preparing students for graduate study in law, medicine, business, education and other professional fields that value effective communication. Students who major in English will take a minimum of ten upper-division English courses. Majors in the Premedical Program are allowed a minimum of eight.

First-year students majoring in English 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 ten required upper-division courses) a two-semester second-year course, The Traditions of English Literature. All majors must take at least one course in American literature 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 upper-division courses for majors. Some are organized in terms of historical periods of English and American literature (Medieval Women Writers, Restoration and 18th Century Literature, American Poetry to 1900, African American Literary Tradition); some are organized according to literary type (Modern Drama, 19th Century Novel); and some are by author (Chaucer, Dickens, Shakespeare, Frost/Bishop); others are arranged thematically (Tragic View, Literature and Myth, Nature Poetry); some deal with aesthetics and criticism (Feminist Literary Theory and Criticism); and others concentrate upon the art of writing (Composition, Creative Writing: Poetry and Fiction, and Expository Writing).

Tutorials, seminars, and lecture courses on special topics are also offered, as well as a range of courses in the College's concentrations in Women's Studies, African American Studies, Peace and Conflict Studies, and International Studies.

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

Introductory Courses

English 10 — Composition *Fall, Spring*
Devoted to improving the student's writing through frequent revisions. Intensive work during the semester concentrates on the student's own writing which is examined in class and in conference with the instructor. Each section is limited to 10 students. One unit.

English 20 — Critical Reading and Writing:Poetry *Fall*
Identifies and examines the elements of literature as they are found in poems of various periods, authors, and kinds. Equal emphasis falls on the student's critical essays, which logically organize and persuasively present responses to the reading. One unit.

English 30 — Critical Reading and Writing:Fiction *Spring*
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 student essays on the literature. One unit.

English 110 — Traditions of English Literature I *Fall*
A study of several major works from the Medieval Period to the 18th Century to illustrate the influence of literary, cultural, and historical contexts on interpretation. One unit.

English 111 — Traditions of English Literature II *Spring*
A study of several major works of the 19th and 20th centuries in England and America with the same purpose as Traditions I. One unit.

Upper-Division Courses

English 200 — Masterpieces of British Literature *Fall, Spring*
A study of selected major works of British Literature. Non-majors only. One unit.

English 201 — Masterpieces of American Literature *Fall, Spring*
A study of selected major works of American Literature. Non-majors only. One unit.

English 205 — Expository Writing *Fall, Spring*
Intensive reading and writing of expository essays to develop the student's authorial voice and style. A section of Expository Writing will be devoted each term to students for whom English is a second language or who come from a diverse or multicultural background. One unit.

English 210 — Medieval Literature *Fall*
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. One unit.

English 213 — Middle English Literature *Spring*
A course which develops the student's ability to deal directly with Middle English texts. Works read include Chaucer's Troilus and Cressida, Piers Plowman, and a selection of romances, lyrics, and other 13th and 14th Century texts. One unit.

English 214 — Chaucer *Fall*
A reading and critical discussion of the complete Middle English text of The Canterbury Tales and selected minor poems. One unit.

English 219 — Medieval and Renaissance Drama *Occasionally*
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. One unit.

English 220 — 16th Century Renaissance Literature *Occasionally*
A study of 16th Century prose and poetry in Europe and England. Included are works of Petrarch, Castiglione, More, Wyatt, Sydney, and Spenser. One unit.

English 221 — 17th Century Renaissance Literature *Fall*
Concentrates primarily on the poetry of the period, including works of Jonson, Donne, Herrick, Carew, Herbert, Vaughan, Marvell and Milton. One unit.

English 222 — Epic and Romance *Occasionally*
A study of Spenser's Faerie Queene in context of the classical and Italian models which influenced it, Virgil's Aeneid, Ariosto's Orlando Furioso, and Tasso's Gerusalemme Liberata. One unit.

English 224 — Milton *Occasionally*
A study of Milton's early poems, Paradise Lost, Paradise Regained, and Samson Agonistes, and selections from the prose. One unit.

English 227 — Shakespeare's Elizabethan Drama *Fall*
Studies those plays Shakespeare wrote during the reign of Elizabeth I. While the focus of the course is Shakespeare's mastery of the history play and comedy, his experiments with tragedy are also considered. Special attention is given to the nature of Elizabethan theater and to those cultural and political influences which helped shape the playwright's response to his world. One unit.

English 228 — Shakespeare's Jacobean Drama *Spring*
Studies the major works Shakespeare wrote during the reign of James I, especially his great tragedies and his experiments in romance drama. The course places those works in the context of Jacobean cultural and political history. One unit.

English 229 — Shakespeare Survey *Fall, Spring*
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. One section each for majors and non-majors. One unit.

English 230 — Restoration and 18th Century Literature *Fall*
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. One unit.

English 231 — Dryden/Pope/Swift *Occasionally*
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. One unit.

English 236 — 18th Century Novel *Occasionally*
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. One unit.

English 239 — Restoration and 18th Century Drama *Spring*
A survey of English drama from Dryden to Sheridan, including heroic drama, Restoration comedy, sentimental developments of the 18th century, and the re-emergence of laughing comedy. One unit.

English 241 — English Romantic Writers *Fall*
A study of the major writers of the Romantic movement — Edmund Burke, Mary Wollstonecraft, William and Dorothy Wordsworth, Coleridge, Mary and Percy Shelley, Byron, Keats, Hazlitt, Lamb, and DeQuincy. One unit.

English 243 — British Women Writers: 1780-1860 *Occasionally*
Novels, poetry, and prose writings by women writing during and after the Romantic Movement — Frances Burney, Jane Austen, the Bront,s, Mary Wollstonecraft, Elizabeth Barrett Browning, and others. One unit.

English 244 — 19th Century Bildungsroman *Occasionally*
The so-called "novel of education" — about the growth and development of a central character. Close readings of novels by Austen, Dickens, Eliot, Hardy, Butler, Wells, Chopin, Glasgow, and others. One unit.

English 245 — Major Victorians *Occasionally*
A study of works by major poets such as Tennyson, Browning, Arnold, and Hopkins, and essayists such as Mill, Ruskin, and Caryle, to examine some of the cultural developments which define "Victorianism." One unit.

English 246 — 19th Century Novels *Spring*
A close examination of the British novel in the 19th Century, including novels by Thackeray, Dickens, the Brontes, George Eliot, and Hardy. One unit.

English 247 — Dickens's World *Alternate years*
Studies Dickens's development as the major novelist of Victorian England through analyses of works from his Early, Middle, and Late periods: Oliver Twist, Dombey and Son, David Copperfield, Hard Times, Tale of Two Cities, Great Expectations, Our Mutual Friend. One unit.

English 248 — Tennyson/Browning/Arnold *Occasionally*
A close study of the three major poets of the Victorian era, with special reference to the development of the dramatic monologue. One unit.

English 250 — Early American Literature *Alternate years*
A study of the development of American Literature up to Romanticism, with emphasis on the late 18th and early 19th centuries. One unit.

English 251 — American Renaissance *Spring*
A study of the "American Renaissance" through selected prose and poetry of Poe, Emerson, Thoreau, Whitman, Hawthorne, and Melville. One unit.

English 252 — American Realism *Occasionally*
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. One unit.

English 252 — American Realism *Occasionally*
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. One unit.

English 253 — Nineteenth-Century American Women Writers *Occasionally*
Nineteenth-century women writers sought to engage restrictive definitions of "woman's sphere" so that women could broaden their work opportunities and so that they could engage in social activism, particularly against slavery. This course studies various prose fiction and non-fiction texts in which white and black women pursued this struggle. One unit.

English 254 — Self and World in American Literature *Spring*
A study of the American mythic self originating in Emerson and Whitman and mediated in various works of poetry and fiction by such authors as Dickinson, Fern, Twain, Chopin, Frost, Masters, Eliot, Fitzgerald, and Hemingway. One unit.

English 255 — American Poetry to 1900 *Occasionally*
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. One unit.

English 256 — American Novel to 1900 *Fall*
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. One unit.

English 257 — Modern American Poetry *Occasionally*
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. One unit.

English 258 — Modern American Novel *Spring*
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. One unit.

English 260 — Modern British Literature *Fall*
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. One unit.

English 262 — T. S. Eliot *Occasionally*
A close study of Eliot's poetry, including unpublished texts, the major early poems, The Waste Land, and a selection of later poetry or a study of Eliot's early poetry in relation to another poet or fiction writer of the period, e.g. Hemingway. One unit.

English 265 — Modern British Poetry *Occasionally*
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. One unit.

English 268 — African-American Literature *Occasionally*
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. One unit.

English 269 — Modern Drama *Occasionally*
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. One unit.

English 270 — Tragic View *Occasionally*
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. One unit.

English 271 — Detective Fiction *Alternate years in Fall*
The course traces detective fiction from its 19th-century beginnings (Poe, Doyle) to the British Golden Age (Christie, Sayers), and recent metaphysical parodies of the genre (Pynchon, Auster). One unit.

English 275 — Nature/Poetry *Occasionally*
A reading of natural history essays from the 18th to 20th century with emphasis on our problematic relationship to nature and the roots of that problem in scientific thinking and the arrogance of humanism. One unit.

English 276 — Contemporary Fiction *Fall*
An examination of recent developments in fiction through study of selected works of present-day writers. One unit.

English 277 — Contemporary Poetry *Alternate years*
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. One unit.

English 279 — Contemporary Drama *Alternate years*
Studies the works of playwrights principally from the Anglo-American tradition. The course begins, however, with a look at the French absurdist movement of the 1950s. Works by Beckett, Ionesco, and Pinter are followed by those of authors such as Albee, Williams, Osborne, Orton, Stoppard, Rabe, Fugard, Churchill, Wasserstein, and Wilson. One unit.

English 281 — Rhetoric *Occasionally*
A consideration of rhetorical theory in the classical texts of Plato and Aristotle, an analysis of some famous examples of persuasive eloquence, and the student's own exercise of persuasive speech on subjects of public concern. One unit.

English 283 — Feminist Literary Theory *Occasionally*
Readings in major directions in 20th century feminist literary theory, with study of fiction drawn from writings of Woolf, Charlotte Bronte, Chopin, Gilman, Atwood, and Morrison. Theory may address such issues as gendered reading and writing, representation of the body and sexuality, gender/race/class; feminism and ideology. One unit.

English 284 — Literary Criticism *Spring*
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. One unit.

English 287 — Composition Theory and Pedagogy *Occasionally*
Composition Studies investigates how people learn to write, and how they can be helped to write better. Topics include individual composing processes, academic discourse constraints, and cultural influences on writing. This by-permission course is required for all students who wish to become peer tutors in the Holy Cross Writer's Workshop. One unit.

English 288, 289 — Creative Writing *Fall, Spring*
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. One unit.

English 290 — Special Topics in English *Fall, Spring*
The study of a special problem or topic in literature or language, or a body of literature outside present course listings. Representative examples include: Renaissance Love Lyric, Arthurian Tradition, Contemporary Women Writers, Renaissance Women Writers, Southern Literature. One unit.

English 300 *Fall, Spring*
Tutorials and independent study projects. Permission of the instructor and/or the Department Chair ordinarily required for such courses.

English 363 — Joyce *Occasionally*
A close study of Joyce's modernist epic novel Ulysses as an experimental narrative; preceded by a close reading of Portrait of the Artist as a Young Man or Dubliners. One unit.

History

Ross W. Beales, Jr., Ph.D., *Professor*
Robert L. Brandfon, Ph.D., *Professor*
James T. Flynn, Ph.D., *Professor*
William A. Green, Ph.D., *Rev. J.E. Brooks, S.J.,Chair in the Humanities and Professor*
Theresa M. McBride, Ph.D., *Professor*
David J. O'Brien, Ph.D., *Loyola Professor of Roman Catholic Studies*
James F. Powers, Ph.D., *Professor*
John B. Anderson, M.A., *Associate Professor and Chair*
Lorraine C. Attreed, Ph.D., *Associate Professor*
Noel D. Cary, Ph.D., *Associate Professor*
Rev. Anthony J. Kuzniewski, S.J., Ph.D., *Associate Professor*
Rev. Vincent A. Lapomarda, S.J., Ph.D., *Associate Professor*
Karen Turner, Ph.D., *Associate Professor*
Aldo Lauria-Santiago, Ph.D., *Assistant Professor*
Mark E. Lincicome, Ph.D., *Assistant Professor*
Rev. Thomas Worcester, S.J., Ph.D., *Assistant Professor*

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, History 1 through History 16. Courses numbered 30 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 ten courses. First-year courses count toward that total; advanced placement credits do not. Two entry-level courses must be chosen from among the following: Rise of the Christian West to AD 1000 (History 11); Emerging

Europe, 1000-1500 (History 12); Europe: Renaissance to Napoleon, 1500-1815 (History 13); and Europe: Napoleon to the Cold War, 1800-1990 (History 14). Majors also must take two United States history courses from those numbered above 30 and at least one course in the history of Africa, Asia, the Middle East, or Latin America. Entry-level requirements are ordinarily fulfilled by the end of the second year. Fourth-year history majors will not be admitted to entry-level courses in European history except under extraordinary circumstances and only with special permission from the Department Chair. 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.

Students who have scored four or above in their Advanced Placement test in American history are exempted from the entry-level American history courses. History majors with Advanced Placement credits in American history must take two American history courses numbered above 30. 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.

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, majors should select courses carefully in related disciplines to expand their historical insights and to acquire critical tools that will enhance their ability to pursue serious historical scholarship.

Students considering application to Holy Cross as history majors are strongly advised to pursue foreign language study in high school.

The Department of History offers the opportunity for fourth-year students to apply to the History Honors Program. Students in the Honors Program are required to take the seminar on Historiography and to work closely with a member of the history faculty on a major research thesis. The Department Honors Program will enrich and inform a student's course of studies at Holy Cross, particularly the quality and direction of a student's major in history. The program involves significant commitment and work, offers the intellectual rewards of independent research and original writing, and recognition of outstanding achievement.

Courses

History 1, 2 — American Themes *Annually*
An introduction to history as a mode of intellectual inquiry, this is an intensive reading, writing, and discussion course which is limited to 24 students. Sections are conducted in small groups of no more than 12 students. This course seeks to develop a sense of history through an in-depth study of selected topics and themes in American history. Emphasis is on student participation and the development of critical thinking. Readings involve some textual analysis, and there are frequent short papers. First year students only. One unit each semester.

History 3 — Perspectives on Asia: "Traditional" East Asia *Fall*
This course focuses on selected themes in the civilizations of Asia from the earliest times through the nineteenth century. It will examine the philosophical, political, religious and artistic traditions of these great cultures, and how those traditions changed over time. Creative literature, films, field trips, lectures and discussions will be used. One unit.

History 4 — Perspectives on Asia: Modern Transformations *Fall*
The course focuses on historical and cultural movements in the Asian countries. This is a team taught course and themes will vary according to the interests and expertise of the Asian Studies faculty. Creative literature, anthropological accounts, journalists' reports, films and guest lecturers will be used to gain a multi-layered perspective of these complex societies. One unit.

History 5 — History of Latin America 1: Colonial Period *Fall*
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. One unit.

History 6 — History of Latin America 2: National Period *Spring*
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. One unit.

History 9 — Ancient Civilization 1 *Fall*
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. One unit.

History 10 — Ancient Civilization 2 *Spring*
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. One unit.

History 11 — The Rise of the Christian West to AD 1000
(Formerly Birth of the West) *Fall, Spring*
Western history from the later Roman period to the formation of Europe in the eleventh century. Covers political, religious, economic, social, artistic and legal developments in the fusion of Roman and Christian civilization, the disintegration of the Western Roman empire in the face of barbarian invasions, relations with the Byzantine Eastern Empire, the impact of Islam, rural and urban life, the Carolingian revival, and the impact of feudal structures. One unit.

History 12 — Emerging Europe, 1000-1500 *Fall, Spring*
The emergence of Europe in the eleventh century to the era of the Renaissance. Covers political, religious, economic, social, artistic and legal developments in the formation of European states and territorial monarchy, European frontier expansion, urban growth, the evolution of Romanesque and Gothic styles, and the conflict of church and state. One unit.

History 13 — Europe from the Renaissance to Napoleon: 1500-1815 *Fall, Spring*
Social, cultural, religious, economic, and political developments in Europe from the Renaissance to the Fall of Napoleon. Special emphasis is given to the Protestant and Catholic Reformations, the evolution of monarchical power, the rise of European overseas empires, the scientific revolution, the Enlightenment, the French Revolution, and the rise and fall of Napoleon Bonaparte. One unit.

History 14 — Europe from Napoleon to the End of the Cold War: 1815-1990 *Fall, Spring*
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, the age of imperialism, World War I, the rise of Bolshevism, fascism, and Nazism, World War II, the origins and development of the Cold War, the formation of the European Community, and the breakup of the Soviet Empire. One unit.

History 31 — History of Greece *Fall*
A study of Greek history from the beginnings to the death of Alexander. Cross-registered in the Department of Classics as Classics 157. One unit.

History 33 — History of the Roman Republic *Spring*
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. One unit.

History 34 — History of the Roman Empire *Fall*
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. One unit.

History 43 — The Later Middle Ages *Every three years in Fall*
The course studies Europe from the late thirteenth through the late fifteenth centuries. It is organized both chronologically and topically. We will study the period from the perspectives of: kingship and government, warfare, church and lay piety, society and family, economy, and philosophy and education. Each of these topics will be studied with a chronological approach to chart development over time. This is a critical time in Europe's development as governmental structures grow in size and strength while the population faces the social and economic crises engendered by the Black Death and the Hundred Years' War. One unit.

History 45 — Twelfth Century Renaissance
(formerly The 12th-Century Renaissance I) *Alternate years in Fall*
The first European creative surge, covering from the later 11th century to the mid-12th century. Emphasis given to European expansion and the Crusades, the struggle between the Church and the emerging institutional monarchies, the intellectual revival, and the fruition of Romanesque art and architecture. One unit.

History 46 — The Rise of the Gothic
(formerly The 12th-Century Renaissance II) *Alternate years in Spring*
The extension of the 12th-Century renaissance from the mid-12th century to the early 13th century. Emphasis given to the struggle between the Church and the emerging institutional monarchies, the mature development of the Papacy, the invention of representative government, the intellectual revival, and the emergence of Gothic art and architecture. One unit.

History 47 — Renaissance Europe *Every three years in Fall*
Surveys the significant intellectual, cultural, social and political developments across Europe, beginning with the achievements of Dante and the early Italian Renaissance, continuing with the political and artistic expressions of the Italian city-states, and tracing the spread of Renaissance influences to northern Europe through the early sixteenth century. One unit.

History 48 — Reformation Europe *Alternate years in Spring*
The most significant political, intellectual, and religious developments of the Protestant and Catholic Reformation movements in sixteenth and seventeenth century Europe. One unit.

History 53 — Twentieth Century Europe: 1890-1939 *Alternate years in Fall*
From the high point of European global power and cultural influence, Europe descended into an era of world war, dictatorship, popular extremist ideologies, and unprecedented mass murder. Topics include: the pre-1914 "belle epoque," the origins and nature of World War I, the Russian Revolution, the Versailles peace settlement, the "crisis of democracy" and the rise of fascism, the Italian, German and Soviet dictatorships, the Spanish Civil War, appeasement, and the origins of World War II One unit.

History 54 — Europe and the Superpowers: 1939-1991 *Alternate years in Spring*
World War II, the Holocaust, science and government, Cold War, the division of Europe, the revival of west-European democracy, de-Nazification, post-Stalin Russia, decolonization, the "economic miracle," European integration, Berlin crises, Christian democracy, Gaullism, the sixties, the Prague Spring, Ostpolitik, the Green movement, perestroika, and the collapse of communism. One unit.

History 71 — The West and the Wider World, 1400-1650 *Alternate years in Fall*
Brief introduction of the structural setting for European expansion into the Atlantic and Indian Oceans: the economic revival of Christian Europe in the 11th and 12th centuries, the Crusades, and the establishment of Italian maritime empires in the Eastern Mediterranean. Principal attention is given to the growth of geographical knowledge, to Portuguese discoveries in the Atlantic and Indian Oceans, to Spanish conquest of America, to Dutch

imperium in the East Indies, and to the beginning of Anglo-French penetration of North America and the Caribbean. Readings will consider the biological and environmental consequences of European discoveries and conquests. One unit.

History 72 — Europe and the Western World Hegemony, 1650-1815
Alternate years in Spring
Concentrates on political, social, and economic developments in Western and Central Europe: the development of modern monarchies, the transition to capitalism, and the beginnings of European industrialization. The competitive interaction of European states provides a framework for studying the growth of vast mercantile empires in the Americas, the evolution of slave based plantation colonies, and the establishment of European hegemony in Asia. A principal objective of the course is to evaluate how and why the West acquired an unprecedented and unparalleled position of dominance in the world after 1600. One unit.

History 73 — Islamic History and Civilization *Fall*
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. One unit.

History 85 — The American Social Gospel *Alternate years*
Examines 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 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. One unit.

History 86 — Catholicism, Capitalism and Democracy *Alternate years*
The history of the Catholic Church from the French Revolution through the second Vatican Council. Particular attention is directed to the development of Catholic social and political thought and to church inspired social movements. The themes of the course arise form the Catholic encounter with democracy, capitalism and socialism. Participants become familiar with the major Catholic figures of the last two centuries. One unit.

History 87 — Catholicism in the United States *Annually*
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. One unit.

History 88 — Issues in American Catholic History *Annually*
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. One unit.

History 95 — Great Leaders *Alternate years*
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. One unit.

History 99 — Women's History *Spring*
The course is designed as an introduction to the history of women in the western world beginning with the movement for women's rights at the beginning of the nineteenth centuries. Among the topics to be discussed are: medical views of female sexuality; adultery, prostitution, and Victorian morality; contraception, infanticide, abortion; the domestic ideology of the nineteenth century; changes in women's work with the industrial age; women's education and women's entry into the professions; the campaign for women's suffrage; Marxism, socialist feminism and the Russian revolution; the impact of World War I, the

sexual revolution of the 1920s and the New Woman; women under the totalitarian states of Italy and Germany in the 1930s and 1940s; and some aspects of feminism in the 1960s to the 1980s. One unit.

History 101 — Colonial America *Fall*
The exploration, settlement, and development of North America from the late 16th 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. One unit.

History 102 — The Age of the American Revolution, 1763-1815 *Spring*
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. One unit.

History 103 — Age of Jackson: 1815-1860 *Alternate years in Spring*
American life and politics between the time of the Founding Fathers and the Civil War. Emphasis will be given to Jackson's role as a national hero and political leader; constitutional issues; political and economic developments; continental expansion; antebellum literature, social life, and reform; and the breakup of the Jacksonian consensus over the issue of slavery. One unit.

History 105, 106 — U.S. in the 20th Century *Annually*
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. One unit each semester.

History 107 — 19th Century U.S. Diplomacy *Fall*
A study of the foundations and development of American diplomacy to the turn of the 20th century. One unit.

History 108 — 20th Century U.S. Diplomacy *Spring*
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. One unit.

History 109, 110 — Problems in American Political History *Annually*
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. One unit each semester.

History 111, 112 — American Social and Intellectual History *Alternate years*
An interdisciplinary examination of the political, economic, religious, social, and cultural development of the American mind from the discovery of America to the present. One unit each semester.

History 113 — Economic History of the United States *Fall*
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. One unit.

History 115 — The Idea of American History *Occasionally*
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. One unit.

History 116 — American Religious History *Alternate years*
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. One unit.

History 117, 118 — Family in American History *Annually*
A study of the history of the American family. The first semester deals with the family in America from the English background of colonization in the sixteenth and seventeenth centuries to the middle of the nineteenth century. The second semester covers the mid-nineteenth century to the present. One unit per semester.

History 119, 120 — African-American History *Annually*
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. One unit each semester.

History 121 — American Urban History *Alternate years in Fall*
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 ghettoes, and visions of the ideal city in the United States. One unit.

History 127 — American Immigration to 1882 *Alternate years in Fall*
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; Asian immigration and the Chinese Exclusion Act of 1882. One unit.

History 128 — American Immigration since 1882 *Alternate years in Spring*
A survey of immigration since the era of the Civil War. Topics include "new" immigration from southern and eastern Europe, the growth of sentiment for immigration restriction, assimilation in the wake of the National Origins Act of 1924, refugee immigrants, Hispanic-American and Asian immigrants, and immigration legislation since 1945. One unit.

History 130 — U.S. Business and Industrial History *Spring*
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. One unit.

History 131 — Medieval England to 1216 *Every three years*
Examines the political, social, legal and economic developments in England and the Celtic fringe from the prehistoric period, through the Roman and Anglo-Saxon invasions, into the Norman and Angevin eras, ending in 1216 with Magna Carta and the death of King John. Topics include the Romanization of Britain, the growth of Christianity, the roles of medieval women and minority groups, crime and violence. One unit.

History 132 — Medieval England: 1216-1485 *Every three years*
Political, legal, social, and economic development in England and the Celtic fringe from 1216 and the reign of Henry III to the death of Richard III in 1485. Covers the growth of English common law and Parliament, especially during the reign of Edward I 1272-1307; agriculture and society, particularly during the years of demographic expansion in the thirteenth century and contraction after the Black Death; disturbances of the Hundred Years' War, the Wars of the Roses, and the role of crime and violence in medieval society. One Unit.

History 137 — Tudor England: 1485-1603 *Every three years in Spring*
Political, constitutional, social and cultural developments in England from the accession of Henry VII in 1485 until the death of Elizabeth in 1603. Covers changes in the nature of monarchical government, the role of Parliament, the English Reformation, Northern Re-

naissance humanism, and the settlement of Elizabeth. Social and economic changes as they affected family life, the role of women, and urban growth will be emphasized. One unit.

History 139 — England and the British Empire, 1783-1901 *Alternate years in Fall*
This course examines the recovery of Britain after the American Revolution, the country's struggle against Napoleonic France, and its development as the first great industrial nation. Social reform, the evolution of parliamentary government, and the problem of Irish nationalism are treated. Particular attention is given to imperial topics: the founding of the British Empire of India, the opening of Australia, the "New Imperialism" and British conquest in Sub-Saharan Africa. One unit.

History 140 — Britain and the Empire in the 20th Century *Alternate years in Spring*
Social currents in the Edwardian Era provide background for domestic struggles in the prewar period, particularly those involving women's suffrage, working-class solidarity, and the Irish question. World War I, inter-war diplomacy, the depression, World War II, and the rise of the welfare state are treated. Special emphasis is given to the expansion of empire during World War I, the transition from Empire to Commonwealth in the inter-war period, and the process of decolonization in the wake of World War II. The course examines postwar economic crises and British entry to the European Economic Community. One unit.

History 143 — Medieval Spain (formerly History of Spain I) *Alternate years in Fall*
The historical evolution of the peoples of the Iberian Peninsula from their Roman experience to the creation of Spain as a political entity at the end of the 15th century. Emphasis is placed on political, social, economic, religious and artistic development, and the influence of the Visigothic and Muslim invasions and the Reconquest on the shaping of Luso-Hispania. One unit.

History 144 — Modern Spain (formerly History of Spain II) *Alternate years in Spring*
The development of Spain from its creation of the first world empire in the 16th and 17th centuries, through its imperial decline and revitalization in the Enlightenment, its Napoleonic experience, the evolution of the constitutional monarchy in the 19th century, and the struggle of political ideologies leading the Spanish Civil War in the 20th century. A survey of Franco and Post-Franco Spain concludes the course. One unit.

History 147 — History of Poland *Every three years in Fall*
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. One unit.

History 148 — The Hapsburg Empire *Spring*
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. One unit.

History 149 — Poland and Ireland: Origins to 1815 *Alternate years in Fall*
Comparative study of Polish and Irish nations, designed to illuminate the development of the West. 1) Origins to Renaissance and Reformation. 2) 17th century conquests. 3) Rise and defeat of democratic revolutions. Poland and Ireland were the frontiers, eastern and western, of Western Christendom and experienced in special ways the main developments of the West, from medieval origins to the late 18th century age of democratic revolutions, when the Partitions of Poland and the Act of Union ended the political independence of both. One unit.

History 150 — Poland and Ireland since 1815 *Alternate years in Spring*
Comparative study of Polish and Irish nations, designed to illuminate the process by which traditional societies became modern. 1) Rise of modern nationalism to 1850. 2) "Organic Work" in Poland and "Home Rule" in Ireland, 1850-1922. 3) The trials of independent small nations in 20th century. Poland and Ireland began the 19th century agrarian, Catholic, and dependent parts of multi-national empires. In 20th century both became independent nation states after century long struggle from economic, ideological, and social, as well as political, change. Both experienced special difficulties of small nations' efforts to achieve meaningful independence in 20th century. One Unit.

History 151 — History of Russia to 1905 *Alternate years in Fall*
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. One unit.

History 152 — Twentieth-Century Russia *Alternate years in Spring*
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. One unit.

History 155 — Introduction to Russian Studies *Alternate years in Fall*
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. One unit.

History 160 — The Reformation in Germany *Alternate years in Fall*
This course focuses on the Reformation in the German-speaking countries by examining the interplay of intellectual, social and political forces that brought about profound changes in the sixteenth century. Topics discussed include: Martin Luther's evangelical thrust, humanism and the Reformation, Erasmus and Luther, the radical wing (Munzer and Karlstadt), the Anabaptists, the Imperial Knights' Revolt, the Peasants' War, the Reformation in the cities, Zwingli in Zurich, Calvin and the Calvinists, art as visual propaganda, Catholic reform and the Counter-Reformation, the legacy of the Reformation, the rise of the territorial states. One unit.

History 161 — Germany from Metternich to Hitler *Alternate years in Fall*
Late to unify, late to industrialize, and late to acquire democratic institutions, Germany had to cope with all three processes at once, with serious consequences for the European international system. This course analyzes the trends and circumstances in German and European history that came together to produce Nazism. This course also explores the presence of diversity and the alternative pathways in German history that help explain postwar developments. religion tension and prejudice (Catholics, Protestants, and Jews), Prusso-Austrian duality, the German confederation, the revolution of 1848, German national liberalism, Bismarckian unification, the development of imperial Germany under the Kaisers, German socialism, the First World War, the revolution of 1918, the Weimar Republic, the Third Reich, and the Holocaust. One unit.

History 162 — Germany from Dictatorship to Democracy *Alternate years in Spring*
In Western Germany after World War II, a people that once had followed Hitler now produced perhaps the most stable democracy in Europe. At the same time, eastern Germans lived under a new dictatorship that lasted more than three times as long as Hitler's. What is the place of the two postwar Germanies in the broader context of German and European history? To what degree were the two German states a product of their shared past, and to what degree were they products of the Cold War? What are the implications for reunified Germany? This course explores these questions by examining the history of democracy, dictatorship, political ideology, and social change in modern Germany. Topics include: German liberalism, socialism, and political Catholicism before the Nazi era; the legacy of Nazism; the Allied occupation; de-Nazification, the Cold War, and the partition of Germany; Communism, Christian Democracy, and Social Democracy; the Adenauer era, the Berlin crises, and the economic miracle; German-German relations and the *Ostpolitik* of Chancellor Willy Brandt; protest politics, Euromissiles, and the Green movement; the collapse of East Germany' and Germany since reunification. One unit.

History 167 — History of Modern Italy *Fall*
This course will examine 19th and 20th century Italian history, focusing on Italy as it gained major status as an economic, political, and cultural force in the modern world. Topics considered are: unification, the failure of republican forms, and rise of Mussolini and Fascism, Italy's role in World War II and Italian resistance to Fascism, Italian communism and

the "historic compromise," economic recovery, 1968 and challenges from the left and right, and Italy today. One unit.

History 172 — Medieval France *Alternate years in Spring*
This course examines the political, social, and cultural developments in France from the rise of the Capetian monarchies in 987 to the 1560s and Wars of Religion. Stress will be placed on the institutional development of the state, the vital role of Christianity in the religious, political and intellectual life of France, the evolution of social life and social classes, and the rich artistic and architectural heritage of this era in French history. One unit.

History 174 — Early Modern France, 1515-1713 *Fall*
From the age of the religious wars to the Enlightenment, France was at the center of European political changes. This course will study the politics, society, and culture of early modern France from 1515 to 1750. One unit.

History 175 — French Revolution and Napoleon *Fall*
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 focus is on the history of the French Revolution, its causes and effects and the historical controversy which continues to surround almost every aspect of the Enlightenment and the Revolution. One unit.

History 176 — Modern France *Spring*
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. One unit.

History 178 — African History to 1885 *Fall*
The course examines African history and culture from its earliest times to the advent to colonialism in 1885. It focuses on the early migrations, state formations, trade, cultural interaction, the spread of Islam, slavery, and early European contact. While lectures and assigned readings will be the basis for information, films will be used occasionally to provide more insight on the subject. One unit.

History 179 — African History since 1885 *Spring*
The course examines African history and culture from 1885 to the present, focusing largely on the colonial period and its impact on African culture, the socioeconomic structure, women, and development. It discusses the rise of national liberation movements, neocolonialism, and settler colonialism. Films will be used to enhance the subject. One unit.

History 181 — Imperial China *Alternate years in Fall*
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 remains 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. One unit.

History 182 — China in Revolution *Alternate years in Spring*
This course introduces students to events, personalities, and concepts of particular significance for understanding China's 20th century history. It covers the period from 1911 through the present in some detail through a variety of documentary sources, interpretive accounts, and literature. One unit.

History 183 — Economic Development of Modern China *Alternate years in Spring*
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. One unit.

History 185 — Japan Under the Tokugawa Shoguns *Fall*
This course will examine the political, social, economic, intellectual, and cultural history of Japan between the late 16th and mid-19th centuries, coinciding with the political rise and

fall of the Tokugawa shogunate. In the process, orthodox historiographical interpretations of this period as the "early modern" precursor to Japan's rapid modernization during the late 19th and 20th centuries will be reconsidered, along with the viability of conventional terms like "early modern" and "modern" for historical analysis. One unit.

History 186 — Modern Japan *Spring*
The course will be divided into two parts. Part One will offer a diachronic overview of early-modern and modern Japanese history from the seventeenth century to the present. It will serve as general background for a more detailed, synchronic examination of the dilemmas of modernization in Part Two, which will focus on the period between the 1860s and the 1930s. Topics for consideration include: industrialization and economic change; law and politics; education, religion, and the state; diplomacy and war; and cultural currents. One unit.

History 187 — Japan Since World War Two *Fall*
This course will examine the political, economic, social, intellectual, and cultural history of Japan since 1945. Some comparisons will be made with the prewar period, in order to place these developments within a broader historical context. Topics to be discussed include: individual, community and state; religion, education and socialization; gender relations; industrial development and its consequences; Japan and the global community; post-war interpretations of Japanese history. One unit.

History 189 — The Warrior Tradition in Japan *Alternate years in Fall*
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 how Japanese perceptions of the warrior have changed over time. The course concludes with an evaluation of the importance of the warrior ethic in contemporary Japanese business and politics. One unit.

History 201 — Seminar in American History *Occasionally*
An intensive research oriented study, limited to 12 participants. One unit.

History 202 — Seminar in Latin American History *Occasionally*
An intensive research oriented study, limited to 12 participants. One unit.

History 203 — Seminar in Pre-Modern History *Occasionally*
An intensive research oriented study, limited to 12 participants. One unit.

History 204 — Seminar in Modern History *Occasionally*
An intensive research oriented study, limited to 12 participants. One unit.

History 205 — Seminar in Asian History *Occasionally*
An intensive research oriented study, limited to 12 participants. One unit.

History 206 — Seminar in Historiography *Occasionally*
An intensive research oriented study, limited to 12 participants. One unit.

History 207 — Tutorial *Occasionally*
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. One unit.

History 208 — Tutorial *Occasionally*
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.) One unit.

History 209 — Colloquium *Occasionally*
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. One unit.

History 210 — Colloquium *Occasionally*
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.) One unit.

History 211 — Colloquium in American History *Occasionally*
Limited to an enrollment of 12 students, this course emphasizes reading, discussion, and writing on a topic in American History. Three places are reserved for non-majors; preference will be given to students who have not already taken a colloquium. One unit.

History 212 — Colloquium in Latin American History *Occasionally*
Limited to an enrollment of 12 students, this course emphasizes reading, discussion, and writing on a topic in Latin American History. Three places are reserved for non-majors; preference will be given to students who have not already taken a colloquium. One unit.

History 213 — Colloquium in Pre-Modern History *Occasionally*
Limited to an enrollment of 12 students, this course emphasizes reading, discussion, and writing on a topic in Pre-Modern History. Three places are reserved for non-majors; preference will be given to students who have not already taken a colloquium. One unit.

History 214 — Colloquium in Modern History *Occasionally*
Limited to an enrollment of 12 students, this course emphasizes reading, discussion, and writing on a topic in Modern History. Three places are reserved for non-majors; preference will be given to students who have not already taken a colloquium. One unit.

History 215 — Colloquium in Asian History *Occasionally*
Limited to an enrollment of 12 students, this course emphasizes reading, discussion, and writing on a topic in Asian History. Three places are reserved for non-majors; preference will be given to students who have not already taken a colloquium. One unit.

History 220, 221 — Fourth-year Thesis *Both semesters*
An individual, student-designed, professor directed, major research project. Usually available only to outstanding fourth-year majors. A lengthy final paper and public presentation are expected. Two units.

Mathematics

Thomas E. Cecil, Ph.D., *Professor*
Peter Perkins, Ph.D., *Professor*
John T. Anderson, Ph.D., *Associate Professor*
David B. Damiano, Ph.D., *Associate Professor and Chair*
Daniel G. Dewey, M.A., *Associate Professor*
Margaret N. Freije, Ph.D., *Associate Professor*
John B. Little III, Ph.D., *Associate Professor*
Rev. John J. MacDonnell, S.J., Ph.D., *Associate Professor*
Melvin C. Tews, Ph.D., *Associate Professor*
Alisa DeStefano, Ph.D., *Assistant Professor*
Thomas W. Dube, Ph.D., *Assistant Professor*
Deirdre Haskell, Ph.D., *Assistant Professor*
David Schweizer, Ph.D., *Assistant Professor*
Maria M. Morrill, Cand Ph.D., *Instructor*
Kenneth A. Scott, M.Ed., M.N.S., *Lecturer*
Joel Villa, B.S., *Lecturer*
Rev. Andrew P. Whitman, S.J., Ph.D., *Lecturer*

The primary goal of the program in mathematics at Holy Cross is to enable students to become active participants in the study of a fundamental and dynamic area of human endeavor. The inherent structure and beauty of mathematics is at the core of all mathematical inquiry, yet the language of mathematics is also the language of the sciences and social sciences, and, in our increasingly technology driven society, it is becoming part of our daily public discourse. Thus the program in mathematics is both informed by other disciplines and seeks ways that mathematics has an impact on the world at large. In this context the Department works toward helping students to become knowledgeable and sophisticated learners, not only able to think and work independently, but also to work productively in concert with their peers in a challenging and stimulating discipline.

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. The requirements for the mathematics major are listed first followed by 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 following course requirements apply beginning with the Class of 1998.

Mathematics majors normally begin their studies with the three-semester Analysis sequence (Mathematics 31, 32, 41), a solid grounding in the differential and integral calculus of functions of one and several variables. Students may also begin the major with Intensive Analysis (Mathematics 33, 34), which is designed for the student with a demonstrated interest in mathematics, the sciences or medicine, but who does not have a strong background in mathematics; or a student may begin the major with Advanced Placement Analysis (Mathematics 36), which is designed for the student with a year of high school calculus or advanced placement credit in calculus.

The major must also take the two-semester Linear Algebra sequence (Mathematics 43, 44) and Principles of Analysis (Mathematics 42) in preparation for more advanced courses. Including these basic courses, the major is required to take a minimum of ten 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 topology, and applied mathematics.

Students are encouraged to take advantage of the close student-faculty contact afforded by upper-division seminars, independent study projects, and departmental honors, which permit students to explore topics of mutual interest to students and faculty that are not part of the regular course offerings. Also, throughout the curriculum, in courses and in independent work, students are able to explore and utilize the growing relationship between mathematics and computing.

. 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. In addition, the computer science concentrator must take a minimum of four computer science courses including Techniques of Programming (Computer Science 61) and Data Structures (Computer Science 62) and two advanced courses chosen from Introduction to Computer Systems and Organization (Computer Science 181), Principles of Programming Languages (Computer Science 182), and Theory of Computation (Computer Science 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 Swords Science Center and the College's extensive major computing facilities are described elsewhere in the catalog. In addition, computer science and mathematics students will have the opportunity to use the Department's IBM PC laboratory in the lower-division courses and network of Sun workstations in upper-division courses.

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 build 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 fourth-year honors thesis. Any questions concerning the program should be directed to the Departmental Honors Program Director or the Department Chair.

Course Requirements for Honors. Seven courses numbered above 100. These seven must include three semesters of Abstract Algebra and/or Real and Abstract Analysis, two seminar courses, and at least two full-year courses.

Course Requirements for High Honors. Eight courses numbered above 100. These eight must include two semesters of Abstract Algebra, two semesters of Real and Abstract Analysis, and at least three Seminar courses, two of which must be either the Seminar in Algebra or the Seminar in Analysis.

Course Requirements for Honors and High Honors in the Computer Science Concentration. Four mathematics courses beyond Mathematics 31, 32; 41, 42; and 43, 44; including a full year of Abstract Algebra and one other full-year course. In addition a student is expected to complete three upper-division computer science courses beyond Computer Science 61, 62.

Exceptions to some of the course requirements for either Honors or High Honors may be possible for students who participate in the Study Abroad Program. Students going abroad and considering this Honors Program should consult with the Departmental Honors Program Director before leaving for Study Abroad concerning any modifications of these requirements.

GPA Requirements for Honors and High Honors. The average GPA for mathematics courses above the level of 31, 32 must be at least 3.40 at the end of the fall semester of the fourth year.

Fourth-Year Honors Presentation. During the fourth year all Honors majors must give an oral presentation open to the Department and majors on an important problem or result. 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.

Fourth-Year Honors Thesis for High Honors. This is a large project extending over the course of the fourth year. This can either consist of original research or be of an expository nature and is 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 fourth year, which will be accompanied by a written report of the year's work. Normally, a student will earn one unit in the spring semester of the fourth 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 10 — Topics in Mathematics *Fall, Spring*
Consideration of diverse subjects in mathematics. Course content varies from semester to semester with specific subject matter for each course announced at preregistration. Designed for non-majors who wish to study mathematics other than calculus. One unit.

Mathematics 21 — Survey of Calculus *Fall*
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. This is a terminal course. One unit.

Mathematics 22 — Introductory Probability *Spring*
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. One unit.

Mathematics 25, 26 — Calculus 1, 2 *Annually*
A two-semester introduction to the calculus of one and several variables primarily intended for students majoring in Economics. Topics discussed 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. This is a terminal sequence. One unit each semester.

Mathematics 31, 32 — Analysis 1, 2 *Fall, Spring*
Considers the calculus of real-valued functions of one variable for students who are planning further coursework in mathematics or a major in the sciences. Emphasis is placed on a conceptual understanding of the calculus, presenting material from symbolic, numerical, and graphical points of view. The course will make regular use of calculators or computers and will consider a variety of applications to the sciences and social sciences. In the first semester, the concepts of limit, continuity, derivative and integral are developed and applied to algebraic, logarithmic, exponential and trigonometric functions. The second term focuses on the theory and applications of integration, Taylor polynomials and Taylor series, and ordinary differential equations. This course is the prerequisite for Mathematics 41, 42. This course meets four hours per week. One and one-quarter units each semester.

Mathematics 33, 34 — Intensive Analysis 1, 2 *Fall, Spring*
This sequence is an intensive version of Analysis 1-2 that is designed for students with an interest in pursuing a major in mathematics, the sciences or premed and who have deficiencies in their high school mathematics backgrounds. See the description of Mathematics 31, 32 for the course content. This course meets five hours per week. One and one-quarter units each semester.

Mathematics 36 — Advanced Placement Analysis *Fall*
This course is a one semester version of Analysis 1-2 for those students who have either received one unit of advanced placement credit in calculus or who have taken a year of calculus in high school. See the description of Mathematics 31, 32 for the course content. This course meets four hours per week. One and one-quarter units.

Mathematics 41 — Analysis 3 *Fall, Spring*
A study of the calculus of functions of several variables. The course concerns the theory and applications of differentiation and integration of functions of several variables, vector fields, line and surface integrals, Green's and Stokes' theorems. Prerequisite: Mathematics 32, 34, 36 or the equivalent. This course meets four hours per week. One and one-quarter units.

Mathematics 42 — Principles of Analysis *Fall, Spring*
An in-depth study of the theory of the calculus of functions of one variable. Topics include sequences, series, continuity, differentiability, the extreme value theorem, the mean value theorem, Riemann integration, and the fundamental theorem of calculus. Prerequisite: Mathematics 41. One unit.

Mathematics 43, 44 — Linear Algebra 1, 2 *Annually*
Designed to acquaint students with the basic techniques of linear algebra. Topics 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 are included as time permits. One unit each semester.

Mathematics 99 — History and Development of Mathematical Ideas *Occasionally*
Designed for the non-major, it 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 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 infinites. Open to non-majors only. One unit.

Mathematics 101 — Topics in Geometry *Alternate years in Fall*
Centers 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. Geometry and Topology. One unit.

Mathematics 102 — Differential Geometry *Alternate years in Fall*
A first course in the differential geometry of curves and surfaces for students who have completed Mathematics 42 and a semester course in linear algebra. Topics include the Frenet-Serret formulas, smooth surfaces in 3-space, fundamental forms, differentiable manifolds, vector fields, connections and a brief introduction to Riemannian geometry. Geometry and Topology. One unit.

Mathematics 104 — Ordinary Differential Equations *Alternate years in Spring*
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. Applied Mathematics. One unit.

Mathematics 141, 142 — Calculus on Manifolds *Occasionally*
Deals with calculus on manifolds and assumes that the student has a strong background in linear algebra. Topics include: the calculus of vector-valued functions, the Frenet equations, steady-state flows, real-valued functions of several variables, line integrals, the differential, the implicit function theorem, tensor products and exterior algebra, differential forms, integrals of forms over singular chains, the deRham theorem. Geometry and Topology. One unit each semester.

Mathematics 143 — Complex Analysis *Alternate years in Spring*
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. Analysis. One unit.

Mathematics 151, 152 — Abstract Algebra *Annually*
An introduction to groups, rings, fields, and Galois theory. Depending on the instructor, applications to number theory, geometry, topology, physics, etc., are presented. Algebra. One unit each semester.

Mathematics 153 — Mathematical Models *Alternate years in Spring*
Content may vary somewhat year to year, but in general the topics are 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 are studied. Applied Mathematics. One unit.

Mathematics 155 — Optimization Theory *Occasionally*
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 is placed

on the geometric foundations common to these various methods of optimization. Applied Mathematics. One unit.

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

Mathematics 163 — Topics in Topology *Alternate years in Spring*
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. Geometry and Topology. One unit.

Mathematics 171, 172 — Methods of Numerical Analysis *Alternate years*
The 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. Includes 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. Analysis/Applied Mathematics. One unit each semester.

Mathematics 173, 174 — Principles and Techniques of Applied Mathematics
Alternate years
Provides an 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. Applied Mathematics. One unit each semester.

Mathematics 175, 176 — Probability and Statistics *Alternate years*
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. Analysis/Applied Mathematics. One unit each semester.

Mathematics 201, 202 — Seminar *Annually*
Provides 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 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. One unit each semester.

Mathematics 295, 296 — Mathematics Honors Thesis *Annually*
This is a large project extending over the course of the fourth year. It can consist of original research or be of an expository nature and is written under the guidance of one or more members of the Department. Normally, a student will earn one unit in the spring semester of the fourth 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 that case, no extra credit is given above the credit for the seminar itself. For a particularly extensive project, a student may earn one unit in each semester of the fourth year for completion of the thesis with permission of the Department Chair.

Mathematics 300 — Directed Reading *Fall, Spring*
This is an independent reading project for upper division students. Normally this will be on a topic that is not covered by the regular course offerings. Permission of the instructor and/or Department Chair is required for this course. One unit.

Computer Science Courses

Computer Science 50 — Introduction to Computing/PASCAL *Fall, Spring*
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. One unit.

Computer Science 51 — Introduction to Computing/FORTRAN *Spring*
Same as Computer Science 50 except the language FORTRAN is used. One unit.

Computer Science 52 — Intermediate Computing *Spring*
For those with more than an ordinary competence in Computer Science 50 or Computer Science 51, 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. One unit.

Computer Science 61 — Techniques of Programming *Fall*
An intensive introduction to structured programming in C++ for students considering further course work in computing. It is expected that most of the class will continue with Computer Science 62, Data Structures. Although this course is an introductory course, the pace is somewhat faster, more topics are covered, and more of the programs considered may be of a mathematical nature than is the case in Computer Science 50, Introduction to Computing. One unit.

Computer Science 62 — Data Structures *Spring*
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. One unit.

Computer Science 181 — Introduction to Computer Systems and Organization
Alternate years in Fall
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. One unit.

Computer Science 182 — Principles of Programming Languages *Alternate years in Fall*
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). One unit.

Computer Science 183 — Theory of Computation *Alternate years in Spring*
Basic aspects of regular and context-free languages, propositional and predicate calculus, automata theory and computational complexity. One unit.

Computer Science 184 — Topics in Computer Science *Alternate years in Spring*
This 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. One unit.

Computer Science 295, 296 — Mathematics Honors Thesis *Annually*
See the description for Mathematics 296, 296.

Computer Science 300 — Directed Reading *Fall, Spring*.
This is an independent reading project for upper division students. Normally this will be on a topic that is not covered by the regular course offerings. Permission of the instructor and/or Department Chair is required for this course. One unit.

Modern Languages and Literatures

Eckhard Bernstein, Ph.D., *Professor*
Theodore P. Fraser, Ph.D., *Professor*
Normand J. Lamoureux, Ph.D., *Professor and Chair*
William L. Zwiebel, Ph.D., *Professor*
Isabel Alvarez-Borland, Ph.D., *Associate Professor*
Charles A. Baker, Ph.D., *Associate Professor*
John T. Cull, Ph.D., *Associate Professor*
Laurence Enjolras, Ph.D., *Associate Professor*
Rev. Lionel P. Honoré, S.J., Ph.D., *Associate Professor*
George N. Kostich, Ph.D., *Associate Professor*
Claudia Ross, Ph.D., *Associate Professor*
Constance G. Schick, Ph.D., *Associate Professor*
Jorge H. Valdés, Ph.D., *Associate Professor*
Suzanne Branciforte, Ph.D., *Assistant Professor*
Estrella Cibreiro, Ph.D., *Assistant Professor*
Amy Singleton, Ph.D., *Assistant Professor*
Cynthia Stone, Ph.D., *Assistant Professor*
Jutta Arend-Bernstein, Ph.D., *Senior Lecturer*
Tamara Barreda, Ph.D., *Lecturer*
Rev. Alfred R. Desautels, S.J., Ph.D., Lecturer
Esther L. Levine, M.A., Lecturer
Wendy Wagner, Cand. Ph.D., Lecturer
Joan Weber, M.A., Lecturer
Malou Kury, CAPES, Visiting Instructor
Elizabeth O'Connell, Cand., Ph.D., Visiting Instructor
Helen Roberts, Cand. Ph.D., Visiting Instructor
Hector Torres-Ayala, A.B.D., Visiting Instructor

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 ten semester courses on the intermediate 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 Russian study programs in Moscow and St. Petersburg. 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 major program 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 — Elementary Chinese 1 *Fall*
An introduction to spoken Mandarin and written Chinese. Emphasis is placed on oral proficiency and communicative competence and also on the mastery of written skills. Five class hours weekly and laboratory practice. One and one-quarter units.

Chinese 12 — Elementary Chinese 2 *Spring*
A continuation of Chinese 11. Five class hours weekly and laboratory practice. One and one-quarter units.

Chinese 21 — Intermediate Chinese 1 *Fall*
Continued focus on speaking, writing and reading skills. Emphasis on the consolidation of basic Chinese structures and the development of speaking and reading fluency. Five class hours weekly and laboratory practice. One and one-quarter units.

Chinese 22 — Intermediate Chinese 2 *Spring*
A continuation of Chinese 21. Five class hours weekly and laboratory practice. One and one-quarter units.

Chinese 31 — Advanced Chinese 1 *Fall*
Study and discussion of advanced structured readings and movies in Chinese. Emphasis on the building of oral and written fluency. One unit.

Chinese 32 — Advanced Chinese 2 *Spring*
A continuation of Chinese 31. For students who have taken Chinese 31 or the equivalent. One unit.

Chinese 41 — Survey of Chinese Literature *Fall*
The study and discussion of authentic Chinese texts. Emphasis on the building of oral and written fluency in Chinese. For students who have completed Chinese 32 or the equivalent. One unit.

Chinese 42 — Survey of Chinese Literature *Spring*
A continuation of Chinese 41. One unit.

French

French major requirements: a minimum of 10 courses at 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 two courses must be taken in the fourth year.

Majors are urged to seriously consider spending their third year at one of Holy Cross' two sites in France, the University of Bourgogne in Dijon or the University of Strasbourg.

French 11 — Elementary French 1 *Fall*
The aim of this course, designed for students with no previous study of French, is the acquisition of a basic speaking, reading, and writing knowledge of idiomatic French. Five class hours weekly and laboratory practice. One and one-quarter units.

French 12 — Elementary French 2 *Spring*
A continuation of French 11. Five class hours weekly and laboratory practice. One and one-quarter units.

French 21 — Intermediate French 1 *Fall*
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. One unit.

French 22 — Intermediate French 2 *Spring*
A continuation of French 21. Four class hours weekly and laboratory practice. One unit.

French 111 — Composition and Conversation *Fall*
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. Required for French majors and recommended for first-year students with advanced placement. Prerequisite: French 22 or the equivalent. Conducted in French. One unit.

French 117 — Introduction to French Literature *Spring*
An introduction to literary genres as well as to approaches to the analysis and interpretation of texts. Prerequisite: French 111. Conducted in French. One unit.

French 119 — Contemporary France *Spring*
This course focuses on current issues in contemporary France. Politics, society, the arts, domestic and international affairs, education, the media, feminism, etc., are among the topics analyzed and discussed. Conducted in French. One unit.

French 201 — Advanced Composition and Conversation *Spring*
A course designed for students who have completed French 111 or its equivalent. Intensive practice of the four language skills. One unit.

French 203 — Syntax *Alternate years*
An appreciation of the structure of the French sentence through two types of analyses: *analyse grammaticale* and *analyse logique*. Prerequisite: French 111 or 201. One unit.

French 205, 206 — Survey of French Literature *Annually*
A survey of the literature of France from medieval times to the present. The first semester includes the major writers of the Middle Ages, the Renaissance, the seventeenth and eighteenth centuries. The second semester presents the major writers and literary movements of the nineteenth and twentieth centuries. Prerequisites: French 111 and 117. One unit each semester.

French 211 — Seminar: French Poetry *Alternate years*
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. One unit.

French 213 — French Literature from the Middle Ages to the Renaissance *Alternate years*
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. One unit.

French 215 — The Classical Theater and its Aftermath *Alternate years*
Representative dramatic works of the 17th and 18th centuries are studied against the backgrounds of the dramatic theory from which they spring. The plays of Corneille, Molière and Racine are featured. Conducted in French. One unit.

French 217 — Eighteenth Century French Literature *Alternate years*
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 include Beaumarchais, Saint-Pierre, Laclos, Lesage, Marivaux, Prévost, Montesquieu, Rousseau, Diderot, Sedaine, Voltaire. In French. One unit.

French 219 — Nineteenth Century Novel *Alternate years*
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. One unit.

French 221 — Twentieth Century Theater *Alternate years*
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 include Giraudoux, Beckett, Ionesco. Conducted in French. One unit.

French 223 — Twentieth Century Novel *Alternate years*
This course will explore the major literary movements which have marked the century up to the present. Authors studied include Gide, Proust, Sartre, Collette, Camus, Breton, De Beauvoir, Beckett, Robbe-Grillet, Sarraute, Duras, Hyvrard, Modiano, Sollers, Wittig, Roche. Conducted in French. One unit.

French 233 — French Romanticism *Alternate years*
A study of the vision and sensibility shaped by writers of the Romantic generation (1820-1850). Among the authors read are Chateaubriand, Lamartine, Vigny, Hugo, Musset, Balzac, and Sand. Conducted in French. One unit.

French 235 — Les moralistes et les philosophes *Occasionally*
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. One unit.

French 241, 242 — Special Topics *Occasionally*
A special course offered either semester for the study of a literary genre, form, theme or problem. Conducted in French. One unit.

French 251, 252 — Special Authors *Occasionally*
A special course offered either semester for the study of one or several authors of importance drawn from specific periods. Conducted in French. One unit.

French 291, 292 — Third-year Tutorial *By arrangement*
Eligible third-year students may elect one or both of these courses only with the permission of the Department Chair. Tutorials are normally offered only to students who have previously taken all other advanced courses offered in a given semester. One unit each semester.

French 293, 294 — Fourth-year Tutorial *By arrangement*
Eligible fourth-year students may elect one or both of these courses only with the permission of the Department Chair. Tutorials are normally offered only to students who have previously taken all other advanced courses offered in a given semester. One unit each semester.

German

German major requirements: a minimum of ten courses at the intermediate level and above. German majors are required to complete successfully 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. Majors who spent their third year abroad are required to take at least one course at Holy Cross in their fourth year.

German minor requirements: a minimum of six courses at the intermediate level and above. German minors are required to complete successfully German 133 or 134 and German 131 or 132. Minors who spent their third year abroad are required to take at least three courses at Holy Cross including one in their fourth year.

German 11 — Elementary German 1 *Fall*
A 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. One and one-quarter units.

German 12 — Elementary German 2 *Spring*
A continuation of German 11. Five class hours weekly and laboratory practice. One and one-quarter units.

German 21 — Intermediate German 1 *Fall*
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. Five class hours weekly and laboratory practice. One and one quarter units.

German 22 — Intermediate German 2 *Spring*
A continuation of German 21. Five class hours weekly and laboratory practice. One and one quarter units.

German 131 — German Culture: 1750-1890 *Alternate years in Spring*
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 are discussed. Readings, lectures, and discussions in German. Prerequisite: German 22 or the equivalent. One unit.

German 132 — German Culture: The 20th Century *Alternate years in Spring*
An introduction to political and cultural developments in Germany in the 20th century. Aspects of the Weimar Republic, the Third Reich, East and West Germany, and the United Germany are studied. Readings, lectures, and discussions in German. Prerequisite: German 22 or the equivalent. One unit.

German 133 — Advanced German 1 *Alternate years in Fall*
Designed for students wishing to acquire proficiency in spoken and written German. Discussions of problems dealing with German culture and students' daily concerns and interests. Weekly oral and written assignments with grammar review as necessary. Required for German majors and recommended for first-year students with advanced placement. Equal in level of proficiency to German 134 but different in content. Prerequisite: German 22 or the equivalent. In German. One unit.

German 134 — Advanced German 2 *Alternate years in Fall*
A course devoted to the achievement of proficiency in spoken and written German. Weekly papers and oral assignments are given. Required for German majors and recommended for first-year students with advanced placement. Equal in level of language proficiency to German 133 but different in content. In German. Prerequisite: German 22 or the equivalent. One unit.

German 161 — Goethe and Schiller *Every three years in Spring*
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. One unit.

German 162 — German Romanticism *Every three years*
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. One unit.

German 171 — Nineteenth Century German Literature *Every three years in Spring*
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, Droste-Hülshoff, Stifter, Keller, Meyer and Fontane. Readings and discussions in German. Prerequisite: German 22 or the equivalent. One unit.

German 172 — Modern German Theater *Every three years*
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, Hofmannsthal, Brecht, Frisch, Dürrenmatt, Weiss and others. Readings and discussion in German. Prerequisite: German 22 or the equivalent. One unit.

German 181 — Kafka, Hesse, Mann and Their Contemporaries *Every three years in Fall*
Introduction to the most significant masters of German prose in the first half of the 20th century. Works of representative writers such as Hauptmann, Schnitzler, Mann, Kafka,

Hesse, Brecht. Readings and discussions in German. Prerequisite: German 22 or the equivalent. One unit.

German 182 — Contemporary German Literature *Every three years in Fall*
A study of the literature written in German after World War II reflecting experiences of life as seen by representative authors of the Federal Republic of Germany, the German Democratic Republic, Switzerland, Austria and the newly unified Germany. Selected works by Borchert, Grass, Böll, Frisch, Christa Wolf, Dürrenmatt, Plenzdorf, Handke and Biermann. Prerequisite: German 22 or the equivalent. One unit.

German 241, 242 — Special Topics in German Literature and Culture *Occasionally*
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. One unit each semester.

German 251, 252 — Major Authors in German Literature *Occasionally*
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. One unit each semester.

German 291, 292 — Third-year Tutorial *Annually*
Eligible third-year students 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. One unit each semester.

German 293, 294 — Fourth-year Tutorial *Annually*
Eligible fourth-year students 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 <169>Wall<170> in East and West German Literature, Theodor Fontane Topics to be determined by instructor. One unit each semester.

Italian

Italian 11 — Elementary Italian 1 *Fall*
A 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. One and one-quarter units.

Italian 12 — Elementary Italian 2 *Spring*
A continuation of Italian 11. Five class hours weekly and laboratory practice. One and one-quarter units.

Italian 21 — Intermediate Italian 1 *Fall*
A review of the fundamentals of the Italian language supplemented by reading of literary and cultural material and by practice in oral expression and comprehension. Prerequisite: Italian 12 or equivalent. Four class hours weekly and laboratory practice. One unit.

Italian 22 — Intermediate Italian 2 *Spring*
A continuation of Italian 21. Four class hours weekly and laboratory practice. One unit.

Italian 111 — Italian Composition and Conversation *Fall*
A course devoted to intensive oral and written practice of the Italian language. Emphasis is on correct, idiomatic Italian and the achievement of fluency in the language. Cultural readings will include newspapers and periodicals. Weekly papers and oral assignments. In Italian. Prerequisite: Italian 22 or equivalent. One unit.

Italian 201 — Dante *Alternate years*
A comprehensive look at Dante's oeuvre, from the early Vita Nuova to the three cantos of the Comedia. Conducted in English. One unit.

Italian 211 — Italian Renaissance Literature *Alternate years*
Representative works of the 15th and 16th centuries are studied with consideration of their historical context. Selected works by Petrarch, Boccaccio, Machiavelli, Leon Battista Alberti, Poliziano, Castiglione. One unit.

Italian 219 — Twentieth Century Italian Novel *Alternate years*
Introduction to the major writers of the 20th century. Authors studied include Italo Calvino, Luigi Pirandello, Italo Svevo, Elsa Morante, Giorgio Bassani, Alberto Moravia, Grazia Deledda. One unit.

Italian 240 — Italian Cinema *Alternate years*
A study of the major trends in Italian Cinema from the post-war Neo-Realist period to the present day. Films by directors such as Fellini, Rossellini, De Sica, Visconti, Taviani Brothers, Wertmuller, Scola will be viewed while exploring narrative structure and cultural context. In English. One unit.

Italian 251,252 — Special Authors *Occasionally*
A special course offered either semester for the study of one or several authors. One unit.

Italian 261, 262 — Special Authors *Occasionally*
A special course offered either semester for the study of a literary or cultural theme, movement or problem. One unit.

Italian 291,292 — Third-year Tutorial *By arrangement*
Eligible third-year students may elect one or both of these courses only with the permission of the Department Chair. For students who have previously taken all other advanced courses offered in a given semester. One unit.

Italian 293,294 — Fourth-year Tutorial *By arrangement.*
Eligible fourth-year students may elect one or both of these courses only with the permission of the Department Chair. For students who have previously taken all other advanced courses offered in a given semester. One unit.

Russian

Russian major requirements: A minimum of ten courses at 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 émigrés.

Russian 11 — Elementary Russian 1 *Fall*
This course aims to acquaint students with the fundamentals of Russian grammar, pronunciation, intonation, and oral expression. Emphasis is placed also on acquiring a knowledge of Russian culture and life through the medium of language. Five class hours weekly and laboratory practice. One and one-quarter units.

Russian 12 — Elementary Russian 2 *Spring*
A continuation of Russian 11. Five class hours weekly and laboratory practice. One and one-quarter units.

Russian 21 — Intermediate Russian 1 *Fall*
This course is designed to activate the students' spoken Russian. Reading, discussion, and writing activities provide dynamic applications for the language. Study of more complex aspects of Russian grammar. Textbook and workbook are supplemented with audio tapes, video, and software. Conducted in Russian. Prerequisite: Russian 12 or the equivalent. Five class hours weekly and language lab practice. One and one-quarter units.

Russian 22 — Intermediate Russian 2 *Spring*
A continuation of Russian 21. Five class hours weekly and laboratory practice. One and one-quarter units.

Russian 131 — Studies in Russian Language and Culture 1 *Fall*
This course aims to refine the students' knowledge of the Russian language and culture. Supported by continued review of grammar and stylistics, students read and discuss a Russian novel—the twentieth-century classic, *The Twelve Chairs*. Text supported by audio tapes, video, and software. Conducted in Russian. Prerequisite: Russian 22 or the equivalent. Five class hours weekly and language lab practice. One and one-quarter units.

Russian 132 — Studies in Russian Language and Culture 2 *Spring*
A continuation of Russian 131. Five class hours weekly and laboratory practice. One and one-quarter units.

Russian 141 — Advanced Studies in Russian Culture and Literature 1 *Fall*
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. One unit.

Russian 142 — Advanced Studies in Russian Culture and Literature 2 *Spring*
A continuation of Russian 141. One unit.

Russian 151 — Masterpieces of Russian Literature
An in-depth examination of the literary works that helped shape the historical, social, and cultural issues in Russia of the nineteenth and twentieth centuries. Authors include Gogol, Goncharov, Turgenev, Sologub, and Bulgakov. Conducted in English. One unit.

Russian 162 — Russian Theater *Alternate years*
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 American, British and Soviet films. Conducted in English. One unit.

Russian 165 — Russian Poetry *Alternate years*
An introduction and a critical study of the major poets from Pushkin to the present. Lectures and readings in Russian. One unit.

Russian 241 — 19th Century Russian Literature *Alternate Years*
A survey of the authors who dominated Russian and world literature in the nineteenth century. Readings include the prose and poetry of Pushkin, Gogol, Lermontov, Tolstoy, Dostoevsky, Turgenev, and others. Conducted in English. One unit.

Russian 242 — 20th Century Russian Literature *Alternate years*
A survey of the turbulent twentieth century that took Russian literature from the exhilaration of pre-revolutionary years to the uncertainty of the glasnost era. Readings include the prose and poetry of Bely, Gorky, Blok, Babel, Zamyatin, Akhmatova, Chukovskaya, and Tolstaya. Conducted in English. One unit.

Russian 251 — Introduction to Russian Studies *Alternate years*
An interdisciplinary study of Russian civilization. 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 concentrators and open to others. Offered by the History Department as History 155 (cross-registered as Political Science 256 and Russian 251). One unit.

Russian 261, 262 — Special Topics in Russian Literature *Occasionally*
A special course offered either semester to study a single author or theme. Conducted in English or Russian. One unit.

Russian 291, 292 — Third-year Tutorial *By arrangement*
With permission of Department Chair and instructor only. For third-year students who wish to pursue work not covered by one of the regularly offered courses. One unit.

Russian 293, 294 — Fourth-year Tutorial *By arrangement*
With permission of Department Chair and instructor only. For fourth-year students who wish to pursue work not covered by one of the regularly offered courses. One unit.

Spanish

The Spanish major must complete ten courses at the intermediate language level or above, including Spanish Composition and Conversation, Introduction to Literary Genres, one semester of survey of early literature (Spanish 133 or 135), one semester of survey of modern literature (Spanish 134 or 136), one semester of culture and civilization (Spanish 127 or 128) or Latin-American Film (Spanish 172)or advanced culture and civilization (offered as "Special Topics"), Advanced Spanish Composition and Conversation (Spanish 137) or Advanced Spanish Grammar (Spanish 139), one advanced literature course in pre-19th century Spanish or Spanish-American literature, and one advanced literature course in modern Spanish or Spanish-American literature. At least one advanced literature course must be taken at Holy Cross during the fourth year. Majors should note that internships

and courses taught in English will not count toward the fulfillment of the Spanish major. Spanish majors are highly encouraged to study abroad during their third year in one of our study abroad programs. Holy Cross programs are located in Seville and Palma de Mallorca.

Spanish 11 — Elementary Spanish 1 *Fall*
An intensive 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. One and one-quarter units.

Spanish 12 — Elementary Spanish 2 *Spring*
A continuation of Spanish 11. Five class hours weekly and laboratory practice. One and one-quarter units.

Spanish 21 — Intermediate Spanish 1 *Fall*
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. One unit.

Spanish 22 — Intermediate Spanish 2 *Spring*
A continuation of Spanish 21. Four class hours weekly and laboratory practice. One unit.

Spanish 127 — Aspects of Spanish Culture *Alternate years*
A course devoted to the study of outstanding examples of Spanish thought, art, and historical developments. Readings, lectures, and discussions in Spanish. Prerequisites: Spanish 129 or the equivalent. One unit.

Spanish 128 — Aspects of Spanish-American Culture *Alternate years*
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. Prerequisites: Spanish 129 or the equivalent. One unit.

Spanish 129 — Spanish Composition and Conversation *Fall, Spring*
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. One hour per week of practicum required. Prerequisite: Spanish 22 or the equivalent. One unit.

Spanish 132 — Introduction to Literary Genres *Fall, Spring*
Designed especially as an introduction to drama, poetry, and prose fiction of 20th century Spain and Spanish America, this course familiarizes students with literary analysis and further develops their oral and written skills. Recommended for students who have completed Composition and Conversation and a course in Hispanic culture. Advanced (Spanish) literature students should *not* enroll in this course. Conducted in Spanish. Prerequisite: Spanish 129 or the equivalent. One unit.

Spanish 133, 134 — Survey of Spanish Literature *Alternate years*
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 132. One unit each semester.

Spanish 135, 136 — Survey of Spanish American Literature *Alternate years*
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. Prerequisite: Spanish 132. One unit each semester.

Spanish 137 — Advanced Spanish Composition and Conversation *Fall, Spring*
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 are trained in analytical writing. Prerequisites: Spanish 129 or the equivalent, and Spanish 132. A semester of survey is highly recommended. One hour per week of practicum required. One unit.

Spanish 139 — Advanced Spanish Grammar *Fall, Spring*
This one-semester course provides intensive review and practice of advanced grammar structures with emphasis on improving writing skills. Systematic grammar drills, translation and readings will serve as a basis for analysis of syntactic and semantic structures of Spanish. The course emphasizes strategies for all stages of the writing process, from generating and organizing ideas to rules of accentuation and punctuation. This course can be substituted for Advanced Spanish Composition and Conversation as one of the Spanish major requirements. Prerequisite: Spanish 129 or the equivalent. Spanish 132 or a semester of Survey strongly recommended. One unit.

Spanish 152 — Medieval Spanish Literature *Alternate years*
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. Prerequisite: Spanish 132 and a semester of survey. One unit.

Spanish 153 — Golden Age Literature *Alternate years*
Intensive study of the major authors of the 16th and 17th centuries. The course may include such authors as Garcilaso, San Juan de la Cruz, Cervantes, Lope de Vega, Quevedo, and Calderón. Conducted in Spanish. Prerequisite: Spanish 132 and a semester of survey. One unit.

Spanish 154 — Don Quixote *Alternate years*
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 defines Cervantes' conception of narrative prose fiction and his role as the originator of the modern novel. Conducted in Spanish. Prerequisite: Spanish 132 and a semester of survey. One unit.

Spanish 156 — Nineteenth-Century Spanish Literature *Alternate years*
A study of the rise of romanticism and realism in Spain and their respective developments as literary movements in the Spanish peninsula. The course may include 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. Prerequisite: Spanish 132 and a semester of survey. One unit.

Spanish 158 — Twentieth-Century Spanish Narrative *Alternate years*
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. Prerequisite: Spanish 132 and a semester of survey. One unit.

Spanish 160 — Modern Spanish-American Narrative *Alternate years*
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 is given to such outstanding novelists of the "Boom" as Rulfo, Cortázar, Cabrera Infante and García Márquez, and to the development of their works within the context of the modern novel. Conducted in Spanish. Prerequisite: Spanish 132 and a semester of survey. One unit.

Spanish 162 — Modern Spanish and Spanish-American Poetry *Alternate years*
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 examines the major poetic currents since *modernismo* and the "Generation of 1898," it studies the interaction between the poetry of Spain and Spanish America, and it familiarizes students with poetic theory. Among the authors studied are Rubén Darío, Antonio Machado, Federico García Lorca, and Pablo Neruda. Conducted in Spanish. Prerequisite: Spanish 132 and a semester of survey. One unit.

Spanish 164 — Colonial Spanish-American Literature *Alternate years*
An advanced course in 16th-18th century Spanish-American literature. Readings emphasize the diversity of the colonial period, with in-depth analyses of works from several

major genres. Discussion will focus on the significance of these works from a contemporary perspective as well as on the historical and cultural distance that separates us from the world views contained therein. Conducted in Spanish. Prerequisite: Spanish 132 and a semester of survey (preferably Spanish 135). One unit.

Spanish 172 — Latin-American Film *Alternate Years*
The principle objectives of this course are to serve as an introduction to film analysis, to study the development of the medium in Latin America, and to explore issues of cultural difference through discussion of the cinematic portrayal of representative historical periods, figures, intellectual and political movements. Conducted in Spanish. Prerequisite: Spanish 132 and a semester of survey. One unit.

Spanish 231 — Seminar in Hispanic Literature *Occasionally*
A course dealing with a 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. Prerequisite: Spanish 132 and a semester of survey. One unit.

Spanish 241, 242 — Special Topics *Occasionally*
A special course offered either semester for the study of a literary genre, form, theme, or problem, or an aspect of Spanish language. Prerequisite: Spanish 132 and a semester of survey. One unit each semester.

Spanish 291, 292 — Third-year Tutorial *By arrangement*
Eligible third-year students 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. One unit each semester.

Spanish 293, 294 — Fourth-year Tutorial *By arrangement*
Eligible fourth-year students 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. One unit per semester.

Studies in European Literature

Studies in European Literature courses are open, without prerequisites, to all students of the College. Requirements for the Studies in European Literature major: 10 courses specifically designated Studies in European Literature. 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.

Studies in European Literature 101, 102 — Landmarks of European Literature
Occasionally
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. One unit each semester.

Studies in European Literature 110 — Medieval Literature *Occasionally*
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*. One unit.

Studies in European Literature 111 — The Renaissance *Occasionally*
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. One unit.

Studies in European Literature 121 — Baroque and Classic Literature *Occasionally*
An interdisciplinary approach to Continental literature between 1580 and 1680. Among authors read are Cervantes, Calderón, Lope de Vega, Corneille, Molière, Pascal and Grimmelshausen. One unit.

Studies in European Literature 131 — The Age of Enlightenment *Occasionally*
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. One unit.

Studies in European Literature 141 — European Romanticism *Occasionally*
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, Leopardo, and Manzoni. Special consideration is given to the relations between the Romantic Movements of the individual countries. One unit.

Studies in European Literature 142 — Modern Religious Novelists *Occasionally*
The course studies representative works of modern novelists whose fiction deals substantially with the relationship of God and human beings and religious concerns caused by God's perceived absence or presence in the human community. Among authors read are: Unamuno, Kafka, Silone, Bernanos, Mauriac, Greene, Waugh, Camus, Wiesel, Percy, Gordon, and Lodge. One unit.

Studies in European Literature 143 — The Rise of Realism in the 19th Century European Novel *Occasionally*
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. One unit.

Studies in European Literature 151 — The Modern European Novel *Occasionally*
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, Malraux, Silone, Sartre, Camus, Grass, Robbe-Grillet, and Boll. One unit.

Studies in European Literature 153 — Modern European Theater *Occasionally*
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. One unit.

Studies in European Literature 241, 242 — Special Topics in European Literature *Occasionally*
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. One unit each semester.

Music

Shirish Korde, M.M., *Professor and Chair*
Carol Lieberman, D.M.A., *Associate Professor*
Geoffrey Burleson, M.M., *Assistant Professor*
Osvaldo Golijov, Ph.D., *Assistant Professor*
Jessica Waldoff, Ph.D., *Assistant Professor*
James David Christie, M.M., *Distinguished Artist in Residence; Director, Schola Cantorum*
Nym Cooke, Ph.D., *Lecturer*
Jean DeMart, M.M., *Lecturer, flute*
Marian C. Hanshaw, M.M., *Lecturer, piano*
Jane Harrison, B.M., *Lecturer, oboe*
Bruce Hopkins, M.M., *Lecturer, trumpet/trombone*
Bruce I. Miller, M.M., *Lecturer; Director, College Choir*
Michael Monaghan, M.A., *Lecturer, jazz improvisation; Director, Jazz Ensemble*
Paul Phillips, M.M., *Director, Chamber Orchestra*
Robert A. Principe, M.A., *Director, Crusader Band*
Susan Seeber, M.F.A., *Lecturer, violin/viola*
Robert Sullivan, *Lecturer, guitar*
Maria Tegzes, M.M., *Lecturer, voice*
Marsha Vleck, M.M., *Lecturer, voice*
Paul J. Wabrek, B.M., *Lecturer*
Caroline Worthington, *Lecturer, cello*

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 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 ten courses. Required courses are 201 and 202, Music 211 and 212, 301 and 302, and 400. Electives can include courses in History, Theory, Composition, 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 sizable collection of scores, books, recordings and videotapes; practice rooms with pianos; classrooms; a studio for electronic and computer music; music notation workstations; 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. Eleven 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 two units 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 1 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 Choir, Holy Cross Chamber Singers, Holy Cross Chamber Orchestra, Crusader Marching and Pep Band, Holy Cross Jazz Ensemble, and the Schola Cantorum.

Courses

Music 1 — Introduction to Music *Fall, Spring*
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. One unit.

Music 3 — Fundamentals of Music *Fall, Spring*
Introductory theory (notation, scales, intervals, chords, rhythm and meter) and basic musicianship (keyboard skills, score-reading and ear training). One unit.

Music 10 — College Choir *Both semesters*
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 are given instruction in the rudiments of reading music and ear training. Prerequisites: permission of instructor (audition). Must be taken on a Pass/No Pass basis and in two consecutive semesters. Does not count toward the 32 courses required for graduation. One-half unit.

Music 30, 40 — Great Composers *Annually*
The study of the life and works of a major composer (e.g., Beethoven, Mozart, Wagner, Stravinsky, J.S. Bach) and of the age in which he lived. Attention is 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. One unit each semester.

Music 41 — Music and Theatre *Annually*
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. One unit.

Music 42 — American Popular Song *Occasionally*
A historical survey of American popular song—Stephen Foster, blackface minstrels, sentimental parlor songs, songs of the Civil War, gospel hymns, vaudeville, Tin Pan Alley, Broadway musicals, Jerome Kern, George and Ira Gershwin, jazz-band songs and singers, country music, rhythm and blues, rock'n'roll, rock, popular "folk" songs, and more. One unit.

Music 43 — Choral Music *Occasionally*
A survey of music for a cappella choir and orchestrally accompanied chorus. Topics include: 16th-century masses and motets (which are 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. One unit.

Music 44 — Music and Worship *Occasionally*
A history of sacred music from the early Christian Church to Vatican II. 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. One unit.

Music 50 — American Music *Alternate years*
Surveys three main repertories 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. One unit.

Music 51, 59 — World Music *Alternate years*
Introduction to music of selected African, Asian and American cultures. Each culture is approached through: 1) social and cultural context; 2) theoretical systems and musical instruments; 3) major musical and theatrical genres. One unit.

Music 60 — Introduction to Electronic Music *Alternate years*
Surveys musical and scientific theories related to developments in electronic music. Topics include: physical parameters of audio waveforms and specific means of processing sound using digital synthesizers and computers. Students are introduced to techniques of electronic music composition through the analysis of selected works as well as studio assignments. No prerequisite. One unit.

Music 101 — Concerto *Alternate years*
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 include the Brandenburg Concertos of J.S. Bach, the solo piano and violin concertos of Mozart and Beethoven, and selected works of Brahms, Liszt, Rachmaninov and Bartok. One unit.

Music 102 — Symphony *Alternate years*
Introduction to the orchestra, its instruments and its repertory from the inception of public concerts in the 18th Century to the present day. One unit.

Music 104 — Music for Keyboard *Alternate years*
A survey of representative works for keyboard instruments (the organ, the harpsichord, the clavichord, the fortepiano and the modern piano) from the 17th Century to the present. The history and role of synthesizers will be explored. The contexts of keyboards in religion, in the orchestra, in chamber ensembles, in the home, in concert halls and in jazz will be studies. One unit.

Music 105 — Masterpieces For Small Ensembles *Alternate years*
This course will explore vocal and instrumental repertoire from the 17th century to the present which was intended for performance in an intimate setting, and is therefore referred to as "chamber music". Works for String Quartet, Piano Trio, Wind Quintet and Baroque Trio Sonata as well as music for voice with instruments (madrigals, art songs, cantatas) will be studied. One unit.

Music 201, 202 — Theory of Music 1, 2 *Annually*
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. One unit each semester.

Music 211 — History of Western Music 1 *Fall*
Historical development of musical styles from the ninth to the middle of the 18th century. Surveys 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. One unit.

Music 212 — History of Western Music 2 *Spring*
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 1 or permission of instructor. One unit.

Music 214 — Music of the 20th century *Alternate years*
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 also includes selected readings of contemporary music theory and practice. Prerequisite: Fundamentals of Music or equivalent knowledge. One unit.

Music 215 — Music of the Classical Era *Alternate years*
The rise and development of the Viennese classical style as reflected in the chamber music, piano sonatas, and symphonies of Haydn and Beethoven, and in the operas and concertos of Mozart. Special emphasis is 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. One unit.

Music 216 — Music of the Baroque Era *Alternate years*
A study of the most important developments in Baroque national styles from the beginning of the 17th century to the middle of the 18th century. Works for analysis are drawn from the music of such composers as Monteverdi, Schuetz, Vivaldi, Handel, J.S. Bach and F. Couperin. Prerequisite: ability to read music, or permission of instructor. One unit.

Music 217 — Music of the Medieval/Renaissance Era *Alternate years*
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. One unit.

Music 218 — Jazz/Improvisation 1 *Fall*
This course will introduce students to the fundamentals of jazz harmony and improvisation. Topics include: chord and scale construction, harmonic progression, symbols used in improvisation, jazz scales and modes. These theoretical concepts will be applied to the analysis and performance of standard jazz tunes. This course will emphasize aural training through specific identification exercises. A portion of the class will be devoted to performance and improvisation with each member of the class having the opportunity to perform on their own instruments. One unit.

Music 219 — Jazz/Improvisation 2 *Spring*
Examination and analysis of contemporary jazz improvisation techniques. Modern harmonics, chord studies, and modal playing will be discussed. Students will be required to play their own instruments in class. Recorded jazz solos by jazz artists will be analyzed and discussed. One unit.

Music 301, 302 — Theory 3, 4 *Annually*
Semester 1 emphasizes analysis of tonal music through the study of representative works of such composers as Bach, Haydn, Mozart, Beethoven, and Brahms. Semester 2 focuses 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 also includes original composition. Prerequisite: Theory 2. One unit each semester.

Music 325 — Tutorial *Annually*
Tutorials in computer music, orchestration, theory, composition, form and analysis, music history and jazz. By arrangement. One unit each semester.

Music 330 — Special Topics *Annually*
Topics include Introduction to Composition, Organ History and Music, History of Jazz Music, Survey of African American Music, and India: Religion/Music/Visual Art. One unit each semester.

Music 331, 332 — Performance *Both semesters*
Instrumental or vocal lessons for students of intermediate competency. Interested students must consult with the Chair of the Department. One unit.

Music 333, 334 — Advanced Performance *Both semesters*
Instrumental or vocal lessons for students of advanced competency. Interested students must consult with the Chair of the Department. One unit.

Music 400 — Fourth-year Seminar *Spring*
The Fourth-year Seminar is designed to integrate the three areas of music: History, Theory and Performance. Required for music majors. Topics are selected from the important repertories of both Western and non-Western music. Prerequisite (or co-requisite): Music 212 and Music 302. One unit.

Naval Science

CAPT William S. Boniface, USN, M.S., *Professor and Chair*
CDR Dale E. Snyder, USN, M.S., *Lecturer*
Capt. Hector Marcayda, USMC, M.A., *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 understood clearly by everyone who applies for the program.

Scholarship Program

Graduating high school students 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 academic fees, all textbooks, military uniforms, and a $150 per month subsistence allowance while attending college. Holy Cross offers free room to all four year national scholarship winners. 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.

Second-year college students can apply through the national competition for the two-year Naval ROTC Scholarship Program. If selected, during their third and fourth years they will receive full tuition, all academic fees, all textbooks, military uniforms, and a $150 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 third 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 four years on active duty after commissioning.

College Program

First and second year students at the College may apply directly to the Professor of Naval Science for enrollment in the College Program (non-scholarship). After completion of at least one semester in the College Program, students who have achieved a GPA of 3.0 or higher and passed one semester of calculus with a grade of C or better and performed well in the battalion may be recommended by the Professor of Naval Science for a Chief of Naval Education and Training Controlled Scholarship. The scholarship includes full tuition, all books and fees, military uniforms and a subsistence allowance of $150 a month.

College Program students not selected for a scholarship by the beginning of their junior year must be selected for advanced standing or be dropped from the NROTC program. A minimum 2.5 GPA is required to be granted advanced standing status. This program provides military uniforms and a subsistence allowance of $150 per month while attending college. College Program students are required to take certain college courses, and to undergo one summer training cruise of four to six weeks duration the summer preceding their fourth year. Second-year College Program students who receive advanced standing or a scholarship must attend the Naval Science Institute in Newport, R.I. for six weeks during the summer preceding their junior year. Upon commissioning, College Program students are required to serve at least three years on active duty.

Naval Science Students

Any student in the College may take Naval Science courses. Naval Science students receive credit for satisfactory completion of accredited Naval Science courses, but have no official status in the NROTC Program, and receive none of the benefits provided to NROTC students.

General Information

The Holy Cross NROTC Unit is composed of approximately 65 midshipmen. The battalion is divided into companies, and the overall leader is the Midshipman Battalion Commander,

a fourth-year student 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 fall and spring picnics; a spaghetti dinner; the Military Ball; and drill, basketball, and military excellence competitions.

Courses

Naval Science 11 — Naval Orientation *Fall*
A non-credit course, presented 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; required of all midshipmen.

Naval Science 12 — Naval Ship Systems 1 *Spring*
A course designed to familiarize students with types, structure and purpose of naval ships and engineering systems. 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. One unit.

Naval Science 13 — Naval Ship Systems 2 *Fall*
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; required of all midshipmen.

Naval Science 14 — Naval Seapower *Spring*
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. One unit.

Naval Science 41 — Navigation 1 *Fall*
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. Required of all Navy option midshipmen. One unit.

Naval Science 42 — Navigation 2 *Spring*
An introductory course to the procedures used in Naval Operations and Naval Shiphandling. Includes: Maneuvering Board Concepts, Rules of the Road and basic ship-handling. Required of all Navy option midshipmen. One unit.

Naval Science 45 — Evolution of Warfare *Alternate years in Fall*
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 addresses 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. Required of all Navy option midshipmen. One unit.

Naval Science 51 — Organizational Management *Fall*
This course focuses on the basic concepts of leadership and management. It includes discussions of the principles and processes required of managers, including: planning, organizing, controlling, motivation, communication, and decision making. Examples from both general business and the Naval Establishment are used. The social, ethical and moral responsibilities of managers are also discussed. One unit.

Naval Science 52 — Naval Leadership *Spring*
The study of Navy 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; required of all Navy option midshipmen.

Naval Science 55 — Amphibious Doctrine *Alternate years in Fall*
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. Required of all Marine option midshipmen. One unit.

Philosophy

Hanna Buczynska-Garewicz, Ph.D., *Professor*
Hermann J. Cloeren, Ph.D., *Professor and Chair*
Thomas D. Feehan, Ph.D., *Associate Professor*
Hilde S. Hein, Ph.D., *Associate Professor*
Joseph P. Lawrence, Ph.D., *Associate Professor*
Predrag Cicovacki, Ph.D., *Assistant Professor*
Gavin T. Colvert, Ph.D., *Assistant Professor*
Christopher A. Dustin, Ph.D., *Assistant Professor*
Karsten R. Stueber, Ph.D., *Assistant Professor*

Philosophy is concerned with fundamental questions about the meaning of reality, the foundations of science, morality and aesthetics, and the nature and scope of human knowledge. Philosophy is in fact the meeting place for all disciplines, for any discipline becomes philosophical once it begins seriously to examine its own methodology and foundational presuppositions. The study of philosophy is therefore to be recommended to all students, regardless of their major.

Philosophy involves both systematic forms of inquiry and a prolonged reflection upon its own history. For its majors, minors, and for all students interested in deepening their humanistic culture, the Department offers courses in the history of philosophy which span the entire tradition from the pre-Socratics to the philosophers of our own century. Occasionally courses in non-Western philosophy are also offered. The historical courses are best pursued in conjunction with more systematic courses. Philosophy is much more than the acquisition of a certain kind of knowledge. It is the ability to think reflectively about problems at the root of what might appear as self-evident.

Courses exclusively reserved for first-year students are: all sections of Themes (Philosophy 10) and the Intensive First-year Seminars (Philosophy 30). Students are permitted to take only one Themes course or one First-Year Intensive Seminar. Philosophy 20 (Themes) is for second-year students only.

Second, third, and fourth-year students can fulfill the college distribution requirement in philosophy by choosing any course in the 100-199 range that does not have special prerequisites.

To its majors and minors, the Department offers a program that combines areas of logic and theoretical, as well as practical, philosophy. At least three courses must be taken at an advanced level (200-299).

In addition to a wide range of regular courses and seminars, the Department offers a number of tutorials and opportunities for independent study. Accomplished students are urged to use these opportunities to complete their studies by writing a fourth-year thesis and giving a public presentation of its main conclusions.

The Fourth-Year Thesis in Philosophy comprises a semester-long project of concentrated research geared towards the production of a substantial piece of written work. The thesis addresses a sharply defined topic. It provides fourth-year majors with the opportunity to explore a specialized interest they may have developed over the course of their studies, to synthesize their ideas, and to devote themselves to the careful writing and rewriting of a well-conceived and highly polished philosophical paper. The principal arguments and conclusions of this paper will be publicly presented at the end of the semester. (See Philosophy 297 below.)

Faculty and students together benefit from regular departmental colloquia and the lively exchanges initiated by the Philosophy Club, which is open to all interested students. In addition, membership in the Holy Cross Chapter of the National Honor Society in Philosophy, Phi Sigma Tau, is available to those who have a strong academic record, participate regularly in philosophical colloquia, and demonstrate a desire and ability to philosophize. Students are encouraged to compete for the Strain Gold Medal, an essay competition, and the Markham Memorial Prize awarded to the winner of an oral examination before a panel of judges.

Introductory Courses

Philosophy 10 — Themes *Fall, Spring*

A one-semester consideration of specific themes in philosophy specifically designed for first-year students. Students will be introduced to philosophical thinking, as well as to reading and writing carefully about philosophical topics. Themes will vary from section to section and from year to year. One unit.

Philosophy 20 — Themes *Fall, Spring*

A one-semester consideration of specific themes in philosophy specifically designed for second-year students. Students will be introduced to philosophical thinking, as well as to reading and writing carefully about philosophical topics. Themes will vary from section to section and from year to year. One unit.

Philosophy 30 — Intensive First-year Seminar *Fall, Spring*

A one-semester seminar specifically designed for highly motivated first-year students. Enrollment will be limited to accommodate the critical discussions and intensive work that a seminar format requires. One unit.

Intermediate Courses

Philosophy 101 — Metaphysics *Fall*

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 challenges to metaphysics. One unit.

Philosophy 104 — Approaches to Ethics *Annually*

An examination of the attempts to arrive at the foundations of ethics. Emphasis is placed on the continuity in the development and refinement of these attempts historically, so that contemporary moral problems and their proposed solutions may be seen in proper perspective. One unit.

Philosophy 107 — Foundational Questions in Ethics *Fall, Spring*

In this course, we shall consider various challenges to the claims of morality. We shall also consider whether and how moral philosophy can meet these challenges. Special topics include: the nature and justification of an ethical life, the limits of practical reasoning, the subjectivity vs. the objectivity of value, relativism, conflicts of obligation, the idea of moral "truth", the sources and ultimate value of morality itself. We shall think about how they are treated in recent philosophical literature. Our goal is to understand the foundations of morality (if there are any), and go gain insight into what is perhaps the most striking thing about human life: the fact that we have values.

Philosophy 109 — Theory of Knowledge *Spring*
The course presents philosophical reflections on human knowledge. It is focused on clarifying the following questions: What can we know? What is truth? How do we obtain knowledge? Is the world itself similar to what we perceive it to be? What is an object of knowledge? What is the function of language in knowing? What is thinking? etc. Readings will include: Plato, Aristotle, Hume, Kant and others. One unit.

Philosophy 115 — Introductory Logic *Fall, Spring*
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, predicate calculus, and an investigation into logic's value and limits. One unit.

Philosophy 122 — Critical Thinking *Fall, Spring*
This is a joint effort to appreciate, understand and practice deliberative, sound judgments on accepting statements or committing to courses of action. It involves two areas of concentration. First, we reflect critically on unsupported statements stressing their clarity, precision and function as well as the various criteria for their evaluation. Secondly, we concentrate on statements supported by reasons whether deductively or inductively, underlining the discernment, anatomy, and evaluation of such arguments and their related fallacies. Since this course involves Socratic questioning and active student participation in discussions and prepared arguments, both full attendance and faithful preparation are essential. Second-year students only. One unit.

Philosophy 125 — Ancient Philosophy *Spring*
The first third of morality (if there are any), and to gain insight into what is perhaps the most striking thing of this course focuses on the very origins of Western philosophical and scientific thought as documented in the fragments of the pre-Socratics. The second and third parts concentrate on Plato and Aristotle. Epistemological and ontological problems with concomitant methodological reflections will be the central issues. Other topics, however, will also be considered, especially Plato's political philosophy, Aristotle's moral philosophy, and the fundamental epistemological, theological and linguistic problems of how human beings can talk about God. One unit.

Philosophy 130 — Medieval *Fall*
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. One unit.

Philosophy 135 — Modern Philosophy 1 *Fall*
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 empiricist philosophers such as Bacon, Hobbes, Locke, Berkeley, Hume and their approaches to philosophy and science. One unit.

Philosophy 141 — Modern Philosophy 2 *Spring*
A study of the later development of modern philosophy including Kant's new evaluation of metaphysics, epistemology, the nature of the sciences and morality, and the idealist thought of Fichte and Hegel. Attention will also be given to the thought of those opposing idealism, especially Marx and Kierkegaard. One unit.

Philosophy 143 — American Philosophy *Alternate years*
A survey of the beginnings and development of American philosophic thought from the colonial period to the present. Detailed discussion of the work of Emerson, Peirce, and James and of important movements such as transcendentalism, pragmatism and analytic thought. One unit.

Philosophy 144 — Contemporary European Philosophy *Alternate years*
The course covers the last hundred years in the history of European philosophy. It will deal in part with: 1) Logical positivism/analytical philosophy, 2) Phenomenology, 3) Existentialism, 4) Marxism, 5) Post-Modernism. Topics considered will include basic ontological, epistemological and moral problems of the contemporary world. One unit.

Philosophy 145 — Phenomenology *Alternate years*
This course will conduct an examination of the origin and intent of the contemporary philosophical movement of phenomenology. This involves a detailed study of selected texts of Husserl, Heidegger and others, and the influence of phenomenological thinking in the areas of psychology, aesthetics, and literary criticism. One unit.

Philosophy 146 — Philosophy and Literature *Fall*
This is basically a philosophy course: its main purpose is to introduce students to some basic problems in contemporary philosophy. This goal is accomplished through simultaneous reading of philosophical and literary texts which present similar notions. The course presents the impact of philosophy on literature and shows how philosophy is present in all forms of intellectual life as its integral part. The basic problems discussed are: time, freedom, solitude and community. The authors of the texts used in class are: Bergson, Proust, Nietzsche, Husserl, Heidegger, Hesse, Jaspers, Sartre, Camus, T.S. Eliot, Orwell and others. One unit.

Philosophy 160 — Aesthetics *Fall*
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. One unit.

Philosophy 161 — Philosophy of Mind *Alternate years*
Questions concerning the nature of the mind and its relation to the body or questions about the essential capacities of human beings distinguishing them from plants, animals, and machines are raised. In the course different traditional and contemporary themes about the nature of the mind will be discussed critically. The discussion will emphasize topics such as the mind-body problem, the nature of sensation, the explanation of action and the problem of intentionality. One unit.

Philosophy 162 — Philosophy of Language *Alternate years*
At the beginning of this century philosophy underwent, with the so-called "linguistic turn," yet another Copernican revolution. Traditional philosophical problems were supposed to be solved or dissolved through an analysis of the meaning of linguistic expressions. The course will try to evaluate this kind of philosophizing through a systematic analysis of the philosophical project of a theory of meaning in its historical development. Readings will include texts of Frege, Carnap, Quine, Davidson, Dummett, and Wittgenstein. One unit.

Philosophy 169 — Philosophy of Law *Alternate years*
This course examines the nature of law and the place of law in human society. We will consider the history of rule by law and reflect upon its value. Theories of law and of the relation of law to morality are explored. The course draws upon case histories and jurisprudential readings. It is not an introduction to legal reasoning, but a probe of the philosophical issues that underlie such legal concepts as equality, freedom of speech, evidence, obligation, rights, punishment and justice. One unit.

Philosophy 171 — Philosophy of Science *Alternate years*
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. One unit.

Philosophy 172 — Philosophy of Biology *Alternate years*
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, evolution, environmentalism. One unit.

Philosophy 177 — Philosophical Perspectives on Women *Alternate years*
This course surveys the classic 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. One unit.

Philosophy 185 — Philosophy and Myth *Alternate years*
This course will examine both philosophy's ground in mythical thinking and the tension that arises between the two spheres. Themes will vary from semester to semester and will generally include such authors as Plato, Vico, Hegel, and Goethe. One unit.

Philosophy 187 — The Philosophy of Architecture *Alternate years*
More than any other art, architecture shapes our environment and the way we live. This raises serious and difficult questions about what architecture is and does, about the status of architecture as art, about the truths (if any) which it expresses, about the relationship between architectural forms and the character of human life, and about what it is to dwell. Such questions lie at the intersection of art and philosophy. These and related questions are the focus of this course. In addition to readings from traditional and contemporary literature in aesthetics and architectural theory, we shall reflect on these issues by looking at and responding to architectural examples. We shall study the PHILOSOPHY of architecture by studying ARCHITECTURE philosophically. The goal is to reach a deeper understanding of architecture and of the role it plays in our lives. One unit.

Philosophy 190 — Seminar: Knowledge of Self *Alternate years*
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. One unit.

Philosophy 191 — Seminar: Lying and Self Deception *Fall*
Philosophical analysis, both descriptive and normative, of lying, deception and self-deception prompted by Socratic questioning, student response to various scenarios, open discussion and substantive oral student presentations. Treated will be various life situations involving outright deception or lying and other more marginal cases such as truth-bearing lies and deceptive truth-telling. This will bring us into philosophical areas such as linguistics, epistemology, philosophy of mind and ethics. This course involves extensive readings, oral and written presentations and group discussions. One unit.

Philosophy 193 — Seminar: Moral Reasoning *Spring*
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 prepared oral presentations and open discussions which will center around their own reasoning about contemporary moral problems. The meetings will be conducted by student-initiated discussions, Socratic questioning and micro-lectures; hence there will be extensive readings and various course resources such as books, video and audio tapes. One unit.

Advanced Courses

Philosophy 201 — Seminar: Language and Thought *Alternate years*
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 as critique of cognition, as well as its expected therapeutic effect in overcoming pseudo-problems in philosophy. Main focus will be on 19th-century philosophers under the dual influence of the British empiricists and Kant and their anticipation of important features of 20th-century philosophy, especially that of Wittgenstein. One unit.

Philosophy 204 — Seminar: Problems in Metaphysics *Alternate years*
How is it possible to think Being without doing violence to its transcendence? The principal text will be Heidegger's Being and Time, but other works of the early Heidegger will be read, as well as works of Husserl. One unit.

Philosophy 208 — Seminar: Epistemology *Alternate years*
The seminar presents philosophical reflection on human knowledge. Its main subject is intersubjectivity. The discussion will be focused on language and thinking. Philosophers discussed in class are: Husserl, Heidegger, Wittgenstein. One unit.

Philosophy 216 — Seminar: Aesthetics *Alternate years*
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. One unit.

Philosophy 232 — Seminar: Phenomenology *Alternate years*
An intensive investigation of the question of rationality and meaning. The course will be focused on the ontological status of meaning (ideal object, intentional object, act of mind) and on the criticism of psychologism. Phenomenology, hermeneutics and deconstruction will be discussed. Authors studied in class are: Husserl, Ingarden, Heidegger, Ricoeur, Derrida. One unit.

Philosophy 234 — Hermeneutics *Alternate years*
A study of the theory of interpretation as constitutive of human knowing and action. The course examines classical and contemporary theories about interpretation, but also demands that the participants enter the practice of hermeneutics in an effort to understand selected difficulties of the modern and contemporary world. One unit.

Philosophy 250 — Seminar: Pre-Socratic Philosophy *Alternate years*
This 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. One unit.

Philosophy 254 — Plato *Alternate years*
An introduction to the philosophy of Plato: his dispute with the sophists 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. One unit.

Philosophy 258 — Seminar: Aristotle *Alternate years*
An intense examination and overview of the major philosophical projects of the Philosopher. The goal of the course is to give the student both a detailed grasp of Aristotle's major works and an appreciation of the relation of Aristotle's philosophical contributions to problems and questions raised by his teacher, Plato. Works to be studied include: Categories, Physics, Metaphysics, Politics, Rhetoric, and Poetics. One unit.

Philosophy 266 — Thomas Aquinas *Alternate years*
A detailed study of selected texts of St. Thomas Aquinas with reference to other significant medieval figures. Throughout the semester we will focus on understanding St. Thomas' thought both as an intellectual achievement in its own right and as part of a continuous tradition of philosophical and theological inquiry. Topics of special interest will include: the existence and nature of God, creation and the nature of reality, human and divine knowledge as well as problems in ethics and politics. Late medieval Scholasticism involved a rediscovery of and sustained dialogue with Aristotelian thought. Thus, participants in the course will benefit from a prior knowledge of ancient Greek philosophy, although it is not a prerequisite for enrollment in the course. One unit.

Philosophy 270 — Kant *Alternate years*
A reading course in the primary sources, concentrating mostly on Kant's *Critique of Pure Reason* and *Critique of Judgment*. The reading and discussion focus on Kant's theory of knowledge, as well as his metaphysical, aesthetic, and anthropological views. The approach is both historical and critical. One unit.

Philosophy 275 — Hegel *Alternate years*
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. One unit.

Philosophy 280 — Nietzsche *Alternate years*
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. One unit.

Philosophy 283 — Heidegger *Alternate years*
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. One unit.

Philosophy 291 — Wittgenstein *Alternate years*
An intensive reading course focusing on Wittgenstein's early Tractatus Logico-Philosophicus and his late Philosophical Investigations. Topics of special interest will include the author's view on philosophy, the constitution of linguistic meaning, truth, and the problem of solipsism. The course will also try to evaluate Wittgenstein's contribution to and relevance for contemporary philosophy. One unit.

Philosophy 295 — Special Topics and Tutorials *Fall, Spring*
Independent study and tutorial work on various topics of special interest to individual students and faculty directors. One unit.

Philosophy 297 — Fourth-Year Thesis *Fall, Spring*
The fourth-year thesis should in some way represent the culmination of a student's work in philosophy, drawing on previous background and developed skills. It is therefore best undertaken in the spring semester of the fourth year. A student who is interested in doing a fourth-year thesis must submit to the Chair of the Department a brief prospectus (2-4 pages) describing the proposed topic. This prospectus should clarify the problems/issues/themes which the thesis will address, and present an initial plan of research (explaining how certain issues will be approached, the kinds of sources the student plans to draw on, etc.). Ideally, the prospectus would provide at least a rough outline for the project as a whole. It should include a tentative bibliography, indicating some principal texts on which the student will base his or her research (the student need not have read all of these texts in preparing the prospectus). The last day for submitting a prospectus will be the Monday following the Thanksgiving vacation. Once the prospectus is submitted, the Chair will review it in consultation with the prospective advisors. The Chair and the advisors will approve the prospectus or suggest revisions. Where revisions are called for, the student will be asked to submit the revised prospectus before the end of the reading period.

The prospectus is meant to ensure that the student has a coherent and manageable topic. It also ensures that substantive work on the thesis itself can begin at the outset of the spring semester. Equipped with an initial reading list, the student should be able to undertake preliminary research over the Christmas vacation. It is recommended that a student interested in submitting a prospectus meet with a potential advisor well in advance of the deadline, so that the prospectus itself will be thoughtfully worked out when it is submitted.

The completed written thesis shall be given to the advisors and two additional readers (one of whom may be from outside the Department) not later than the Friday before the last full week of classes. The readers will be chosen by the student together with the advisors and Department Chair. The thesis shall be given to the readers not later than the Friday before the last full week of classes. The defense of the thesis is twofold: The private defense will be before the advisors and the Department Chair in the last full week of classes. Several days later, the public defense will take place. This will involve a) a presentation of the main lines of the thesis by the student, b) a period of open questioning and discussion. This event will be open to the public. After the defense, the advisors (in consultation with the readers) will determine a letter grade for the thesis.

The student will receive written comments from the advisors and the readers. A copy of the thesis will be kept for the departmental archives.

Physics

Edward F. Kennedy, Ph.D., *Professor*
Ram Sarup Rana, Ph.D., *Professor*
Randy R. Ross, Ph.D., *Professor and Chair*
Robert H. Garvey, Ph.D., *Associate Professor*
Francis W. Kaseta, Ph.D., *Associate Professor*
Janine Shertzer, Ph.D., *Associate Professor*
De-Ping Yang, 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 intended to provide a thorough foundation in the principal branches of physics. With this background and with appropriately selected advanced courses, a student is well prepared for further study leading to advanced degrees in physics, applied physics, geology, oceanography, engineering, medicine, or law, or for entry-level positions in research, business, teaching, and other fields. First-year students planning to major in physics are ordinarily enrolled in General Physics (Physics 23, 24, 27), an intensive three-semester course in mechanics, electricity, magnetism, thermal physics, wave motion, and optics with gradual, but liberal, use of calculus (taken concurrently in the Mathematics Department).

The requirements for a major in physics consist of both physics and mathematics courses. Physics majors must take Analysis 1, 2, and 3 in mathematics. The required physics lecture courses are General Physics (Physics 23, 24, and 27 or Physics 21 and 22), Modern Physics (Physics 25), Classical Mechanics 1 (Physics 121), Electromagnetic Theory 1 (Physics 133), Quantum Mechanics 1 (Physics 144), and Thermophysics 1 (Physics 163). In consultation with their advisors, physics majors must choose additional courses for a minimum of ten physics lecture courses below the 200 level. Lastly, in addition to the First-year (Physics 34) and Second-year (Physics 37) Physics Laboratories, physics majors must take at least two physics laboratory courses above the 100 level. A laboratory course is taken as a fifth course in any given semester.

A minor in physics is also offered for interested students. General Physics (Physics 21 and 22 or Physics 23, 24, and 27) and Modern Physics (Physics 25) are required. In consultation with their physics advisors, minors must choose three additional physics courses, at least two of which are lecture courses above the 100 level (excluding Physics 118). The General Physics Laboratory (Physics 31 and 32 or Physics 34 and 37) is also required.

All physics courses above the 100 level have General Physics (Physics 27 or Physics 22) and Analysis 3 (Mathematics 41) as prerequisites. Some also have Modern Physics (Physics 25) as a prerequisite. Any student seeking to take one of these upper-level courses without the required prerequisites must seek the permission of the instructor of the course in question.

Programs 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, multichannel pulse-height analyzers, ultraviolet monochromators, a 1.5-meter optical spectrograph, a high resolution grating spectrograph (UV to far IR), a 7-inch variable-gap precision electromagnet, an X-ray diffraction system, holography facilities, and numerous personal computers. The College also has an Alpha AXP computer with ample time available for student use in research.

The Department offers a variety of courses for non-science majors, including Introduction to Geology (Physics 36), Topics in Physics (Physics 45), Introduction to Meteorology (Physics 53), Introduction to Astronomy (Physics 54), and Energy and the Environment (Physics 55).

Courses

Physics 21 — General Physics 1 *Fall*
An introduction, with calculus, to the basic principles of mechanics and thermal physics. One unit.

Physics 22 — General Physics 2 *Spring*
Continuation of Physics 21. An introduction, with calculus, to the basic principles of wave motion, electricity, magnetism, and optics, with selected topics in modern physics as time allows. One unit.

Physics 23 — General Physics 1 *Fall*
A thorough introduction to the basic principles of mechanics, including rectilinear and rotational motion, with liberal use of calculus. Primarily for first-year physics majors and any other interested first-year students taking calculus concurrently. One unit.

Physics 24 — General Physics 2 *Spring*
Continuation of Physics 23. A thorough introduction to the basic principles of electricity, magnetism, and AC circuits, with liberal use of calculus. One unit.

Physics 25 — Modern Physics *Spring*
A thorough 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 27. One unit.

Physics 27 — General Physics 3 *Fall*
Continuation of Physics 24. A thorough introduction to the basic principles of fluid mechanics, thermal physics, wave motion, and optics. One unit.

Physics 31 — General Physics Laboratory 1* *Fall*
Usually taken concurrently with Physics 21. One-quarter unit.

Physics 32 — General Physics Laboratory 2* *Spring*
Usually taken concurrently with Physics 22. One-quarter unit.

Physics 34 — First-year Physics Laboratory* *Spring*
A required course for physics majors. Taken concurrently with Physics 24. One-quarter unit.

Physics 36 — Introduction to Geology *Fall*
An elective for non-science majors. A study of 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). One unit.

Physics 37 — Second-year Physics Laboratory* *Fall*
A required course for physics majors. Taken concurrently with Physics 27. One-quarter unit.

Physics 45 — Topics in Physics *Fall*
An elective for non-science majors. Consideration of the physical principles underlying various aspects of everyday life and modern technology. Course subjects vary from semester to semester, with the specific subject matter being announced at preregistration. Recently taught topics have included the making of the atomic bomb, the world of electricity, the physics of music, and the way things work. One unit.

Physics 53 — Introduction to Meteorology *Fall*
An elective for non-science majors. Topics include: atmospheric properties, solar and terrestrial radiation, cloud types and their causes, thunderstorms, extra-tropical cyclones and anticyclones (low and high pressure systems), tropical cyclones, forecasting, climate and climatic changes (ice ages), stratospheric ozone, and optical atmospheric phenomena. One unit.

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Physics 54 — Introduction to Astronomy *Spring*
An elective for non-science majors. A survey of modern theories concerning the solar system, stars, galaxies, and the structure of the universe, including an examination of the assumptions, measurements, and reasoning upon which astronomical knowledge is based. Lectures may be supplemented with direct observation of astronomical phenomena. One unit.

Physics 55 — Energy and the Environment *Spring*
An elective for non-science majors. A study of the effects related to the production and consumption of energy and natural resources, and their consequent impact on the environment. Topics include the principles of ecology, the role of energy and resources in human affairs, the impact of human activities on health and the environment, and possible solutions to the resulting problems. One unit.

Physics 111 — Modern Physics Laboratory* *Spring*
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, Planck's constant, the hydrogen Balmer lines, and the speed of light. Usually taken concurrently with Physics 25. One unit.

Physics 115 — Optics *Alternate years in Spring*
Topics include: 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. One unit.

Physics 116 — Optics Laboratory* *Alternate years in Spring*
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. Taken concurrently with Physics 115. One unit.

Physics 118 — Methods of Physics *Spring*
Provides a working knowledge of the mathematical techniques needed for the study of physics at the intermediate and advanced level. Topics include ordinary differential equations, vector calculus, partial differential equations, matrices, Fourier series, and complex variables. One unit.

Physics 121 — Classical Mechanics 1 *Fall*
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. One unit.

Physics 122 — Classical Mechanics 2 *Alternate years in Spring*
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. One unit.

Physics 133 — Electromagnetic Theory 1 *Fall*
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. One unit.

Physics 134 — Electromagnetic Theory 2 *Spring*
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

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applications of EM theory in solid state, astrophysics, plasma physics and optics. Prerequisite: Physics 133. One unit.

Physics 135 — Electronics *Alternate years in Spring*
Analog electronics is developed starting with Kirchhoff's Laws applied to DC and AC network analysis. The physics of semiconductors 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. One unit.

Physics 136 — Electronics Laboratory* *Alternate years in Spring*
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. Taken concurrently with Physics 135. One unit.

Physics 143 — Quantum Mechanics 1 *Spring*
The postulates of quantum mechanics, one-dimensional problems, and three-dimensional problems, including the hydrogen atom. Prerequisite: Physics 25. One unit.

Physics 144 — Quantum Mechanics 2 *Fall*
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. One unit.

Physics 154 — Theoretical Physics *Occasionally in Fall*
Selected topics in theoretical physics. One unit.

Physics 155 — Nuclear Physics Laboratory* *Alternate years in Fall*
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. Prerequisite: Physics 25. One unit.

Physics 161 — Solid State Laboratory* *Occasionally in Fall*
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. Prerequisite: Physics 25. One unit.

Physics 163 — Thermophysics 1 *Fall*
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. One unit.

Physics 164 — Thermophysics 2 *Alternate years in Spring*
The fundamentals of kinetic theory and statistical mechanics are discussed. Fluctuations in equilibrium systems are discussed. Maxwell-Boltzmann, Bose-Einstein, and Fermi-Dirac statistics are developed and applied. Special topics in solid state physics (magnetism and heat capacities) are discussed. Prerequisite: Physics 163. One unit.

Physics 181 — Introduction to Astrophysics *Occasionally*
A survey course of selected topics of current interest in astrophysics such as solar physics, stellar evolution, stellar remnants (white dwarfs, neutron stars, and black holes), and cosmological models for the origin of the universe. This course is designed for science majors who have had General Physics and Modern Physics. Prerequisite: Physics 25. One unit.

Physics 201, 202 — Undergraduate Research *Fall, Spring*
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. One unit each semester.

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Physics 205, 206 — Independent Study *Fall, Spring*
One unit each semester.

Political Science

David L. Schaefer, Ph.D., *Professor*
Hussein M. Adam, Ph.D., *Associate Professor*
Selma Botman, Ph.D., *Associate Professor*
Donald R. Brand Ph.D., *Associate Professor*
Judith A. Chubb, Ph.D., *Associate Professor and Chair*
Caren G. Dubnoff, Ph.D., *Associate Professor*
Stephen A. Kocs, Ph.D., *Assistant Professor*
Peter Bruce, Ph.D., *Assistant Professor*
Carol B. Conaway, Ph.D., *Assistant Professor*
Charles C. Euchner, Ph.D., *Assistant Professor*
Stephen R. Pelletier, Ph.D., *Assistant Professor*
Denise Schaeffer, Cand. Ph.D., *Instructor*
Gerry Gendlin, Ph.D., *Lecturer*
George M. Lane, M.A., *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 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 at least six upper-level courses for a minimum total of ten courses required for the major. Of the six upper-level courses, at least one must be in American Government, one in Political Philosophy, and one in either International Relations or Comparative Politics. For outstanding students, there is the possibility of undertaking a two-semester Honors Thesis in the fourth year. Majors are also strongly encouraged to take courses in related fields like history, economics, and sociology. Proficiency in 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 nonmajors 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 academic records.

Introductory Courses

Political Science 100 — Principles of American Government *Fall, Spring*
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. One unit.

Political Science 101 — Introduction to Political Philosophy *Fall, Spring*
Concise survey of the 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. Political Philosophy. One unit.

Political Science 102 — Introduction to Comparative Politics *Fall, Spring*
A comparative examination of Western liberal democracies, Communist and post-Communist systems, and selected Third World alternatives. The course will focus on alternative models of modernization and on the causes of and prospects for the current wave of democratization throughout the world. Comparative Politics. One unit.

Political Science 103 — Introduction to International Relations *Fall, Spring*
The study of relations between nations and the impact of emerging trans-national forces. This course examines a variety of conceptual approaches to understanding global politics and the manifestation of these theories in practice. Among the topics addressed are: modes of influence, models of diplomacy, war and peace issues, the role of trans-national forces, regional and universal international organizations, international economic relations, human rights in foreign policy, and the impact of science and technology. International Relations. One unit.

Intermediate Courses

Political Science 201, 202 — Constitutional Law *Annually*
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. American Government. Prerequisite: Political Science 100 or permission. One unit each semester.

Political Science 203 — Judicial Behavior *Occasionally*
This course will concentrate on two central questions: 1) how and why judges decide as they do; 2) how judges should decide cases. Do judges decide cases according to which litigant presents the stronger factual evidence and the best controlling precedents. Do they rule according to what "the law says"? Or is the evidence and controlling precedents sufficiently ambiguous to allow for the influence of factors external to the law? and if so, what are these factors? Put differently, to what extent do judges decide cases according to their personal values? to what extent are they influenced by other judges? by legal norms? by concerns for the institutional place of their Court? by the values and attitudes of their particular region? by the way in which they were selected etc.? American Government. Prerequisite: Political Science 100. One unit.

Political Science 204 — Political and Social Movements *Annually*
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. American Government. Prerequisite: Political Science 100. One unit.

Political Science 206 — Public Policy *Annually*
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 govern-

ment 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. American Government. Prerequisite: Political Science 100 or permission. One unit.

Political Science 207 — American Presidency *Annually*
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. American Government. Prerequisite: Political Science 100. One unit.

Political Science 208 — U.S. Congress *Annually*
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. American Government. Prerequisite: Political Science 100. One unit.

Political Science 209 — Urban Politics *Fall*
A study of the political issues, processes and realities underlying urban problems faced by municipalities in responding to social, economic, and physical change. American Government. Prerequisite: Political Science 100. One unit.

Political Science 210 — Urban Policy *Spring*
Emphasis on the policy areas that municipal government must address. The class will begin with an overview of the urban policy-making environment — the fragmentation of the metropolis, the nationalization and internationalization of the economy, the U.S. federal system. Then the course will explore a number of case studies of urban policy — the mainstays being fiscal crisis, poverty, housing, crime, education, and management of service delivery. American Government. Prerequisite: Political Science 100. One unit.

Political Science 211 — American Political Parties *Annually*
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. American Government. Prerequisite: Political Science 100. One unit.

Political Science 225 — Liberalism and Its Critics *Annually*
In this course students will explore the political, historical, philosophic and economic foundations of liberalism. First, the class will focus on distinguishing the various principles which define classical liberalism, including political equality, private property, rule of law, constitutionalism, state/society distinction, secularism, privacy, etc. We will read not only the major sources of these principles, but also historical sources of criticisms of these principles. We will then turn to the contemporary debates about and within liberalism, focusing on such issues as the role of the state, communitarianism, discursive models of legitimacy, and multiculturalism. Political Philosophy. One unit.

Political Science 227 — Classical Political Philosophy *Alternate years in Fall*
Close study of several works by major classical political thinkers such as Plato, Aristotle, Thucydides, Aristophanes, and/or Cicero. Focus on such central themes as the nature of justice, the relation between politics and reason, the variety of political regimes, and the possibilities and limits of political reform. Political Philosophy. One unit.

Political Science 228 — Modern Political Philosophy *Alternate years in Spring*
Close study of works by several major modern political philosophers such as Bacon, Montesquieu, Rousseau, Burke, Hume, and Nietzsche. Central themes include the rise and political consequences of the modern project of "mastering" nature; the political effects of commerce; the replacement of virtue by freedom and/or security as the goal of politics; the relation of political philosophy to history; and the Nietzschean critique of modern egalitarianism. Political Philosophy. One unit.

Political Science 229 — Contemporary Political Theory *Alternate years*
Analysis of major recent works on political philosophy by such Anglo-American writers as John Rawls, Robert Nozick, Alasdair Macintyre, Richard Rorty, Irving Kristol, and Harvey Mansfield. Topics include the relation among liberty, equality, and justice; the grounds of moral judgment; and the meaning of justice in the American Constitutional regime. Political Philosophy. One unit.

Political Science 230 — Political Thought in Literature *Alternate years*
Examination of fundamental problems of political life through the study of literary works such as Aristophanes, Sophocles, Shakespeare, Swift, Melville, and Faulkner. Themes include the effects of various forms of government on human character; the central conflicts of political life; and the problem of race in the American polity. Political Philosophy. One unit.

Political Science 233 — American Political Thought, 1: to 1850 *Alternate years*
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. Political Philosophy. One unit.

Political Science 234 — American Political Thought, 2: 1850 - Present *Alternate years*
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; and recent "radical" and "neo-conservative" thought. Political Philosophy. One unit.

Political Science 245 — American Federalism *Occasionally*
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. American Government. Prerequisite: Political Science 100. One unit.

Political Science 251 — Latin American Politics *Fall*
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. Comparative Politics. One unit.

Political Science 255, 256 — Soviet Political Development, 1917-1953; Contemporary Soviet and Post-Soviet Politics *Annually*
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. Comparative Politics. Prerequisite: Political Science 102. One unit each semester.

Political Science 257 — Politics of Development *Fall*
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. Comparative Politics. Prerequisite: Political Science 102. One unit.

Political Science 261 — Contemporary African Politics *Fall*
An examination of the process of establishing political order and providing for change in contemporary Africa. Topics to be considered include: problems of decolonization, national integration and mobilization, parties, ideologies, elites, and political symbols. Comparative Politics. One unit.

Political Science 263 — Black Political & Social Thought *Spring*
This course analyzes African and African-American political and social thought by examining selected writings. It explores these ideas within their socio-historical context in connection with related movements: Pan-Africanism, Negritude Movement, the African National Liberation Movement, the African-American Civil Rights and Black Power Movements. This course will compare and contrast the African and the African-American protest/liberation struggle. Political Philosophy. One unit.

Political Science 265 — Contemporary Western European Politics *Fall*
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. Comparative Politics. One unit.

Political Science 269 — Power & Politics: A View From Below *Occasionally*
What is the meaning and impact of politics seen from the perspective of those at the bottom of the pyramid of political power rather than from the usual focus on the actions and perceptions of political elites? What ways do "the masses" become involved in politics? Under what circumstances are they likely to be successful in bringing about change? This course will address these questions by exploring political power, political participation and political change from a broad historical and cross-cultural perspective — but always focusing on a view of politics from the bottom up. Cases to be studied include peasant protests and city mobs in pre-industrial Europe, the creation of the industrial working class and the rise of labor politics in Britain and the U.S., peasant revolution in the twentieth century (with particular emphasis on the Chinese case), and the dynamics of contemporary Third World nationalist movements, as well as their counterpart in the black power movement in the United States. Comparative Politics. One unit.

Political Science 270 — Africa and the World *Spring*
The purpose of the course is to examine the historical contemporary relationship between Africa and the rest of the world. Though Africa has been influenced by and acted upon by other peoples, it and its peoples have also had a significant influence on the course of history and development in the world. The course will deal with Africa's relationships with the European world, Africa and the United States, Africa and the Socialist world, Africa and the Middle East and Africa's search for Pan-African unity. International Relations. One Unit.

Political Science 271 — United States and the Middle East *Spring*
This course will discuss the relations between the United States and the Middle East, beginning with the early interest of American missionaries and oil 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. International Relations. Prerequisite: Political Science 103. One unit.

Political Science 272 — Government and Politics of the Middle East *Fall*
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, elites and social classes, the state of Islam and others. Special emphasis will be placed 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 Middle Eastern politics at the current time. Comparative Politics. One unit.

Political Science 273 — Revolutionary Movements in the Middle East *Occasionally*
This course will examine the different phenomena of revolutionary movements in the Middle East. An analysis of the Islamic tradition of revolution will precede a discussion of the prevalent Middle Eastern revolutionary movements. The course will focus on military takeovers, tribal uprisings, leftist and nationalist guerrilla movements and Islamic resurgent organizations. The methods and tactics of revolutionary action, including terrorism, will be emphasized. Comparative Politics. Prerequisite: Political Science 272 or 271. One unit.

Political Science 274 — Nationalism and World Politics *Occasionally*
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. International Relations. Prerequisite: Political Science 102 or 103. One unit.

Political Science 275 — International Political Economy *Occasionally*
This course will examine the interrelations of the 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. International Relations. Prerequisite: Political Science 103. One unit.

Political Science 282 — American Foreign Policy *Annually*
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. International Relations. Prerequisite: Political Science 100 and 103. One unit.

Political Science 283 — International Organization *Occasionally*
This course will examine the role of international organizations in international relations. While the United Nations system will be the major focus of attention, intergovernmental organization such as NATO, 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. International Relations. Prerequisite: Political Science 103. One unit.

Political Science 288 — Power, Morality and Foreign Policy *Occasionally*
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 extend does realism describe the actual basis of past and present international politics? Can considerations of justice and equity be incorporated successfully into national foreign policies, given the will to do so? In particular, must a successful foreign policy always be amoral? International Relations. Prerequisite: Political Science 103. One unit.

• **Political Science 290 — National Security Policy** *Fall*
National security policy has become an intrinsic aspect of American foreign policy and, because of high levels of defense spending, also 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 be paid also 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. International Relations. One unit.

Advanced Courses and Seminars

Political Science 300 — Law, Politics and Society *Spring*
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. American Government. Prerequisite: Political Science 100 or 201. One unit.

Political Science 307 — Government and Business *Fall*
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. American Government. Prerequisite: Political Science 100. One unit.

Political Science 308 — Seminar: Women and International Development *Spring*
Using a comparative methodological approach, the goal of this seminar is to investigate the structural changes taking place in developing societies using gender analysis. Competing paradigms and points of view are present in the readings. Some of the issue addressed include: women in rural and urban work, women in the political process, women and human rights, women in the family, and women in development policy. Students write interpretative essays as well as a research paper. International Relations. One unit.

Political Science 319 — Seminar: Public & Private Realms in American Politics
Occasionally
The course explores the way the concepts of the public and private realms structures the discourse and practice of American politics. Special attention will be paid to the distinct characteristics of the two realms and how they interact and undermine or reinforce each other (depending on the circumstances). Special topics include the family, education, abortion, urban planning, civil disobedience, and bilingualism. American Government. One unit.

Political Science 321 — Religion and Politics in Latin America *Spring*
This course will begin with an examination of the theoretical writings on the role of religion in politics, both in general and in Latin America. Much of the course will focus on the changing political role of the Catholic Church in the region. Emphasis will be placed on the origins and development of Liberation Theology, the debates it has engendered, and its importance in the political conflicts of Central and South America. The growth and political significance of Protestantism will also be examined in some detail in order to round-out our understanding of contemporary Latin America. Comparative Politics. One unit.

Political Science 334 — Seminar on International Negotiations *Fall*
An introductory yet in-depth examination of negotiation in international affairs: its role, its effectiveness, its component parts. Students will explore some of the basic conceptual analysis at bargaining, surveying scholarly and practical criticism, with an emphasis on how negotiation actually functions in international relations. International Relations. Prerequisite: Third and fourth-year students only. One unit.

Political Science 351, 352 — Tutorial Seminar *Fall, Spring*
Research with individual reports on selected topics or projects. Approval of the professor and the Department is necessary. One unit each semester.

Political Science 390, 391 — Political Science Honors Thesis *Both semesters*
One unit each semester.

Psychology

Charles M. Locurto, Ph.D., *Professor*
John F. Axelson, Ph.D., *Associate Professor*
Danuta Bukatko, Ph.D., *Associate Professor*
Mark Freeman, Ph.D., *Associate Professor*
Patricia E. Kramer, Ph.D., *Associate Professor and Chair*
Ogretta V. McNeil, Ph.D., *Associate Professor*
Charles S. Weiss, Ph.D., *Associate Professor*
Daniel Bitran, Ph.D., *Assistant Professor*
Andrew Futterman, Ph.D., *Assistant Professor*
Richard Schmidt, Ph.D., *Assistant Professor*
Ruth Thibodeau, Ph.D., *Assistant Professor*
Amy Wolfson, Ph.D., *Assistant Professor*
James J. Dillon. Ph.D., *Visiting Instructor*
Oded M. Flascher, Ph.D., *Visiting Instructor*
Brion Carroll, Ph.D., *Visiting Lecturer*
Matthew A. Toth, Ph.D., *Visiting Lecturer*

Psychology is the scientific study of the behavior and mental life of humans and animals. It is a remarkably broad discipline with many subfields. Some of these subfields are philosophical in orientation, some are oriented toward basic research in laboratory or field settings, and some have the intent of meeting the needs of individuals or groups in clinical settings. The Psychology Department at Holy Cross has a curriculum and faculty which represent these various orientations in psychology. We offer majors and nonmajors a variety of electives that include courses such as the physiological bases of behavior, learning and conditioning, abnormal psychology, personality, developmental psychology, perception, cognition, aging, and interdisciplinary topics such as gender, the study of the self, the experience of being an African-American, and psychology and literature.

A minimum of eleven courses is required for the major, ten psychology courses and one course in biology. First-year students interested in majoring in psychology should enroll in Introductory Psychology. This course is typically the only psychology course taken by first-year students and is offered in both the fall and spring semesters. In addition to introducing students to psychology as a discipline, this course serves to acquaint prospective majors with the specific goals and requirements of studying psychology at Holy Cross. Formal entrance into the major comes at the end of this introductory course. Students begin an in-depth examination of the process of psychological inquiry by taking courses in Statistics, Research Methods, and Research Methods Laboratory. Upper-level students are provided a curriculum structured to ensure a foundation in both the natural science and social science perspectives within psychology. Accordingly, students are required to take a minimum of one course from the natural science perspective and one from the social science perspective. Further components of the psychology major include: History and Systems of Psychology, which explores the historical and philosophical roots of the discipline; at least one seminar in psychology; as well as several elective courses chosen in accordance with students' own developing interests and curricular needs. Curriculum guidance extends beyond the Psychology Department. Majors who are not enrolled in the premedical program are required to enroll in Perspectives Biology (Biology 17). All majors are strongly encouraged to take courses in mathematics, and are assisted in selecting other courses outside the Department that help provide a coherent, well-integrated program of studies.

There is ample opportunity for students to pursue advanced study and research under the individual direction of their professors. Our faculty are actively engaged in research on a variety of topics, including the effects of hormones and drugs on behavior, the effects of heredity and environment on intelligence, cognitive development in children, relation of perception and action, aging, adolescence and identity development, adjustment to new environments, and grief and bereavement. Many of the Department's students have presented papers at regional and national undergraduate and professional meetings and have published their work in professional journals. The undergraduate liberal arts degree in

psychology also provides students with many advanced-study and career options and has led to students being placed in graduate programs in psychology, medicine, and law as well as a wide variety of work places.

Biological Psychology Concentration
The Departments of Biology and Psychology jointly offer an interdisciplinary concentration that concerns the study of neuroscience and behavior. The concentration requires an understanding of various fields including biology, psychology, chemistry, physics, mathematics and computer science. Concentrators major in either biology or psychology and take courses that fulfill one of the three tracks within the concentration: Behavioral Science, Organismal Neuroscience, or Molecular Neuroscience. Students are exposed to original research throughout the concentration and may elect to spend a portion of their fourth year engaged in a thesis project. Admission to the concentration is competitive and is limited to eight students per class year. Interested students should consult with the Concentration Director or the Chair of the Biology or Psychology Department prior to registering for second-year courses.

Psychology 40 — Psychology of Everyday Life *Fall*
This course explores the application of general psychological principles to a variety of everyday behaviors. Through the examination of these principles and understanding different psychological perspectives, concepts and issues will be achieved. In addition, the way individuals respond to complex environments and how factors in the environment influence behavior will be explored. One unit.

Psychology 50 — Psychology and Literature *Alternate years*
An exploration of mostly non-fictional texts, such as case histories and autobiographies, from the vantage point of literary theory, particularly the theory of narrative. Special attention will be devoted to the issue of memory and its place in the interpretation of the past, as well as issues regarding the distinctions to be made between fictional and "true" stories. One unit.

Psychology 70 — Philosophy of Psychology *Alternate years*
An exploration of concepts and problems related to the understanding and explanation of human action and experience, as related to psychological inquiry. Drawing especially on certain strands of contemporary European philosophy, particular attention will be given to issues concerning the distinction between the social and natural sciences, the problem of interpretation, and the place of psychology in relation to other modes of inquiry in the social sciences and the humanities. One unit.

Psychology 80 — Psychology of Life History *Alternate years*
Considers both methodological and theoretical concepts and problems in the study of life history. Special attention is devoted to issues including the interpretive process, 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." One unit.

Psychology 100 — Introductory Psychology *Fall, Spring*
An introduction to the principles of psychology as emerging from the areas of physiological, learning, social, personality, developmental, abnormal, sensation and perception, and cognition and memory. Required of psychology majors. One unit.

Psychology 145 — Existential Psychology *Alternate years*
The existential movement may be seen as a response and challenge to the tendency — present in both psychology and in our society more generally — to "forget" some of the richness, ambiguity, and depth of human experience; all too often, we cast aside fundamental questions pertaining to the meaning and purpose of life, to human creativity, and to what it might mean to live life fully and optimally. This course, which will draw on philosophy and literature as well as psychology, seeks to bring these broader questions of meaning to the forefront of psychological inquiry. One unit.

Psychology 160 — Psychology of Gender *Spring*
In this course we will examine the development and construction of gender from a range of theoretical perspectives, from the biological to the interpersonal to the postmodern. Special attention will be paid to the assumptions about human nature that underlie different theo-

retical stances and how the positions we take are both shaped by and shape how we see ourselves and others. Readings will consist of a variety of original sources. One unit.

Psychology 200 — Statistics *Fall*
An introduction to descriptive and inferential statistical methods in analysis and interpretation of psychological data. Required of psychology majors. One unit.

Psychology 201 — Research Methods in Psychology *Spring*
Survey of methods and techniques employed in psychological research. Topics include observational research, surveys, case studies, experimental designs, and ethical issues in research. Emphasis is placed on critical evaluation of research. Required of psychology majors. Prerequisite: Psychology 200. One unit.

Psychology 203 — Research Methods Laboratory *Spring*
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. One-half unit.

Psychology 205 — History and Systems of Psychology *Fall, Spring*
An examination in historical perspective of what are considered to be the major systems (e.g., psychoanalysis, behaviorism, existential psychology) of psychology. The course begins by using a number of philosophical questions regarding the status of psychology as a scientific discipline, moves on to a comprehensive treatment of the systems themselves, and finally, returns to initial questions to determine the extent to which they have been answered. One unit.

Psychology 210 — Introduction to Neuroscience *Fall*
This course is designed to give prospective Biopsychology concentrators a general survey of topics in the neurosciences, including topics covered in the three tracks within the concentration. This course is an intensive introduction to the neurosciences emphasizing neurophysiology, neurochemistry, and neuroanatomy. Second year biology and psychology majors who may be interested in applying to the biopsychology concentration should enroll in this course. For psychology majors, this course will fulfill the category A (natural science) requirement. Physiological psychology (Psychology 221), aimed at psychology majors with a leaning towards the social sciences, will be offered in the Spring '96 semester. One unit.

Psychology 220 — Sensation and Perception *Spring*
The two major contemporary theories of perception are discussed for each of the sensory/perceptual systems (vision, audition, haptics, gustation, olfaction). For both theoretical approaches, a critical examination is made of the relation of sensory processes, perceptual abilities, and action systems with the goal of explaining how we are able to perceive the world. Natural Science. Prerequisite: Psychology 100 or permission of instructor. One unit.

Psychology 221 — Physiological Psychology *Fall, Spring*
The structure and function of the nervous system is studied in order to provide an appreciation of the biological basis of behavior. The first half of the course emphasizes neuroanatomy, basic cell physiology, effects of drugs on behavior, and the autonomic nervous system. Topics covered in the latter portion of the course include physiological influences on: sleep-wake and circadian rhythms, reproductive behavior, eating and drinking, learning, and mental illness. Natural Science. Prerequisite: Psychology 100 or permission of instructor. One unit.

Psychology 223 — Learning *Fall*
An intensive evaluation of how behavior is acquired and maintained. The course focuses on Pavlovian and operant conditioning in animals and human subjects. Special topics include the application of these principles to psychotherapy, drug addiction, self-control, and biological influences and constraints on learning. Natural Science. Prerequisite: Psychology 100 or permission of instructor. One unit.

Psychology 225 — Developmental Psychology *Fall, Spring*
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. Social Science. Prerequisite: Psychology 100 or permission of instructor. One unit.

Psychology 226 — Personality *Spring*
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. Social Science. Prerequisite: Psychology 100 or permission of instructor. One unit.

Psychology 227 — Social Psychology *Fall*
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. Social Science. Prerequisite: Psychology 100 or permission of instructor. One unit.

Psychology 229 — Abnormal Psychology *Fall*
Course will look at psychopathology throughout the life span. There will be discussion of the developmental, biological, behavioral, psychosocial and other theories that attempt to explain emotional and behavioral problems. One goal for the course will be to develop an understanding of how information about psychopathology is obtained, and the problems associated with the evaluation and interpretation of this information. Special topics include: gerontology, gender issues, developmental psychopathology, and mental illness in literature. Social Science. Prerequisite: Psychology 100 or permission of instructor. One unit.

Psychology 231 — Industrial/Organizational Psychology *Spring*
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. One unit.

Psychology 236 — Cognition and Memory *Spring*
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. Natural Science. Prerequisite: Psychology 100 or permission of instructor. One unit.

Psychology 238 — Counseling and Psychotherapy *Spring*
A critical evaluation of major forms of counseling and psychotherapy, including the psychoanalytic, behavioral, existential, and interactional (e.g., family therapy) approaches. There is an emphasis both on techniques of therapy and on the underlying theoretical rationale for the various methods. Prerequisite: Psychology 229 or permission of instructor. One unit.

Psychology 242 — Clinical Psychology *Alternate years*
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 is stressed. Prerequisite: Psychology 229 or permission of instructor. One unit.

Psychology 250 — Philosophy of Psychology *Fall*
This course will address long-standing philosophical issues concerning the foundations of psychological research. We will discuss questions such as: Can a machine think?; Can psychology be reduced to neuroscience?; How adequate are biological accounts of "abnormal" behavior?; What is consciousness and can it be explained from a scientific perspective? One unit.

Psychology 300 — Advanced Laboratory in Physiological Psychology *Alternate years*
Designed to give students hands-on experience with the methods and techniques of physiological psychology. Topics include gross neuroanatomy, stereotaxic surgery, histology, effects of drugs on behavior, and recording of biological events. Students participate in research projects. Prerequisites: Psychology 221. One unit.

Psychology 302 — Advanced Laboratory in Learning *Alternate years*
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 demonstra-

tions of several phenomena including imprinting, aggression, and addictive behaviors. Prerequisites: Psychology 201 and 223. One unit.

Psychology 304 — Advanced Laboratory in Developmental Psychology *Alternate years*
Students 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 also are discussed. Prerequisites: Psychology 201 and 225. One unit.

Psychology 306 — Advanced Laboratory in Clinical Psychology *Alternate years*
Students design and carry out empirical research projects, either individually or in cooperation with another student. They 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. One unit.

Psychology 308 — Advanced Laboratory in Sensation and Perception *Occasionally*
Based upon current theories of perceptual experience, students conduct original research projects (either individually or in small groups). Guidance is given in choice of research topic, methodology, data analysis and presentation of findings. Prerequisite: permission of instructor. One unit.

Psychology 310 — Advanced Laboratory in Social or Personality Psychology
Alternate years
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. One unit.

Psychology 318 — Advanced Statistics *Occasionally*
Several advanced techniques in inferential statistics are covered, including multifactor analysis of variance, multiple regression, power analysis, and trend analysis. Prerequisite: Psychology 200. One unit.

Psychology 323 — Clinical/Community Practicum *Fall*
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 clinical and ethical issues, theories and models by psychotherapy as well as the particular problems presented by the client populations with which students work. Prerequisite: permission of instructor. One unit.

Psychology 350 — Seminars *Fall, Spring*
Seminar courses are offered in a variety of topics within Psychology. Seminars are usually smaller than lecture courses providing an opportunity for more student participation and discussion. One unit.

Psychology 360 — Special Topics in Psychology *Fall, Spring*
From time to time intermediate or advanced seminars on particular topics will be offered. Some of these courses are devoted to the writings of individual works such as B. F. Skinner, Sigmund Freud or Jean Piaget. Other courses concern specific advanced topics such as face perception, the African-American experience, hormones and behavior, drugs and human behavior, psychology of aging, and adolescent psychopathology. Prerequisites: to be determined by instructor. One unit.

Psychology 380 — Research Projects *Fall, Spring*
Students may undertake an independent research project under the direction of a particular faculty member. Prerequisite: permission of instructor. One unit.

Psychology 390 — Directed Readings *Fall, Spring*
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. One unit.

Religious Studies

Alan J. Avery-Peck, Ph.D., *Kraft-Hiatt Chair of Judaic Studies*
Rev. John E. Brooks, S.J., S.T.D., *Loyola Professor of Humanities*
Frederick J. Murphy, Ph.D., *Professor*
Mary Ann Hinsdale, I.H.M., Ph.D., *Associate Professor and Chair*
Alice L. Laffey, S.S.D., *Associate Professor*
Gary A. Phillips, Ph.D., *Associate Professor*
Rev. William E. Reiser, S.J., Ph.D., *Associate Professor*
Mary E. Hobgood, Ph.D., *Assistant Professor*
Todd T. Lewis, Ph.D., *Assistant Professor*
Rev. Brian F. Linnane, S.J., Ph.D., *Assistant Professor*
James B. Nickoloff, Ph.D., *Assistant Professor*
Joanne Pierce, Ph.D., *Assistant Professor*
Rev. James F. X. Pratt, S.J., Cand. Ph.D., *Instructor*

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 ten courses in the Department, including one course in each of the following areas: World Religions; The Bible-Old Testament, New Testament; Theology; Ethics; and two intensive courses (seminars or tutorials) in the student's 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 fourth 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 *Occasionally*
An introduction to three classical prophetic religions: Judaism, Islam and Christianity. Examines aspects of their shared history and identifies their distinctive understandings of scripture, law, community, theology, and worship. Seeks to develop an appreciation for the ways each prophetic faith responds to the challenges of the modern period. One unit.

Religious Studies 31 — Islam and Politics *Spring*
A study of the Islamic resurgence: its causes, manifestations, issues and problems. The role of Islam in socio-political change is 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 CISS 139. One unit.

Religious Studies 48 — Introduction to Modern Judaism *Annually*
A study of Jewish tradition: its development, major themes/concerns, and especially the way in which it views time (Holy Days and Life Cycle events). Close attention is paid to the relationship between classical Jewish beliefs and practices and what (American) Jews think and do today. Also considered is the complex issue of Women and Judaism. One unit.

Religious Studies 61 — Religions: China and Japan *Fall*
Introduction to the 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. One unit.

Religious Studies 62 — World Religions (Hinduism, Buddhism and Islam) *Fall*
An introduction to the Islamic, Hindu, and Buddhist religious traditions through an analysis of those historical events, beliefs, values, and practices which exemplify their distinctive world views. The course will survey textual, historical and anthropological sources. One unit.

Religious Studies 80 — Religion in the Ancient World *Occasionally*
Egypt and Mesopotamia as origins of ancient Near Eastern 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. One unit.

Religious Studies 81 — Christianity in the Greco-Roman World *Occasionally*
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. One unit.

Religious Studies 87 — Introduction to the Study of Religion *Spring*
An introduction to the nature and place of religion in the human experience as critically understood through the modern disciplines of comparative history, text criticism, and social science. Viewpoints covered include the psychoanalytic, philosophical, biological, artistic, and anthropological. Sources range broadly from the Bible to modern fiction, Lao Tzu to Celtic myths. The course also examines the effects of modern change on religion in global perspective. One unit.

Religious Studies 90 — Islamic History and Civilization *Occasionally*
This course treats selected topics in Islamic history and civilization from the rise of Islam to the present, exploring major political, religious, social and intellectual themes. One unit.

Intermediate Courses

Religious Studies 104 — Hinduism *Spring*
A survey of the religions of India, from ancient times until the present, through the distinctive beliefs, values and practices of the major orthodox traditions. Topics covered include Vedic sacrificial polytheism, Upanishadic monism, Yoga, sectarian devotionalism, Hindu-Muslim syncretism, Modern reformers. The course utilizes textual, historical, and anthropological sources. One unit.

Religious Studies 105 — American Religious History *Fall*
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. One unit.

Religious Studies 106 — Buddhism *Spring*
A survey of the Buddhist tradition, from its origins in ancient India through its evolution as a pan-Asian faith. Topics include the legends of the Buddha, the early monastic community, the emergence of Theravada and Mahayana teachings, Buddhist ethics and social philosophy, meditation traditions, and the later development of distinctive Tibetan, Chinese, and Japanese schools. The course utilizes textual and anthropological sources. One unit.

Religious Studies 107 — Islam in the Middle East: Religion and Development
Occasionally
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.). One unit.

Religious Studies 111 — Zen Buddhism *Spring*
An examination of Zen Buddhism and its influences on east Asian civilizations. The course surveys the texts and monastic practices that define Zen spiritual cultivation and the history of the Soto and Rinzai schools' evolution. Special attention is also devoted to the distinctive poetic (haiku), fine arts (painting, gardening, tea ceremony), and martial arts (swordsmanship) disciplines that this tradition has inspired in China and Japan. One unit.

Religious Studies 115 — Women in the Muslim World *Occasionally*
Women in the Muslim World will study the experiences and roles of Muslim women, drawing on case studies from Africa to Asia. By examining the relationship between women, religion and social change, it will reveal the complex interplay of religion and social change, a relationship that reveals the extent to which religion has been both an instrument of liberation as well as social oppression. Interdisciplinary in approach, the course cuts across the fields of religion (history of religion), history, and social sciences, focusing on the ways in which women have been able to effect social change within their societies as well as on how they have been affected by their respective religion-social contexts. One unit.

Religious Studies 127 — The Holocaust: Confronting Evil *Alternate years*
An attempt of interpret an event that defies representation and lacks discernible logic or meaning. By evaluating how others have depicted, attempted to create meaningful narratives about, and drawn conclusions from the Holocaust, we hope ourselves to reach some understanding of this event, of its significance for modern society and of its potential for helping us to recognize our own responsibilities in a world in which ultimate evil is possible. One unit.

Religious Studies 195 — American Judaism *Alternate years*
An evaluation of the history and ideologies of Jews in America as an example of contemporary religious life in general: why and how do modern, scientific people maintain religious affiliations? In what ways do their religions carry forward inherited ideals, and in what regards are they simply, or primarily, products of the modern period? These questions are answered through an examination of the character of the American Jewish community and an analysis of the perspectives of American Jews on contemporary social and political issues. Appropriate for students with no prior knowledge of Judaism or Jewish history. One unit.

Religious Studies 197 — The Formation of Rabbinic Judaism *Alternate years*
Judaism as we know it took shape in the first six centuries C.E. This course describes and interprets the formation of that Judaism, asking what happened to Jews in this period, probing why it happened, and suggesting the meaning of these events had for the people who experienced them. The course entails a close examination of Rabbinic literature (Talmud, Midrash) and of the relationship of early Rabbinic Judaism to contemporaneous cultures and religions (Hellenism, nascent Christianity).

Advanced Courses

Religious Studies 204 — Theravada Buddhism *Fall*
A seminar examining the prominent texts, doctrines and practices of the Theravada Buddhist tradition. The course surveys the historical development of the tradition in India, with attention to major schools of interpretation and practice. Theravada social philosophy and ethics are studied, as are the patterns of accommodation with non-Buddhist religions. The second half of the course focuses upon the distinctive practices of Burma, Sri Lanka, and Thailand as well as reformist modern movements. One unit.

Religious Studies 205 — Mahayana Buddhism *Annually*
A seminar examining prominent movements within the "Northern School" of Buddhism, with particular attention to Indic, Tibetan, and east Asian developments. Topics include

the Bodhisattva doctrine, Madhyamika and Hua-yen philosophies. Pure Land lineages, and the esoteric schools. The seminar focuses upon influential texts (Lotus Sutra, Vimalakirtinirdesa Sutra) and associated devotional practices. One unit.

Religious Studies 217 — Approaches to the Study of Religion *Occasionally*
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. One unit.

Religious Studies 220 — Comparative Religious Worldviews *Occasionally*
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. One unit.

Religious Studies 260 — Mystics and Zen Masters *Occasionally*
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 are 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. One unit.

Bible

Introductory Courses

Religious Studies 18 — Introduction to the New Testament *Fall, Spring*
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. One unit.

Religious Studies 22 — Jesus and His Contemporaries *Fall, Spring*
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 are treated: Sadducees, Pharisees, Essenes, Priests, Scribes and Christians. Focus also is on apocalypse as a literary genre and apocalypticism as a worldview and social phenomenon. Attention is paid to the interrelatedness of belief, community structure, ethics, economics and politics. Special emphasis is placed on the ways in which Jesus has been seen to fit into this context. One unit.

Religious Studies 26 — Introduction to the Old Testament *Fall, Spring*
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 sources, as well as literary and theological analysis. One unit.

Religious Studies 66, 67 — Introduction to Biblical Hebrew *Occasionally*
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. One unit each semester.

Intermediate Courses

Religious Studies 101 — Early Christian Communities *Occasionally*
Employing methodologies drawn from cross-cultural models of human interaction and sociological approaches to Christian origins, this course studies various models of community in early Christianity by paying special attention to social setting. Such issues as how Christian communities contended with cultural/environmental adaptation (survival), the role of women, the poor, "outsiders" and the resolution of conflict are studied in order to determine what may be said about the social function of the New Testament writings as well as for the implications for Christian community today. One unit.

Religious Studies 102 — Early Christian Interpretations of Jesus *Occasionally*
A study of different understandings of Jesus in the early Church in view of their historical, theological and cultural settings. Attention is paid to the New Testament Apocrypha, and hellenistic and rabbinic texts. One unit.

Religious Studies 110 — The Land: Then and Now *Occasionally*
An investigation of Israel's land as promise and gift, as jeopardized, as possessed, as lost and regained, and as symbol of Israel's fidelity to God. This seminar also probes "the land motif" as it has come to influence both ecology and contemporary Middle Eastern politics. One unit.

Religious Studies 112 — The Gospels *Fall*
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. One unit.

Religious Studies 116 — Art and Practice of Biblical Exegesis, *Occasionally*
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. One unit.

Religious Studies 129 — Paul the Apostle *Occasionally*
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. One unit.

Religious Studies 134 — Women and the Bible *Fall*
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 is 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 are examined. One unit.

Religious Studies 145 — Princes, Prophets, and Wise Men *Occasionally*
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. One unit.

Religious Studies 150 — The Quest for the Historical Jesus *Spring*
Since the Enlightenment scholars have recognized the difficulties involved in trying to recover the historical Jesus. This course acquaints the student with the exegetical and historical problems encountered in the quest for the historical Jesus; reviews the history of scholarship to the present to determine presuppositions, methods and results; examines the range of options currently available and the exegetical strategies used to support those options; encourages the student to take up an option and defend it. One unit.

Religious Studies 153 — Parables and Paradox *Occasionally*
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. One unit.

Religious Studies 159 — The Psalms *Occasionally*
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. One unit.

Advanced Courses

Religious Studies 215 — Old Testament and Contemporary Prophets *Occasionally*
This seminar examines the function of prophets in the Ancient Near East, including Israel, and the prophetic literature of the Bible (Former and Latter Prophets). Investigates 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, an attempt is made to develop, if possible, criteria against which to identify the prophetic personality, then and now. One unit.

Religious Studies 218 — The Mystery of Evil and Suffering *Occasionally*
This seminar examines 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. Includes 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. One unit.

Religious Studies 225 — Scripture/Story and Value *Occasionally*
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 are the relationship between reader and text, the nature and processes of communication and interpretation and the literary character of the biblical text. One unit.

Religious Studies 226 — The Bible as Text *Occasionally*
An historical and literary examination of the changing conceptions of the nature, role and function of biblical interpretation in light of modern and postmodern developments. The particular focus is on the distinctive historical, interpretive and socio-ethical character of biblical interpretation by different communities of readers in their distinctive social contexts. Attention will be given to feminist, African-American, Latin-American, and South-African interpreters of the Bible; and to method, gender, class and ethnic factors which shape critical readings of the Bible today. One unit.

Theology

Religious Studies 13 — The Problem of God *Occasionally*
A systematic and historical presentation of the debate focusing on the doctrine of God, God's nature and knowability. The course is 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. One unit.

Religious Studies 14 — Introduction to Theology *Occasionally*
Explores modern, critical approaches to the problem of correlating three distinct poles in understanding the Christian tradition: the results of biblical interpretation, the findings of the human and natural sciences, and personal experience. Considers the application of modern theological method to the classical problems of God, the human person, sin and grace, Jesus Christ, and the Church. One unit.

Religious Studies 15 — The Church in the World *Fall,Spring*
A basic presentation of how the Catholic Church sees itself, its mission, and its ministry in today's world in light 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. One unit.

Religious Studies 16 — Introduction to Roman Catholicism *Fall*
Introduces students to the major teachings of Roman Catholic Christianity. Topics include: authority, the place of word and sacrament, community, truth claims, structures, and the church as an actor in the world today. Specific attention is given to such questions as: What do Roman Catholics believe? Can and do the teachings of the church change? May one dissent from these teachings and still be a member of the Roman Catholic Church? How does Roman Catholicism differ from other forms of Christianity? One unit.

Religious Studies 17 — History of Christianity 1 *Fall*
This course provides a survey of the origins and development of Christianity, both its theology and its structures, from the apostolic period to the eve of the Reformation. Special attention will be paid to the evolution of Christian doctrine and worship during the early and medieval periods of the Christian history. The interplay between orthodoxy and heterodoxy will be stressed in a close examination of heretical movements and their impact on the formation of the tradition. The interaction between Church and society will also be addressed. One unit.

Religious Studies 19 — History of Christianity 2 *Spring*
This course provides a survey of the development of Christianity, both its theology and its structures, from the Reformation period to today. Special attention will be paid to the development of the various Protestant traditions, and their doctrine and worship. The interplay between Roman Catholicism and the Protestant churches will be discussed. The impact of these Christian traditions on American society will also be addressed. One unit.

Religious Studies 24 — Problems in the History of Christian Thought *Occasionally*
Examines in detail one of the problems that has occupied the attention of Christian theologians and philosophers throughout the ages. The range of problems includes 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. One unit.

Religious Studies 32 — Christian Sacraments *Occasionally*
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. One unit.

Religious Studies 33 — Contemporary Christian Spirituality *Fall*
An introduction to Christian spirituality understood as discipleship. Examines the lived experience and writings of influential 20th-century Christians such as Dorothy Day, Thomas Merton, Martin Luther King, Jr., and Gustavo Gutierrez. The course focuses on the quest for justice as an imperative of faith. One unit.

Intermediate Courses

Religious Studies 108 — Development of Christian Personhood *Occasionally*
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. One unit.

Religious Studies 117 — The Eucharist: History and Theology *Occasionally*
This seminar provides a detailed study of the historical development and theological significance of the sacrament of the Eucharist. Special attention will be paid to the Roman Catholic experience, but other Christian traditions will be discussed. One unit.

Religious Studies 118 — Sacramental Theology *Spring*
This course provides an in-depth examination of a key are of Catholic (and general Christian) theology and practice: the history and theology of the seven chief rituals known as sacraments.

Religious Studies 126 — Readings in Feminist Theology *Occasionally*
This seminar is designed to introduce students who are already conversant with Judaism and Christianity to a feminist critique of those prophetic traditions. It considers the close

correlation between religious expression and culture and examines how Judaism and Christianity have reinforced a patriarchal culture. Further, the students endeavor to identify and deconstruct the patriarchal underpinnings in order to develop more egalitarian religious models. One unit.

Religious Studies 135 — Contemporary Roman Catholic Thought *Occasionally*
Aims 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. One unit.

Religious Studies 136 — Makers of Modern Theology *Occasionally*
The aim of this seminar is to examine a number of authors or schools of thought which have helped to shape modern theological thinking. The following authors will be examined: Karl Barth, Dietrich Bonhoeffer, Rudolf Bultmann, Paul Tillich, Edward Schillebeeckx, Rosemary Ruether, Gregory Baum, Hans Kung, James Cone, Karl Rahner, Teilhard de Chardin, John Courtney Murray. Schools of thought represented include: liberal theology, process thought, evangelical theology, transcendental Thomism, liberation theologies. One unit.

Religious Studies 138 — Modern Religious Thought: The 20th Century *Occasionally*
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. One unit.

Religious Studies 139 — Understanding Jesus *Fall, Spring*
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. One unit.

Religious Studies 140 — Understanding Christ *Fall*
Building upon the understanding of Jesus that we find in the gospels and other New Testament writings, this course examines some of the spiritual and moral dimensions of Christian living. Special attention is given to the writings of Luke and Paul. Topics include: What are we expected to hold about God, Christ and the Church? What is the theological connection between the Old and New Testaments? What bearing do the death and resurrection of Jesus have on Christian practice today? One unit.

Religious Studies 157 — Modern Catholic Theology *Alternate years*
This course examines selected ethical, biblical, historical, and theological questions addressed by modern Catholic theologians such Rahner, Schillebeeckx, Dulles, Tracy, Gutierrez, and Ruether. Several major works are read and discussed in detail. One unit.

Religious Studies 175 — Theology of Liberation *Fall, Spring*
Based on the principle of God's identification with history's outcasts, liberation theology explores the problems of biblical interpretation, Church teaching and Christian commitment in the contemporary world. With special reference to Latin America, the course examines the relationship between the socio-political consciousness of marginalized peoples and their Christian faith. One unit.

Religious Studies 192 — Medieval Christianity *Occasionally*
This course provides an in-depth study of Christianity in the Middle Ages, a key period for the development of Christian theology, practice, and institutions.

Advanced Courses

Religious Studies 231 — Early Christian Writers *Occasionally*
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. 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. One unit.

Religious Studies 233 — Comparative Theology: Christianity and the Encounter of World Religions *Occasionally*
An exploration of the meaning and significance of Christianity's encounter with the Hindu, Buddhist, and Islamic traditions. The course is 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. One unit.

Religious Studies 271 — Contemporary Christology *Fall*
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 GPA of 3.0 or better. One unit.

Religious Studies 275 — Early Christian Literature *Occasionally*
Reading in the original of selected works from the Patristic period. Cross-registered with Latin 150. One unit.

Religious Studies 276 — North American Theologies of Liberation *Spring*
Building on the work of contemporary Latin American liberation theologians, this course explores recent theological reflection on the dynamics of oppression and liberation in the context of the U.S. The course attempts to sketch the outline of a theology responsive to both the liberating message of the gospel and the socio-political and cultural life of the U.S. One unit.

Ethics

Introductory Courses

Religious Studies 41 — Contemporary Christian Morality *Spring*
A suggested methodology for evaluating contemporary Christian thought and practice in major areas of ethical concern. An in-depth discussion of responsible decision making in an age of situationism and ethical relativism, with detailed application to crucial moral dilemmas facing modern persons. One unit.

Religious Studies 51 — Faith/World Poverty *Spring*
This course investigates the ideological and structural foundations of escalating world poverty. It explores the dynamics of late twentieth century capitalism and its international institutions as they are understood by the tradition of Catholic social teaching and by Christian communities in the United States and the Two-thirds World. The challenge facing people of faith has two sides: one is the reality of oppression and domination, and the other is that of liberation and self-determination. One unit.

Intermediate Courses

Religious Studies 109 — Critical Issues in Religious Thought: War/Peace *Occasionally*
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*. One unit.

Religious Studies 141 — Social Ethics *Fall*
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. One unit.

Religious Studies 142 — Sexual Ethics *Fall*
This seminar will provide students with an opportunity to explore ethical issues of both personal and societal importance. Among the topics covered are historical development of Christian sexual ethics; embodiment; gender, significance of the relation between sexuality; love and reproduction. One unit.

Religious Studies 146 — Business Ethics *Occasionally*
Christian reflection upon the ethical dimensions of modern business practices. Case studies focus on such issues as investment practices, political involvement of multinational corporations, economic distribution, advertising policy and consumerism. Prerequisite: permission of instructor. One unit.

Religious Studies 189 — Marriage Today and Tomorrow *Occasionally*
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. One unit.

Advanced Courses

Religious Studies 230 — Life and Death Issues *Occasionally*
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. One unit.

Religious Studies 235 — Economics and Ethical Values *Fall, Spring*
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 is explored. One unit.

Religious Studies 237 — Religion and Social Protest *Occasionally*
Explores the relationship between religion and social protest in modern American history. The central problems 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 from an appeal to religious symbols and traditions grounded in communities or people. One unit.

Religious Studies 240 — Catholic Social Reforms *Occasionally*
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 *Risorgiarmento*, 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. One unit.

Religious Studies 311 — Tutorial *Annually*

Religious Studies 411 — Research Project *Annually*

Sociology and Anthropology

Stephen C. Ainlay, Ph.D., *Professor*
David M. Hummon, Ph.D., *Professor and Chair*
Susan Rodgers, Ph.D., *Professor*
Royce A. Singleton, Jr., Ph.D., *Professor*
Victoria L. Swigert, Ph.D., *Professor*
Carolyn Howe, Ph.D., *Associate Professor*
Jerry Lembcke, Ph.D, *Associate Professor*
Edward H. Thompson, Jr., Ph.D., *Associate Professor*
Christine Greenway, Ph.D., *Charles A. Dana Faculty Fellow, Assistant Professor*
Susan Cunningham, Ph.D., *Visiting Assistant Professor*

The Department of Sociology and Anthropology challenges students to examine the cultures and institutions of the contemporary world. The Department offers three avenues for specialized study: a major in sociology, a combined sociology-anthropology track major, and a minor in anthropology. The Department also welcomes non-majors, providing both introductory and intermediate level courses on a wide variety of topics.

Sociology and anthropology, as social sciences, play a distinctive role in the liberal arts curriculum. Each discipline combines a humanistic concern for the social conditions in which diverse peoples find themselves with a commitment to rigorous research and analysis of these conditions.

The Sociology Major, one of the three options available, is designed to provide a critical assessment of the modern world and a familiarity with the latest issues in social theory and research. The curriculum features the analysis of cultures and social institutions, of social problems and social change, and of the contribution of social science to policy formulation and implementation. The major is appropriate for students with a wide range of educational and career interests including, but by no means limited to, graduate study in sociology, health care management, communications, urban affairs, and gerontology, and to careers in business, law, government, social services, and public health. The sociology major consists of eleven courses, including the following required courses: The Sociological Perspective (Sociology 101); The Sociology Proseminar (Sociology 200); Methods of Social Research (Sociology 223); The Development of Social Theory (Sociology 241); and one advanced 300-level seminar, tutorial, or research practicum. A minimum of six departmental electives, selected in accordance with student interests and in consultation with a faculty advisor, complete the major. Three of these six electives may be anthropology courses.

The Sociology-Anthropology Track Major provides students with the opportunity to focus a significant part of their major on cultures in the non-Western world, as these regions are studied by cultural anthropologists. Anthropology can lead to further study or careers in the fields of law, development work, international business or journalism, and medicine, or to graduate studies in anthropology and the opportunity for research in such regions as South America or Southeast Asia. This twelve-course sociology/anthropology track requires preparation in both disciplines. The six courses in anthropology consist of the introductory course, The Anthropological Perspective (Anthropology 101); one course in a world area, e.g., South America (Anthropology 280) or Southeast Asia (Anthropology 275); Ethnographic Field Methods (Anthropology 210); Anthropological Theory; one advanced 300-level seminar or tutorial in anthropology; and one additional anthropology elective. The six courses in sociology include: The Sociological Perspective (Sociology 101); The Proseminar (Sociology 200); Methods of Social Research (Sociology 223); The Development of Social Theory (Sociology 241); and two additional sociology electives. All electives will be chosen in accordance with student interest and in consultation with a faculty advisor.

The Minor in Anthropology is available to students in any major except Sociology (Sociology majors interested in pursuing coursework in Anthropology in an intense way should enroll in the Sociology-Anthropology Track in the Department). The Anthropology minor provides students with the opportunity to explore non-Western cultures from a cultural

anthropological perspective. The minor consists of six courses: The Anthropological Perspective (Anthropology 101); an ethnographic methods course, either Ethnographic Field Methods (Anthropology 210) or a specialized seminar in the ethnographic approach; an anthropology course on a world area, such as Cultures of Southeast Asia (Anthropology 275) or Cultures in South America (Anthropology 280); and three additional anthropology courses chosen with the advice of the Anthropology faculty.

The Department maintains an active advising program in which faculty work closely with students to develop their academic interests. Individual students are urged to explore and develop both intellectual and career interests by pursuing individual studies, special studies in gerontology, urban affairs, and other interdisciplinary programs, research opportunities with individual departmental faculty, and local community internships. Appointment to membership in Alpha Kappa Delta, the National Honor Society in Sociology, gives recognition for distinguished academic achievement in the major.

Sociology

Introductory Course

Sociology 101 — The Sociological Perspective *Fall, Spring*
A one-semester introduction to the principles of sociological analysis. Through a critical examination of selected topics and themes, this course develops a sociological perspective for the interpretation and understanding of cultural differences, age and sex roles, discrimination, the family and the workplace, bureaucracies, stratification, the problems of poverty. One unit.

Intermediate Courses

Sociology 200 —The Sociology Proseminar *Fall, Spring*
This course is designed to introduce majors to the sociology/anthropology department. Sessions will be devoted to various topics, including planning your major in a liberal arts context, the major and careers, the professional work of faculty and advanced majors, and learning about departmental and college resources for majors. Required of majors in the semester following declaration. One-half unit.

Sociology 203 — Race and Ethnic Relations *Spring*
An examination of 1) various processes of racial and cultural contact between peoples, especially in regard to the origin and development of American minority groups, 2) various theories of racial and ethnic oppression, and 3) minority responses to oppression. Prerequisite: Sociology 101. One unit.

Sociology 205 — Structures of Social Inequality *Spring*
Examination of major patterns of international and domestic inequality. Topics include measurement of inequality, theories of development and underdevelopment and social stratification, an examination of ideologies of equality and inequality, and consideration of approaches to how existing patterns of inequality might be altered. Prerequisite: Sociology 101. One unit.

Sociology 210 — Social Change in Latin America *Alternate years*
Introduces a sociological perspective on social change in Latin America including an examination of the relationship between the United States and Latin America; a critical analysis of different explanations of underdevelopment; and an examination of policy alternatives, development strategies, and grass-roots struggles for social change. Several case studies are explored. Prerequisite: Sociology 101. One unit.

Sociology 217 — Criminology *Fall*
The study of crime and society. Areas of focus include patterns of criminal behavior, theories of crime causation, and the administration of criminal justice. Prerequisite: Sociology 101. One unit.

Sociology 219 — Deviant Behavior *Spring*
An examination of deviance as a universal consequence of social organization. The course draws from the major theories of social deviance — functionalism, political-economic theory,

the interactionist perspective, anomie theory, learning theory, and social control theory — toward an integrated theory of deviance causation. Prerequisite: Sociology 101. One unit.

Sociology 223 — Methods of Social Research *Fall*
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. Prerequisite: Sociology 101. One unit.

Sociology 230 — Social Problems and Social Policy *Occasionally*
This course examines the cultural, social, and political dimensions of social problems. Attention is paid to both the causes of and possible solutions to major problems facing contemporary society. One unit.

Sociology 235 — Community Occasionally
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. Prerequisite: Sociology 101. One unit.

Sociology 241 — Development of Social Theory *Fall*
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 — Durkheim, Marx, Weber, Simmel — and on the 20th century developments in functionalism, symbolic interactionism and the sociology of knowledge. Prerequisite: Sociology 101. One unit.

Sociology 255 — Social Psychology *Fall, Spring*
A survey of the interdisciplinary field of social psychology. Students are acquainted with: 1) the nature of the field and its range of topics, including person perception, attitudes, attraction, social interaction, and social influence processes; and 2) the theories, models, and methods used to understand human social behavior. One unit.

Sociology 256 — Self and Society *Fall*
The social processes central to the formation of the self. Development of self is traced through childhood, adolescence, young adulthood and middle age. Explicitly examines the individual's experience of everyday life — his/her confrontation with a variety of social institutions and the continually changing psychological, physiological and socio-historical contexts. Prerequisite: Sociology 101. One unit.

Sociology 257 — Aging and Society *Spring*
A thorough introduction to the sociological study of people's experience of late life. 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. Prerequisite: Sociology 101. One unit.

Sociology 258 — Childhood *Spring*
Childhood addresses the lives of children from early childhood to the beginning of adolescence. It explores childhood experiences and seeks to understand how they are shaped by the immediate social worlds of children and the institutional structures and culture of adult society. Readings include ethnographies of childhood, childhood memoirs, and children's fiction. Prerequisite: Sociology 101. One unit.

Sociology 260 — American Culture *Alternate years*
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. Prerequisite: Sociology 101. One unit.

Sociology 261 — Sociology of Religion *Alternate years*
An analysis of religion as a socio-cultural product. Emphasis on the interrelationship 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. Prerequisite: Sociology 101. One unit.

Sociology 262 — Sociology of Mental Health *Alternate years in Spring*
An analysis of mental health services as social constructions. Special attention is paid to the socio-cultural, ethnic, and political forces influencing symptomology, diagnosis, and service delivery. Topics include the history of mental health care, in-patient care and hospitalization, community services, and stigma management.

Sociology 263 — Medical Sociology *Alternate years in Spring*
A critical study of the institution of modern medicine. Special attention is paid to socio-cultural and political factors influencing susceptibility, diagnosis and treatment. Topics include the social meaning of disease, patienthood, the medical profession and the organization of medical care. Prerequisite: Sociology 101. One unit.

Sociology 264 — Sociology of Power *Fall*
A critical study of the social bases of power and of the existing constraints and limitations upon its exercise. Emphasis is given to major power theories, the forms and processes of power, and the consequences of these different understandings for the exercise and use of power. Consideration is given to the redistribution of power and its responsible use in contemporary society. Prerequisite: Sociology 101. One unit.

Sociology 268 — Social Movements *Fall*
This course (1) introduces students to some of the major 20th century social movements that have shaped contemporary U.S. society and (2) helps students understand the forces which affect our ability to effect social change today. Movements examined include the labor movement, the civil rights movement, student movements of the 1960s, the women's movement, and contemporary struggles for social change in the context of a conservative political climate. Prerequisite: Sociology 101. One unit.

Sociology 271 — The Family *Fall*
Examination of patterns in American family behavior. 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, parental decisions, family development, divorce, violence in the family. Prerequisite: Sociology 101. One unit.

Sociology 275 — The Sociology of Men *Spring*
Examines men's experiences as men and cultural blueprint for male role. Topics include men's antifemininity, homophobia, inexpressiveness, success-orientation, relations with family, and grandparenting. Prerequisite: permission of instructor. One unit.

Sociology 276 — Women and Society *Spring*
A sociological analysis of women in contemporary (primarily U.S.) society with a focus on the structural contexts that shape women's lives and place barriers on and provide opportunities for women's development. The political, economic, cultural, and personal dimensions of women's experiences are examined with attention given to racial-ethnic and class differences. Women's struggles for social change and self-definition are explored through case studies and an examination of current issues. Prerequisite: Sociology 101. One unit.

Sociology 285 — Latinos in the United States *Alternate years*
Examines the origins, experiences, influence, and future prospects for Latinos in the United States. Topics include: the origins of Latin-American immigration into the United States, the diversity of Latino cultures, the relationship between Latino communities and other racial-ethnic communities in their local environment, and organizational and cultural forms of resistance, adaptation, and survival by Latino groups. Course includes a practicum experience in the Worcester Latino community. Prerequisite: Sociology 101. One unit.

Sociology 290, 291 — Special Topics *Occasionally*
These intermediate level courses address selected sociological issues not covered by the regular curriculum. They are offered on an occasional basis; topical descriptions for specific offerings are available at pre-registration at the departmental office or from the on-line computer course handbook. Prerequisite: Sociology 101. One unit.

Advanced Courses

Sociology 319 — Special Topics in Social Control *Alternate years*
An in-depth analysis of selected topics in criminology, the sociology of law, and the sociology of deviant behavior. The issues are 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. One unit.

Sociology 324 — Social Statistics with Computer Applications *Occasionally*
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. Does not require a knowledge of computer programming, nor does it require more than a working knowledge of elementary algebra. Prerequisite: permission of instructor. One unit.

Sociology 325 — Research Practicum:
The Worcester Area Project on Aging *Occasionally*
An advanced research seminar. Students enrolling in the course become part of a research team for the on-going study of Worcester's elderly population. This hands-on opportunity for social scientific research emphasizes the involvement of students in the whole research experience including formulation of the problem, instrumentation, quantitative and qualitative interview techniques, data analysis, and the interpretation of findings. Prerequisite: permission of instructor. One unit.

Sociology 330 — The Sociology of Place *Alternate years*
Place examines the interaction of people and places. Substantively, the course investigates different types of places: homes, neighborhoods, communities, regions. Theoretically, it analyzes how people in society construct, use, and interpret places, and how places, in turn, influence social behavior and the self. Prerequisite: permission of instructor. One unit.

Sociology 341 — Sociology of Knowledge *Alternate years*
An advanced seminar in social theory examining the ways in which knowledge is socially distributed and maintained. One goal is to cover the theoretical literature in the sociology of knowledge. Another is to give that theory substance by examining various topical aspects of what people in society come to "know" about themselves and about their world. Prerequisite: permission of instructor. One unit.

Sociology 357 — Small Group Processes *Alternate years*
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; permission of instructor. One unit.

Sociology 362 — Aging and Health Care *Alternate years in Fall*
An advanced seminar critically examining the resources, including health services and family caregivers, within America's health care delivery system which are used by elders and, at times, designed for elders and their needs. Topics include medicine's understandings of geriatric patients, managed health plans, families as unpaid medical workers, and the death industry.

Sociology 363 — Health Care and Society *Occasionally*
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. Prerequisite: permission of instructor. One unit.

Sociology 371 — Family Issues *Alternate years in Fall*
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, devitalize relations. Prerequisite: permission of instructor. One unit.

Sociology 376 — Women and Work *Occasionally*
Examines women's work from both an historical and comparative perspective with experience historically and according to class, racial-ethnic, national, and family-status differ-

ences. Explanations for women's historically subordinate status in the workplace and the devaluation of "women's work" are critically examined. Included is a focus on the tension between women's work and family experiences and strategies for addressing these and other tensions. Prerequisite: permission of instructor. One unit.

Sociology 390, 391 — Selected Topics in Sociological Analysis *Annually*
A critical examination of selected topics utilizing sociological theory and research methods. Topic and staff rotate . Prerequisite: permission of instructor. One unit each semester.

Sociology 394, 395 — Directed Research *Annually*
Students may undertake independent research projects under the direct supervision of a faculty member. Individuals contemplating a research project should make inquiries during their third year, since the project is usually initiated by the beginning of the fourth year. Preference for sociology majors. Prerequisite: permission of instructor. One unit each semester.

Sociology 396, 397 — Directed Reading *Annually*
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 fourth year, and arranged on an individual basis. Open to selected students with a preference for sociology majors. Prerequisite: permission of instructor. One unit each semester.

Sociology 398, 399 — Special Projects *Annually*
Program for individual students who wish to pursue supervised independent study on a selected topic or an advanced research project. Ordinarily projects are approved for one semester. Open to selected third and fourth-year students with preference to sociology majors. Each project must be supervised by a faculty member. Prerequisite: permission of instructor. One unit each semester.

Anthropology

Introductory Course

Anthropology 101 — The Anthropological Perspective *Fall, Spring*
A one-semester introduction to the main modes of cultural anthropological analysis of non-Western cultures, such as those of Melanesia, Polynesia, sub-Saharan Africa, Native America, and village societies in South America, India, and Southeast Asia. Topics include: ethnographic methods; concept of culture; symbolic communication; ecological processes; introduction to anthropological approaches to kinship, religion, gender, social change. One unit.

Intermediate Courses

Anthropology 210 — Ethnographic Field Methods *Alternate years*
An examination of cultural anthropology's main data-gathering strategy: long-term ethnographic fieldwork of small communities, often located in quite foreign, non-Western cultures. Topics include: review of the methodology literature since Malinowski, participant observation, in-depth interviews, designing field studies, oral histories, spanning deep cultural divides via fieldwork. One unit.

Anthropology 255 — Gender in Cross-Cultural Perspective *Alternate years*
A comparative, cultural anthropological examination of the way diverse non-Western cultures define femininity and masculinity. Drawing on ethnographic studies from Melanesia, Southeast Asia, Africa, and other non-European regions, the course will analyze gender as a cultural construction in relation to other systems of social hierarchy. One unit.

Anthropology 260 — Medical Anthropology *Alternate years*
Examination of health, illness, and healing from a cross-cultural perspective. Topics include the medical system as a cultural system, the role and efficacy of traditional healers, and categories of illness causes and treatments in a variety of cultures. One unit.

Anthropology 262 — Anthropology of Religion *Alternate years*
A comparative, cultural anthropological examination of systems of religious action and belief, with special stress on non-Western village religions. Topics include: symbolic, structuralist, and ecological approaches to ritual and myth; religious changes as village societies convert to world religions; shamanism, trancing, and other major religious forms in cultures of Southeast Asia, South America, Native America, Africa, India, and Melanesia. One unit.

Anthropology 263 — Anthropology of Art *Alternate years*
A cultural anthropological exploration of non-Western village art traditions: masks, ritual sculpture and architecture, "holy" textiles, body decorations, sand paintings, and so on. These objects will be studied in relation to indigenous schemes of village thought and as changing ritual systems, which have now been transformed into primitive art and tourist art through interaction with new markets. One unit.

Anthropology 265 —Visual Anthropology *Alternate years*
This course explores the use of photography and film making in ethnographic research. Topics to be addressed include the ethics of observation; the history of ethnographic films; and problems of objectivity, aesthetics, and truth in photography and films. Historical and modern ethnographic films will be shown and analyzed to illustrate the theoretical and methodological aims of the course. One unit.

Anthropology 275 — Cultures of Southeast Asia *Alternate years*
A cultural anthropological inquiry into some of the main social systems and idea systems of village cultures of mainland and island Southeast Asia (with stress on Indonesia, Malaysia, Thailand, and the Philippines.) Attention also to processes of modernization in the region. Kinship, ritual, myth, political thought, oratory, gender in comparative, regional context. One unit.

Anthropology 276 — Psychological Anthropology *Alternate years*
This course examines the diverse ways that non-Western societies imagine the human life cycle; the cultural construction of emotion, of mind, and of self; and the comparative definitions of consciousness. This exploration of psychological themes will draw on non-Western ethnographies, particularly from Pacific and South Asian cultures. One unit.

Anthropology 280 — Cultures of South America *Alternate years*
An ethnographic survey of the traditional Amazonian and Andean peoples of South America. Through a study of selected societies, a consideration of the transformation in traditional lifestyle through the process of European contact and colonialism is presented. Topics include prehistory, subsistence patterns, language, warfare, leadership, social organization, religious practices, and culture change. Current concerns such as the cocaine trade, ethnocide, missionization, and land rights struggles will also be addressed. One unit.

Advanced Courses

Anthropology 390, 391 — Selected Topics in Anthropological Analysis *Occasionally*
A critical examination of selected topics utilizing anthropological theory and research methods. Topic and staff rotate. Prerequisite: permission of instructor. One unit each semester.

Anthropology 394, 395 — Directed Research *Annually*
Students may undertake independent research projects under the direct supervision of a faculty member. Individuals contemplating a research project should make inquiries during their third year, since the project is usually initiated by the beginning of the fourth year. Preference for sociology/anthropology majors. Prerequisite: Permission of instructor. One unit each semester.

Anthropology 396, 397 — Directed Readings *Annually*
An individualized reading program generally addressing a topic in anthropology not covered in course offerings. These reading tutorials are under the supervision of a faculty member in anthropology, usually limited to the fourth year, and arranged on an individual basis. Open to selected students with a preference for sociology/ anthropology majors. Prerequisite: Permission of instructor. One unit each semester.

Anthropology 398, 399 — Special Projects *Annually*
Program for individual students who wish to pursue supervised independent study on a selected topic or an advanced research project. Ordinarily projects are approved for one semester. Open to selected third and fourth-year students with preference to sociology/anthropology majors. Each project must be supervised by a faculty member. Prerequisite: permission of instructor. One unit each semester.

Theatre

Lynn Kremer, M.F.A., *Associate Professor and Chair*
William J. Rynders, M.F.A., *Associate Professor*
Steve Vineberg, Ph.D., *Associate Professor*

The Theatre Department offers a variety of complementary perspectives on performance. Our acting classes combine Western and Eastern techniques for training body and voice while teaching the student to interpret dramatic texts. Our dramatic literature and theatre history courses place those texts in historical and thematic contexts and focus on them as a medium for performance. Our dance courses are grounded in an understanding of dance history as well as technique and composition. Our design courses explore visual interpretations of texts in performance. Additionally, we teach directing, playwriting, mask, and film.

The fully equipped Fenwick Theatre houses the major productions of the Department, dance concerts, and other theatrical events. A range of studio productions (directed by both faculty and students), workshops, and classes take place in the Studio (O'Kane 481), in The Pit (O'Kane 37), and the Dance Studio (O'Kane 28). Work on any department production 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, Basic Acting, Theatre Design and Technical Production, Voice in Acting, Modern Dance or Understanding Dance, Shakespearean Dramaturgy, Contemporary American Playwrights or American Drama, Modern Drama or Realism or Modern Theatre or Iconoclasts or Political Theatre. Lab experience in Theatre Practicum is required for three semesters. Depending on the student's interest in Acting, Directing, Design, Literature, History, Film or Dance, electives are chosen from among the following: Scene Study, Techniques of Mask Performance, Political Expression through Performance, American Film, Production Tutorials, Anti-Realism, Acting for Audience, Film as Narrative, Film Tutorials, Acting Style, Scene Design, Lighting Design, Costume Design, Directing, Greek Drama, Acting Recital, Writing Plays, Classical Ballet 1 or 2, Beginning Modern Dance, Intermediate Modern Dance, and Dance Tutorials.

Courses

Theatre 10 — Theatre Practicum *Fall, Spring*
Participation in Theatre Department major productions through regular rehearsals or weekly lab work on costumes, scenery, properties or lighting. Students must attend all technical and dress rehearsals and performances. Required with enrollment in Theatre Design and Technical Production, Basic Acting, Scene Study, Acting Style, Voice In Acting, Scene Design and Lighting Design. One-half unit.

Theatre 161 — Theatre History 1: Classical to Romantic *Alternate years*
This course focuses on five periods in the history of western theatre: Classical Greek, Medieval, Renaissance, Neoclassical, and Romantic. Readings and viewings include plays by Aeschylus, Sophocles, Euripides, Aristophanes, Shakespeare, Moliere, Racine, Corneille, Gay, Sheridan, and Wilde. One unit.

Theatre 162 — Theatre History 2: Modern and Contemporary *Alternate years*
This course studies modernist movements in western theatre: realism, expressionism, surrealism, epic theatre, poetic theatre, theatre of the absurd. Readings and viewings include plays by Ibsen, Strindberg, Shaw, Chekhov, O'Neill, Durrenmatt, Brecht, Williams, Pirandello, Beckett, Baraka, and Guare and films by Lang, Pabst, Scorsese, and Cocteau. One unit.

Theatre 60 — American Film *Fall*
This introductory course teaches the student how to "read" a movie. Films are presented by genre, with conventional examples of each genre paired with movies that play with, undercut or expand the conventions. The syllabus includes movies from 1930 to the present. One unit.

Theatre 70 — Modern Theatre *Fall*
An introductory study of modern playscripts through close critical reading of the texts in their cultural and theatrical contexts and through in-class performance projects. It also includes a practical introduction to acting. One unit.

Theatre 81 — Understanding Dance *Alternate years*
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 work. One unit.

Theatre 101 — Basic Acting *Fall, Spring*
This course offers, through classroom exercises, improvisations and performance of scenes from plays, an approach to understanding, appreciation and practice of the art of acting and theatre. One unit.

Theatre 102 — Voice in Acting *Alternate years*
Students learn how to correct regionalisms, support the voice, and increase range and flexibility in songs and dramatic texts. Healthy vocal production, relaxation and power are emphasized. One unit.

Theatre 203 — Scene Study *Spring*
This is an intensive scene study class. Plays ranging in style from Restoration to contemporary are analyzed and performed. Physical and vocal exercises from Basic Acting will be continued with the addition of period style work. One unit.

Theatre 126 — Scene Design *Spring*
Principles of scenic design and script analysis as they are used to create an environment for the action of the play. Includes an historical survey of scenic design, theatre architecture, period style, drafting, and rendering techniques. Work on a set for a Fenwick production provides practical experience. One unit.

Theatre 151 — Shakespeare Dramaturgy *Fall*
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. One unit.

Theatre 125 — American Drama *Alternate years*
American plays from the early work of Eugene O'Neill through contemporary dramatists are explored as theatre (through film and video) and as dramatic literature. The course looks at drama in historical and thematic contexts and as the expression of major American playwrights. One unit.

Theatre 304 — Acting Style *Fall*
This advanced class focuses on Shakespearean scene study and monologues. Students will prepare contrasting audition pieces that will be juried at the end of the semester. One unit.

Theatre 206 — Techniques in Mask Performance *Alternate years*
This course develops the student's awareness of the historical and cultural significance of mask drama. Indonesian, South East Asian, and Japanese techniques will be used to teach actors how to connect physically, vocally and emotionally. One unit.

Theatre 127 — Theatre Design and Technical Production *Fall*
This course will examine the management structure, personnel, training and responsibilities required to mount a live theatrical production during the planning, preparation and performance phases. It also explores the function and responsibilities of the design team. Class projects and enrollment in Theatre Practicum provide practical experience in many areas. One unit.

Theatre 228 — Lighting Design *Alternate years in Spring*
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. One unit.

Theatre 240 — Directing *Alternate years in Spring*
Essentials of the art of directing. 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. One unit.

Theatre 150 — Writing Plays *Alternate years in Fall*
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. One unit.

Theatre 200 — Iconoclasts *Occasionally*
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. One unit.

Theatre 201 — Anti-Realism *Alternate years*
Symbolism, surrealism, and absurdism in the theatre. Representative plays will be studied through analysis and performed. One unit.

Theatre 261 — Film as Narrative *Occasionally*
An advanced course dealing with narrative issues in film (point of view, time, structure, style, tone, adaptation). The syllabus includes American, British, French, Italian, Japanese and Scandinavian movies. One unit.

Theatre 263 — American Artists *Alternate years*
This advanced course is an intensive study of the work of two playwrights and/or filmmakers. The authors on the syllabus vary, according to the current offerings of the Fenwick Theatre season and other considerations. One unit.

Theatre 128 — Political Theatre *Alternate years*
This course examines theatre and film that espouses a specific political point of view or just presents political content. The works on the syllabus deal with war, revolution, oppression, gender and cultural issues, the Holocaust, and populism, among other topics. One unit.

Theatre 086 — Ballet 1 *Fall*
Beginning Ballet technique. One unit.

Theatre 253 — Ballet 2 *Spring*
Intermediate Ballet technique. One unit.

Theatre 085 — Beginning Modern Dance *Fall*
This is a basic introductory modern dance technique course. Students will learn to master beginning modern dance exercises and movement combinations. One unit.

Theatre 285 — Intermediate Modern Dance *Spring*
Intermediate modern technique plus choreographic problems. One unit.

Theatre 305 — Acting Recital *Fall*
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. One unit.

Theatre 306 — Acting for Audience *Spring*
Advanced acting work in a major role. One unit.

Theatre 400 — Tutorial/Theatre *Fall, Spring*
Directed study in selected theatre, dance and film topics such as acting, directing, playwriting, literature, dance, stage management, set, costume, lighting and sound design, film history, film acting and screen-writing. One unit.

Visual Arts

Virginia C. Raguin, Ph.D., *Professor*
Rev. John P. Reboli, S.J., Ph.D., *Associate Professor*
Susan P. Schmidt, M.F.A., *Associate Professor and Chair*
Joanna E. Ziegler, Ph.D., *Associate Professor*
Marion Schouten, M.F.A., *Assistant Professor*
Sarah Slavick, M.F.A., *Assistant Professor*
Ellen Lawrence, M.A., *Lecturer*
Robert H. Harrison, M.F.A., *Visiting Assistant Professor*
Sharon McConnell, M.F.A., *Visiting Assistant Professor*

The Visual Arts curriculum is designed to increase student sensitivity to the arts, refine the powers of critical analysis, and provide students 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.

There are two divisions in the Visual Arts Department, Art History and Studio Art. Students may major or minor in either Art History or Studio Art. Students may also combine a major in one area with a major or minor in the other.

The *Art History Major* requires a minimum of ten courses. This includes Introduction to the Visual Arts, one studio course (e.g. 2D or 3D Fundamentals or Photography), and four electives in art history, with one in any four of the following areas: Ancient, Medieval, Renaissance, Baroque/18th Century, Modern, Architectural History. The Concentration Seminar is mandatory. Normally, it will be expected that the remaining three courses be taken as seminars offered by the Department of Visual Arts (History). Exceptions will be granted on an individual basis for students to substitute pertinent courses in other disciplines, such as anthropology, philosophy, literary criticism, or history. Students may develop such sequences in consultation with their advisor after a written proposal has been reviewed and accepted by the Art Historians.

The *Minor in Art History* is available to students in any major, including Studio Art. The Art History minor provides students with the opportunity to explore the history of visual images. The minor consists of six courses: The Introduction to Visual Arts or Survey of Art History (required); three courses distributed between six areas of the discipline (Ancient, Medieval, Renaissance, Baroque/18th century, Modern and Architectural Studies), and two additional electives (not necessarily in the History of Art) chosen with the advice of the Art History faculty. The Concentration Seminar for majors is also available as an elective.

The *Studio Art Major* requires a minimum of ten courses, beginning with 2D and 3D Fundamentals and Fundamental Concepts of Studio Art. Studio Art majors take at least two sequential courses in a particular media, such as Painting I and II or Sculpture I and II. Two Art History classes are required (Contemporary Art is strongly recommended). Students with extensive previous experience in studio art or with specific program needs may be allowed to move directly to intermediate courses with the permission of the instructor. During the third or fourth year, studio majors take the Studio Concentration Seminar, which combines individual studio work with readings, discussions, and trips to exhibitions. The remaining elective courses are selected from Drawing, Painting, Photography, Sculpture, and Printmaking, plus Special Topics courses such as "Photo Projects," "Installation Art" and "Prints & Books, Words & Images." Studio majors end the year by exhibiting a body of their work in the Senior Show. There is an active program of events for the Studio Art majors. Each semester, their art work is evaluated in a required Majors and Minors Review. Majors present their work each spring in the student-run Majors Exhibition. Studio Art events for majors also include a student exhibit space, "GESSO," Visiting Artist talks and trips to museums and galleries.

The *Studio Art Minor* requires a total of six courses including 2D and 3D Fundamentals plus the Studio Concentration Seminar or an Art History course. The remaining three elective courses may be chosen from Fundamental Concepts of Studio Art, Drawing, Painting, Photography, Sculpture, Printmaking, plus Special Topics courses. Each semester, the work of Studio Art minors is evaluated in the required Majors and Minors Review. There are many Studio Art events recommended for minors, such as GESSO, Visiting Artist talks, and trips to museums and galleries.

Visual Arts History

Introductory Courses

Visual Arts History 101 — Introduction to The Visual Arts *Fall*
This is the fundamental, introductory course in art history and visual culture in the Department. The format combines team-taught lectures attended by all students with small group meetings taught by individual faculty. Emphasis is placed on the acquisition of basic visual skills and an understanding of the major periods in the history of art. Exposure to works of art through the collections of The Worcester Art Museum is an integral part of the course. One unit.

Visual Arts History 102 — Survey of Art: Renaissance to Modern Art *Spring*
A cultural history of the major periods of western art since 1400: Renaissance, Baroque, Modern Art. The emphasis is on developments in painting, sculpture and architecture during these periods. Social and historical factors which influenced the art are also given attention. One unit.

Intermediate Courses

Most intermediate courses presume Introduction to The Visual Arts. 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 204 — Medieval Art *Annually*
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. Receives both Arts and Religion Distribution requirements. One unit.

Visual Arts History 205 — Early Renaissance Art *Annually*
This course examines painting and sculpture of the 14th and 15th centuries in Italy in terms of historical and cultural context, for example, the evolution of secular art and the status of the artist. One unit.

Visual Arts History 206 — Northern Renaissance Art *Annually*
The Renaissance in the North extends from the 14-16th centuries in Germany, the Lowlands, 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 Dürer, is included. One unit.

Visual Arts History 207 — Baroque and Rococo Art *Alternate years*
This course studies the diverse styles that emerged in European painting, sculpture and architect 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: Permission of the instructor. One unit.

Visual Arts History 209 — Nineteenth Century Art *Fall*
This course concentrates on the 19th century with emphasis on French developments, Neoclassicism, Romanticism, Realism, Impressionism, and Post Impressionism. Prerequisite: Permission of the instructor. One unit.

Visual Arts History 210 — Twentieth Century Art. *Spring*
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: Permission of the instructor. One unit.

Visual Arts History 212 — High Renaissance Art *Annually*
This course covers painting and sculpture of the 16th century in Italy, especially the developments of the High Renaissance in Florence and Rome and the evolution of Mannerism and the maniera in the latter half of the century. Major figures to be studied include Leonardo da Vinci, Raphael, Michelangelo, and Titian. Prerequisite: Permission of instructor. One unit.

Visual Arts History 240 — Modern Architecture *Spring*
Exploration of the major movements and architects of European and American modernism of the 20th century. Strong emphasis on critical reading, class discussion, and preparation of research projects and/or models. One unit.

Visual Arts History 243 — Introduction to Greek Archaeology *Fall*
Offered by the Classics Department (Classics 152). Cross-registered with Art History. One unit.

Visual Arts History 244 — Introduction to Roman Archaeology *Spring*
Offered by the Classics Department (Classics 150). Cross-registered with Art History. One unit.

Visual Arts History 245 — Ancient Sculpture *Occasionally*
Offered by the Classics Department (Classics 153). Cross-registered with Art History. One unit.

Visual Arts History 247 — Ancient Sanctuaries and Religion *Spring*
Offered by the Classics Department (Classics 192). Cross-registered with Art History. One unit.

Criticism and Themes

Visual Arts History 220 — Structures of Faith *Annually*
This course qualifies for both Arts and Religion Distribution Requirements. Lectures cover the development of religious buildings. A variety of buildings, ornate and plain, Catholic, Protestant, and other faiths are included. Students also receive hands-on experience studying churches in the Worcester area or their home towns. Recommended for students considering careers in preservation or architecture. One unit.

Visual Arts History 227 — Philosophy of Architecture *Alternate years*
The relationship between architectural forms and the basic character of human dwelling and its implications are the focus of this course. It presents an opportunity to study the philosophy of architecture by studying architecture philosophically. In addition to readings from traditional and contemporary literature, aesthetics and architectural theory, we shall reflect on these issues by looking at and responding to architectural examples. The goal is to reach a deeper understanding of architecture and of the role it plays in our lives. Cross-listed with Philosophy 187. One unit.

Visual Arts History 230 and 231 — Architectural Studies 1, 2 *Annually*
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. One unit.

Visual Arts History 232 — Sculpture Since the Renaissance *Occasionally*
This course analyzes major sculptural concepts beginning in the Renaissance but with emphasis placed on the modern world. Prerequisite: Survey II. One unit.

Visual Arts History 233 — Sculpture Seminar *Occasionally*
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. One unit.

Visual Arts History 234 — The Painter in the Modern World *Spring*
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. One unit.

Visual Arts History 235 — Sacred Spaces *Occasionally*
The evolution of sacred architecture (temples, churches, mosques, etc.). Thematic rather than historical; close attention is given to the imagery and intent of spatial design. Prerequisite: permission of the instructor. One unit.

Visual Arts History 236 — Narrative in Art and Film *Annually*
Introductory course to narrative structures in both film and the visual arts. Students view a wide variety of films; comedy, silent and drama, from foreign as well as American directors. Film theory is included. One unit.

Visual Arts History 260-299 — Special Topics in Art *Annually*
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. Examples of recent Special Topics are:

Nineteenth Century Realism *Fall*
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: Nineteenth Century Art. One unit.

Seminar: Architectural Criticism *Occasionally*
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 1 and 2. One unit.

Exhibition Seminar *By arrangement*
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: third and fourth-year students only and permission of the instructor. One unit.

Advanced Courses

Visual Arts History 301 — Concentration Seminar *Fall*
This course, designed for majors, 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. One unit.

Visual Arts History 320-350 — Tutorials *Annually*
Tutorials relate to all areas covered by Visual Arts History 200 courses. One unit each semester.

Visual Arts Studio

Introductory Courses

Visual Arts Studio 101 — 2-D Fundamentals *Fall, Spring*
One of two basic courses, 2-D Fundamentals introduces the student to aspects of the studio program. Studio work in various media, slide talks, regular class critiques and discussions, and visits to museums insure the beginning student of a solid introduction to the creative process. Emphasis is on participation and sensitivity to issues, not on skill-level. This course, which is taught by the studio staff, is one of the prerequisites for all intermediate courses. One unit.

Visual Arts Studio 102 — 3-D Fundamentals *Fall, Spring*
An introductory course that will stress the importance of 3 dimensional art, including building, modeling, constructing as an important communication medium. The emphasis will be on the development of new ideas rather than on the completion of artwork. Students will learn to discuss art critically, not only art made by others but also their own. One unit.

Visual Arts Studio 103 — Fundamental Concepts of Studio Art *Fall, Spring*
This introductory course gives students the opportunity to challenge their problem solving skills by integrating their art making with academic interests. Course content will encourage students to develop their own ideas and concepts, and become independent thinkers and doers. The course will familiarize students with a wide range of ideas and concepts, media and approaches utilized by contemporary artists.

Visual Arts Studio 121 — Drawing 1 *Annually*
Experience drawing from still life, the figure, imagination and ideas. Emphasis on charcoal, with other drawing materials explored. Personal involvement with your work and participation in group critiques is essential. Prerequisite: 2-D or 3-D Fundamentals. One unit.

Visual Arts Studio 130 — Photography 1 *Fall, Spring*
A beginning course for students with a serious interest in the creative use of black and white photography. Teaches exposure controls, camera operation, and rudimentary film developing and printing. Continuous work and advancement is achieved through creative photography assignments and criticism. One unit.

Visual Arts Studio 131 — Photography 2 *Spring*
A more advanced course in the fundamentals of creative photography. Introduces principles of optics, cameras, lighting, films, photographic chemistry, and materials. Visits to museums and galleries in the Boston and Worcester area are required. Continuous work and advancement through creative assignments in photographing, processing, printing and criticism. Individual projects, class presentations, and an exhibition of the students' work in a gallery presentation are also required. Prerequisite: Photography I. One unit.

Intermediate Courses

Visual Arts Studio 200 — Painting 1 *Fall, Spring*
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 human-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: 2-D or 3-D Fundamentals. One unit.

Visual Arts Studio 201 — Painting 2 *Fall, Spring*
Introduces the student 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. One unit.

Visual Arts Studio 202 — Painting 3 *Fall, Spring*
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 2. One unit.

Visual Arts Studio 206 — Drawing 2 *Occasionally*
This course emphasizes more advanced drawing concerns for those who wish to expand seeing and drawing skills. Emphasis will be on development of personal style rather than realistic rendering. Topics will include the exploration of use of color while working with the figure, landscape, and other subjects of choice. Personal involvement with your work and participation in group critiques is essential. Prerequisite: Drawing I or Life Drawing. One unit.

Visual Arts Studio 207 — Life Drawing *Fall, Spring*
Students work from the model each session. Emphasis on a structural understanding of the figure and on expressive approach to drawing. Students work in a range of media including charcoal, oil stick, acrylic paint and wash. In addition to classwork, students work on independent projects in drawing. Personal involvement with your work is essential. One unit.

Visual Arts Studio 210 — Printmaking 1 *Fall*
This course emphasizes printmaking as an expressive medium. Students are encouraged to use various techniques experimentally and in service of their personal imagery. Printmaking 1 concentrates on Intaglio — printing from metal plates onto paper. Intaglio processes include etching, aquatint, sugar-lift, soft-ground drypoint, and the electric engraver. Photo etching and beginning color printing will be explored. Prerequisite: Any Drawing course or 2D Fundamentals One unit.

Visual Arts Studio 211 — Printmaking 2 *Spring*
This course continues with a focus on advanced intaglio printing. Students also explore monotypes — single images made from paintings on Plexiglas. This course stresses developing individual ideas in printmaking and ends with an exchange of editioned prints between members of the class. Prerequisite: Printmaking 1 or permission. One unit.

Visual Arts Studio 220 — Sculpture 1 *Fall, Spring*
Sculpture 1 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: 2D or 3D Fundamentals. One unit.

Visual Arts Studio 221 — Sculpture 2 *Spring*
This course allows the student to continue in-depth work in selected materials of sculptural expression. Students will design their own assignments and work on them independently. Throughout the course, students will participate in group critiques to discuss, not only the finished work, but more importantly, the work in progress. Prerequisite: Sculpture I. One unit.

Visual Arts Studio 230-250 — Special Topics in Studio Art *Annually*
Special Topics in Studio Art are offered by all professors. These courses study special techniques or concepts outside the present course offerings, which respond to particular issues in current art. Recent Special Topics courses have included "Installation Art," "Prints & Books, Words & Images," and "Photo Projects." Prerequisite: 2D or 3D Fundamentals. One unit.

Advanced Courses

Visual Arts Studio 301 — Studio Concentration Seminar *Spring*
The Studio Concentration Seminar is an advanced studio course combining individual work in various media with reading and discussion on contemporary art practice. This class visits New York and Boston galleries to look at current work. This course is required for Studio Art Majors during their Junior or Senior Year and open to Studio Art Minors. Prerequisite: Permission of the instructor. One unit.

Visual Arts Studio 320 — Tutorials *Annually*
Tutorials relate to all areas covered by Visual Arts Studio 200 courses. One unit.

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 nine national awards for the maintenance and appearance of the campus, included Best Maintained Campus in the U.S. twice. Two-dozen major buildings dot the campus.

Libraries

At Holy Cross, libraries are considered central to the educational mission of the College. The libraries place great emphasis on instruction with the goal of helping students become information independent during their four years at Holy Cross. The system includes three libraries: the main library, Dinand; the O'Callahan Science Library; and the Fenwick Music Library. The libraries presently house a combined collection of more than 510,000 volumes and more than 2,500 professional and scholarly journals.

Dinand Library, with a shelving capacity of 510,000 volumes, has seating for over 800 readers, and serves as the system's central information and processing facility. Two wings to Dinand were dedicated in 1978 to the memory of Joshua and Leah Hiatt and all the victims of the Holocaust. A special Holocaust collection of books and other materials is under constant development, and now numbers over 5,000 volumes. Dinand's main reading room contains 10 terminals which access the on-line catalog and a public OCLC terminal. The library is a subscriber to the OCLC and First Search Services. It also contains major reference works, and facilities for research and reading. On the second floor of Dinand are the Reserve Book area with its large reading room, the microform area, video viewing facilities, the Inter-Library Loan Department, and the library photocopy center.

The Serials Department offers multiple research indexes to journals in art, humanities, social sciences, theology, philosophy, and economics. More than 50 newspapers are received and The New York Times from 1851 to the present is on microfilm. CD-ROM equipped PC work stations provide computerized searching of periodical indexes and abstracts.

Additionally, on-line versions of three Wilson Indexes, *Social Science Index, the Humanities Index,*and *the General Science Index;* the *Modern Language Bibliography* (MLA); and *PsychLit* are available to users over the campus Network.

The Reference Department provides scheduled, course-specific bibliographic instruction classes as well as the customary on-demand reference service. A special emphasis is placed on the use of the on-line catalog and the CD-ROM work stations. A mandatory instructional tour is a central component of first-year orientation.

The Library's INTERNET GATEWAY provides direct access to the catalogs of hundreds of major university and research libraries around the world as well as access to the vast array of data bases now available on the INTERNET.

The Technical Services Division operates three OCLC terminals for the acquisition and cataloging of books. The library operates an automated on-line library system purchased from Data Research Associates. This enables the library's entire holdings to be accessed from any campus networked terminal.

The library is open for operation 111 hours per week. Located throughout the library are banks of PCs and VAX terminals freely available for student use.

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 for Higher Education. 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 collection of more than 3,000,000 volumes.

The Special Collection is located in Dinand. It contains six incunabula (printed prior to 1500), 15th to 17th century Jesuitana, Americana (books published in America prior to 1820), John Henry Cardinal Newman letters and first editions, the scrapbooks of James Michael Curley, and the correspondence of Louise Imogene Guiney.

The O'Callahan Science Library, located in Swords Hall, contains more than 80,000 books and bound periodicals in biology, chemistry, computer science, mathematics, neuroscience,

and physics, as well as the history, biography, and ethical concerns of science, medicine, and technology. Completed in 1986, this facility seats more than 100, and offers an expanding menu of electronic access to scientific data bases. With all these resources, and over 630 subscriptions to current journals, it ranks as one of the strongest special libraries for science among U.S. liberal arts colleges.

The Fenwick Music Library, which is located in the east end of Fenwick Hall, has a collection of 2,300 compact discs, 6,000 books, 6,500 music scores, 600 videos, and 7,000 LPs. A gift of more than 8,000 opera recordings provides added richness to this collection. The Music Library is equipped with turntable/amplifier units, CD players and cassette decks for both course-related and pleasure listening. VCRs, televisions, and laser disc players also are available for viewing the library's videos.

Students find in all of these facilities a warm and friendly environment that encourages study, reflection and intellectual growth. A highly competent, friendly and accessible library staff is available and ever willing to provide a vast array of services and assistance to students and faculty.

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, automated bank tellers, a cafeteria, pizza parlor, pub, private dining rooms, ballroom, duplicating center, and FAX facilities. In addition, day-student facilities are provided to accommodate the needs of non-resident students.

A Campus Center Board of Directors 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 residence halls are located on the upper level of the campus, in line with the Hogan Center. Two others, which have been renovated into suite accommodations, are located at opposite ends of the Kimball quadrangle. One residence is adjacent to Dinand Library, and Loyola Hall which is near St. Joseph Memorial Chapel.

The Chapels

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 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 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, and the music library. In 1994, music department facilities in Fenwick were totally renovated and were named the John E. Brooks, S.J. Center for Music. At the same time, the original college chapel was converted into the Brooks Concert Hall, which has been acclaimed by performers and acoustical experts as one of the finest medium-sized performance auditoria in the region. The Iris and B. Gerald Cantor Art Gallery, which displays changing exhibits, is located on the first floor of O'Kane Hall.

Information Technology Services

The Information Technology Services (ITS) department strives for continuous improvement in providing production and support services for the desktop, information systems, and network services.

A staffed Help Desk provides a first point of contact for user assistance, problems, and network issues. Support is given for a wide variety of products and services, including DOS, Macintosh, electronic mail, word processing, residence hall networking, Internet connectivity, and the on-line campus-wide information system.

The College maintains more than a dozen computing laboratories located across the campus. Four are general access facilities, available to all students, faculty and staff. The O'Kane student computing laboratory is available seven days per week, twenty four hours per day, and contains numerous Windows and Macintosh PCs, several printers, and stations for browsing the Internet or Campus-Wide Information System. Another lab is the 'computer classroom' in Stein that contains 24 IBM compatibles and a printer. That lab is used extensively as a classroom, but is available as a general lab at non-class times.

The Desktop Services group of the ITS department provides software assistance to students on the Microsoft Office suite of products, including Microsoft Word for word processing. Training courses are offered throughout the year and individual consultations are provided by Help Desk, student, and professional staff. The Help Desk is located in the basement of Fenwick Hall along with the other ITS offices.

The College is into a two year dormitory network project that will replace the low-speed dial-up access in the dorms with high-speed lines, enabling full graphical Internet browsing and access to the campus-wide information system.

Starting again this fall, the College Bookstore will be selling Compaq computers and related software at competitive prices.

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.

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 its 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.

Edith Stein Hall

Completed in 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; facilities for the audio visual department; a computer-instruction laboratory with 24 personal computers and printer; and a state-of-the-art, computer-equipped 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. Variation from this 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 SAT I or ACT and three SAT II: Subject Tests directly from the appropriate testing service. The SAT II Writing Subject Test is required of all applicants and if possible should be taken in December of the senior year of high school. Students wishing to satisfy the College's foreign language requirement or simply continue the study of a foreign language should take the appropriate Subject Test. Other tests may be of the candidate's choosing, preferably in subject areas in which he or she 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, and through the candidate's statements on the application.

The College limits the number of students accepted to the economics-accounting major and the biology major. Candidates interested in these academic areas should 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. Candidates may file the College's institutional application or the Common Application. 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.

The College of the Holy Cross 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. Group information sessions are held on several Saturday mornings during the fall. These sessions include a presentation by a member of the Admissions staff, 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 observe classes and to meet informally with our students and faculty members. Student visitors may enjoy meals in the College's dining hall and spend the night in a residence hall. This is an excellent opportunity to experience Holy Cross as our own students do.

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 5.**

To arrange any of the above, please write or call the Admissions Office (800-442-2421).

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. Students may file an Early Decision application bewteen November 1 and January 15. Decisions will be made on a rolling basis. Students will be notified of the decision approximately three to four weeks from receipt of ALL required credentials. Early Decision candidates may file applications for regular admission to other colleges, but upon notification of acceptance to Holy Cross, other applications must be withdrawn immediately and a validating, non-refundable tuition deposit of $200 be submitted.

A personal interview, either on campus or with an alumni interviewer, is recommended for all Early Decision candidates and should be arranged well in advance. Should the Admissions Board be unable to grant acceptance, the application will either be denied or deferred for consideration in the regular pool. 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.

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, fulfilled their graduation requirements and have the full support of their high school. 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 second and third-year 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 highly recommended for all transfer candidates. Because of departmental limitations, transfer students are admitted as biology or economics-accounting majors on a space available basis.

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.

First-Year 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
1 College Street
Worcester, MA 01610-2395
508-793-2443
1-800-442-2421

Expenses

Tuition	$18,900	Leave of Absence Fee, each semester	$30
Room and Board	6,500	Graduation Fee	100
Health Service Fee	215	Transcript	2
Student Activities Fee	145	I.D. Card	5
Application Fee	50	Health Insurance	Optional Charge

Acceptance Deposits

Candidates are usually notified of acceptance from January to April, and are obliged to forward a 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. First-year students 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 $900. Books and supplies average about $400 for the year.

Payment of Tuition 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 3573, Boston, Mass. 02241-0573. A student Medical Insurance Plan charge is included on the statement. Descriptive pamphlets are mailed to each student. A waiver of participation must be forwarded to the Bursar if the insurance is not needed. Upon receipt of the waiver the premium charge will be removed. At this time, the College works exclusively with Academic Management Services to handle monthly installment plans. Information regarding the particulars of this plan are sent to current, as well as prospective students on a yearly basis. Students may also call directly for additional information and pamphlets at 1-800-635-0120.

To avoid problems with student registration and a late payment fee, 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 reoccupied 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 1996-97 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.

In 1994-95, the College administered a total of more than $23,000,000 in *need-based* financial assistance to more than 1700 students with an average package of loan, work, scholarships and grants totaling $15,600.

Financial need is the difference between the cost to attend Holy Cross and the amount a family is expected to provide towards the education of the student as determined by the College's professional staff. We use a conservative application of a needs-analysis procedure, Institutional Methodology, which is agreed upon by many members of the national College Scholarship Service Assembly. The approach to this analysis is rigorous but fair. However, it typically results in a determination of need for Holy Cross assistance which differs from the Federal Methodology determination of program eligibility that is used for federal Title IV assistance, which includes the Federal Stafford Loan Program, Federal Pell Grants, Federal College Work Study, and several other federal Title IV assistance programs. The Financial Aid Committee expects families to provide their share of support to the student from both 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 parents in cases where there is a separation or divorce. The non-custodial parent is required to file a Divorced/Separated Parent Statement. A Business/Farm Supplement is required in cases where the family operates a business or farm. These are special forms and they are available in high school guidance offices or from college financial aid offices.

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.

First-Year Students

To apply for assistance, an incoming student must indicate on the admissions application that he or she would like to be considered for Holy Cross financial aid. Also, a student must file ***both*** a Free Application for Federal Student Assistance (FAFSA) and register with the College Scholarship Service by filing a ***PROFILE*** document to be considered for ***both*** Federal Student Assistance and *need-based* Holy Cross scholarships. Both the FAFSA and the ***PROFILE*** should indicate that the College of the Holy Cross should receive a copy of the analysis report. Students who file only a FAFSA will be considered only for Federal Student Assistance. Both forms will be available in secondary schools in the late Fall, and the on-time filing date for priority consideration is February 1. A student who fails to indicate that they wish to be considered for financial aid on the admissions application and later decides to apply for financial aid must do so by writing directly to the Director of

Financial Aid indicating the change. Students who enroll and who have been tendered financial assistance will be required to submit true copies of both parent and student federal income tax returns for the immediately preceding year must be submitted to the Financial Aid Office before final action is taken on their award. Alternate documentation is required in instances where a tax return is not filed by either party.

Upperclass and Renewal Awards

Each year Holy Cross students who receive College-administered financial assistance must file a new FAFSA and ***PROFILE***, a Holy Cross financial aid application, and true copies of the federal income tax returns for the immediately preceding tax year. Forms will be mailed to each family that has received aid in the past year. They are also available in 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 as determined by the College and the availability of funds. April 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 ensure 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 by late June, and notification of award in the case of a new request is made by August 15.

Scholarships

Each year, more than 300 first-year students are awarded Holy Cross Scholarships with stipends ranging from $200 to more than $18,900 depending on the student's financial need. Each applicant is considered for all awards for which he or she may be eligible, including many endowed and restricted scholarships. For First Year applicants to Holy Cross no special application other than the FAFSA and the ***PROFILE*** is necessary to be considered for assistance at Holy Cross. In general, scholarship assistance will be renewed each year provided the student continues to demonstrate need for such assistance. Stipends, however, will be adjusted in accordance with college renewal policy for upperclass students or 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 determine their application deadline and to make application early in the academic year.

Connecticut
Connecticut Scholastic
Achievement Grant Program
Department of Higher Education
61 Woodland St.
Hartford, CT 06105

Maine
Department of Educational &
Cultural Services
Higher Education Service
Vickery-Hill Building
State House Station 19
Augusta, ME 04333

Massachusetts
Commonwealth of Massachusetts
Office of Student Financial Assistance
330 Stuart St.
Boston, MA 02116

New Jersey
Department of Higher Education
Office of Student Assistance
CN540
Trenton, NJ 08625

Pennsylvania
Higher Education Assistance Agency
660 Boas St.
Harrisburg, PA 17102

Vermont
Vermont Student Assistance Corporation
P.O.Box 2000
Winooski, VT 05404

Rhode Island
Rhode Island Higher Education
Assistance Authority
Grants and Scholarships
560 Jefferson Blvd.
Warwick, RI 02886

Grants

Pell Grants:
The Federal Pell Grant Program provides grants directly from the Federal Government in amounts ranging up to $2,340 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 federal Pell Grant application (FAFSA) as a requirement of applying for other assistance at Holy Cross. Processing time is approximately six weeks, after which a Student Aid Report (SAR) is returned to the student applicant by the Pell processor. The SAR should be forwarded to the Financial Aid Office at the College for final processing of the Federal Pell Grant.

Federal 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. Students who are eligible for Pell Grants will receive priority consideration for this program. 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 Federal Stafford Student Loan Program:
This is the primary source of educational loans and eligible students may borrow directly from lenders to finance educational expenses. The interest on this loan may be subsidized or non-subsidized. Each borrower must file a FAFSA in order to receive a determination of his or her eligibility for the interest subsidy. Student borrowers will have their applications processed electronically by the Financial Aid Office unless a student directly informs the office that they wish to apply to a lender of their own choice. The maximum amount of loan under this need-based program is $2,625 the first year, $3500 for the second, and $5500 for students who have completed two years of study for a five-year undergraduate total of $23,000. The interest rate is based on the 91 day treasury bill rate plus 3.1 percent, not to exceed 9 percent. Repayment begins six months after graduation from college, graduate school or termination of studies and may extend beyond 10 years. Typical repayment in the Stafford Program would be $127 per month for 120 months on a loan of $10,000 at 9 percent. 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.

Federal Perkins Loan:
Holy Cross administers a limited number of loans under the authority of this Federal program. These loans carry an interest rate of 5 percent simple interest. Repayment and deferment provisions are similar to the Federal Stafford Program, which is described above. A student may borrow up to $20,000 over four years in the Federal 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 $64 per month for 120 months at 5 percent.

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 who are determined by the College to be most in need for this loan.

It is possible that the U.S. Congress will change the regulations governing the federal Title IV Student Financial Assistance programs mentioned above sometime during 1995. Students should be alert to this possibility, since these programs may be altered, canceled, or revised in ways which will require families to reconsider their college financing plans.

Federal Parent Loans for Undergraduate Students (PLUS):
This is a federal program and is in operation in most states. Parents may borrow up to the difference of the cost of education minus other financial aid each year. The rate of interest is variable based on the 52-week Treasury Bill plus 3.1 percent <197> not to exceed 9 percent. The 1995-96 rate is estimated to be 9.00 percent. Repayment of PLUS loans usually begins within 60 days after note signing and extends up to 10 years.

Processing a Federal 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 (MassPlan):
Holy Cross provides two additional ways for parents to finance their children's education. The MassPlan, administered in conjunction with the Massachusetts Education Finance Authority (MEFA), 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 10 or a 14-year period at a guaranteed fixed rate or a variable interest rate, which is based on the interest rate for each bond issue. The borrower's rate for 1995-96 will be a fixed rate of 7.95 percent (8.59 APR) or a variable rate which is determined each month. Current rates may be determined by calling 1(800)842-1531 from 9 a.m.. to 5 p.m. EST. Monthly payments for the fixed rate loan in 1994-95 equal $9.90 per $1,000 borrowed.

The MassPlan was developed by the MEFA 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, which has no application fee, 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 with level monthly payments, or a variable interest rate 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 recordkeeping.

(4) No Prepayment penalty for early retirement of this loan

Interested families should contact the Financial Aid Office for instructions and applications for this program.

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 first academic year. First-year students should not count on earning any substantial sum through employment on campus if their financial aid award does not contain an authorization for CWSP or if the number of eligible students restricts placements of all students who are eligible for work study.

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 Counseling Center and Career Planning Office in Hogan Campus Center serves as a "clearing house" for such opportuni-

ties. A file in this office is maintained to provide notice of work-study positions that become available.

ROTC Scholarships and Stipends

The Navy ROTC program offers full and partial tuition scholarships to selected cadets and midshipmen. A full four year NROTC scholarship student attending Holy Cross receives a tax-free stipend (currently $100 per month) as well as a Holy Cross NROTC Scholarship Incentive Grant which is equal to standard room charges each year. Additional information can be obtained by directly contacting the Naval ROTC office on campus.

Army and Air Force ROTC are offered at Worcester Polytechnic Institute and, through the Worcester Consortium, Holy Cross students may enroll in one of those programs. Additional information is available by contacting the Professor of Military Science or Professor of Aerospace Studies, Worcester Polytechnic Institute, Worcester, Mass. 01609.

Additional Information

Because appropriations for the federal budget for 1996 were 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, Stafford 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
1 College Street
Worcester, Mass. 01610-2395
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 George I. Alden Scholarship: Established in November 1993 by a grant from the George I. Alden Trust. Income restricted to financial aid for students in the physical sciences.

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 James E. Batchelder Scholarship: Established in March 1989 by a bequest from James E. Batchelder '62. Income for graduates of St. John's Preparatory School in Danvers, Mass.
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 John E. and Mildred E. Brooks Scholarship: Established in November 1990 by Trustees to honor the memory of Father Brooks' parents.
The Francis K. Buckley Scholarship: Established through a gift from Francis K. Buckley, '35.
The Rev. Charles E. Burke 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 Martin W. Caveney, M.D. '08 Scholarship: Established in 1994 by Kathryn L. Caveney in memory of her husband Martin.
The Honorable James Bernard Carroll Scholarship: Established in 1939 by Mrs. James Bernard Carroll as a memorial to 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.
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.
William L. and Hazel B. Clifford Scholarship: Established in 1966.
The Frank D. Comerford Scholarship Fund: Established by Archibald R. Graustein in 1959.
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 student; 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 student or students 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 George D. and Katherine L. Curry Scholarship: Established in 1993 to furnish scholarship and other financial aid to needy and deserving students in member of Mr. and Mrs. George D. Curry.
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 a deserving student in sciences.
The Kenneth R. Desmarais Memorial Scholarship: Established in 1989 by family classmates and friends to honor Kenneth R. Desmarais '61. Income to be used for a student athlete who has demonstrated leadership qualities.
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 fourth-year students, in continuing or completing their college work.
The Rev. Stephen Duffy, S.J. Scholarship Established in 1989 by an anonymous donor to provide full tuition scholarship annually to a fourth-year student graduating from Regis High School.
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. Bernard A. Fiekers, S.J. Memorial Fund: Established in 1973 and augmented by gifts and bequests. Income to be used for scholarship awards to needy students majoring in chemistry.
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 students from Portsmouth, N.H.
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.
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.
The John K. Flynn Scholarship: Established in 1994 from the estate of Anne F. Jolles in memory of her brother John '19.
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.
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 to 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 to 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.
The Hickey Family Scholarship Established in 1989 by a bequest from David B. Lovell, Jr., '23. Preference given to residents of the State of Rhode Island.
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 student 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 in 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 student 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 students from Worcester, Mass., with preference given to students within the boundaries of Holy Rosary Parish.
The Thomas P. Joyce Memorial Scholarship: Established in 1995 by family, friends and classmates to honor Thomas P. Joyce '59.
Timothy F. Kane Scholarship Fund: Established in 1968 from the estate of Timothy F. Kane. Preference is 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, a resident of 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 students entering the 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 is 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 David B. Lovell Jr. Scholarship Established in 1989 by a bequest from David B. Lovell, Jr., '23. Preference given to residents of the State of Rhode Island.

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 Ferdinand F. Martignetti '48 Scholarship: Established in 1991 by Robert and Mary Crane to honor Ferdinand F. Martignetti '48.

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., '55. 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 Joseph Allan McConville Scholarship: Established in 1991 to honor the deceased son of Eleanor and Joseph McConville '36.

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, the beneficiary is to be selected by competitive examinations. Restricted to graduates of St. Mary's Parish School, Milford, Mass., if there is more than one eligible candidate. If there is only one eligible candidate, graduates of Milford Public High School may be admitted to competition; if there is only one candidate from both schools, any one otherwise eligible in the State is 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. McMahon Scholarship: Established in 1938 under provisions of the will of Rt. Rev. Msgr. John W. McMahon, '67, to give scholarship aid to a Holy Cross student to be designated by the Reverend Pastor of St. Mary's Parish, Charlestown, Mass. Preference is to be 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.
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 students.
Mary F. Mourin Memorial Scholarship Fund: Established in 1975 from the estate of Mary F. Mourin to aid in the financial assistance of students whom 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 students 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 a first-year student, 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 Lawrence F. O'Toole Scholarship: Established by a bequest from Lawrence F. O'Toole '10. Income to be awarded to worthy students selected by the Dean of the College.
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 student 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 a student 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 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 and 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 students from Worcester, such students 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.
The Rev. Michael J. Ryan Scholarship: Established in 1990 by a bequest from Rev. Michael J. Ryan. Income to be used for a student from St. Paul's Parish, Warren, Mass.; if none, any student.
The Robert E. Scannell Memorial Scholarship: Established in 1994 by family classmates and friends to honor Robert E. Scannell '61.
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 lst 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 <169>student of Holy Cross College whom the governing body of said College may deem to be in need of financial assistance for college work and worthy of said scholarship.<170>
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 is to be given 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 by financial contributions toward tuition costs.

The Office of the College Chaplains

The Office of the College Chaplains serves the Holy Cross community by witnessing to and preaching the Gospel of Jesus Christ. The Chaplains' Office provides a place for students to raise questions about and experience opportunities for the integration of the spiritual, moral, and intellectual life of the College. All of this stands at the very heart of the mission of Holy Cross.

The Chaplains offer all members of the Holy Cross community a wide variety of avenues through which they may explore the links between a rigorous intellectual life and the promotion of faith and justice. Such opportunities include: nineteen different student run service programs working with our neighbors in the City and Diocese of Worcester; a dynamic and extensive retreat program; numerous liturgical ministry groups and lay leadership possibilities; travel to Appalachia, Maine, Mexico, and Northern Ireland; opportunities for reflection and healing through spiritual direction and counseling; daily and weekly liturgies; active chapters of Pax Christi and Students for Life.

A primary focus of our work is to form an active Catholic worshipping community and to collaborate with faculty to enable students to encounter the intellectual heritage of Catholicism, but students of all faith traditions are warmly invited to participate in all of our programs and liturgies. In addition, we wish to encourage and assist students of other faith traditions in establishing relationships with their local worshipping communities here in Worcester.

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, alcohol education, and student conduct. It is the constant purpose of the College to encourage the growth of personal and social responsibility consistent with 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

College Health Services has been organized to meet the acute care needs of all students, the Jesuit community, and the staff and faculty when injured on duty, and to provide both follow-up treatment and educational services during the academic year.

The Health Service staff consists of:

- Full-time and part-time registered nurses staffing the Health Service 24 hours a day, 7 days a week during the academic year.
- Board certified family practice physicians affiliated with the Medical Center of Central Massachusetts, Memorial as well as a Certified Adult Nurse Practitioner. On site appointments are provided Monday through Friday, 20 hours per week.

The services provided include gynecological, medical/ surgical and orthopedic.

Please review the Health Services' brochure to understand fully the health care facility on campus. To make appointments to be seen, call 793-2276.

CPR courses and First Aid courses are provided throughout the academic year.

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 Counsel-

ing 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. The psychological counseling services offered at the Center are based on interventions designed to help students resolve developmental issues of early adulthood. Students requiring longer or more intensive assistance may be referred to appropriate services off-campus. Among the services offered by the Center 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.
- **Developmental 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 II, which provides 6 to 24-month positions for graduating students in not-for-profit organizations.
- **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 and off-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 nine 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, educational 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 professional live-in staff members and resident assistants who are third and fourth-year students 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 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, 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.

Office of Disability Services

The Office of Disability Services coordinates assistance for disabled students in order to promote equal access to College programs and services. The Office seeks to assist students and their families in making the necessary arrangements to facilitate full participation in academic and extracurricular pursuits.

The College of the Holy Cross complies with Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and applicable local, state, and federal statutes regarding nondiscrimination against persons with disabilities.

The Office of Disability Services is located within the Counseling Center and Career Planning Office in Room 207 of the Hogan Campus Center. The Director of the Office or a designee is available for consultation and may be contacted by telephone: (508) 793-3363, TTY: (508) 793-3591, or FAX: (508) 793-2778.

Student Activities

Holy Cross offers a wide variety of student activities, co-curricular opportunities, cultural events, and formal and informal entertainment that not only provides a respite from the rigors of academic life, but also encourages individual creativity, intellectual development, and an awareness of issues confronting society. Student activities have long been considered an integral part of the College and all students are encouraged to join and take part in the wide range of organizations, events, and activities available.

Holy Cross has more than 70 student groups and each year new ones are added. They include co-curricular organizations devoted to academic pursuits, non-academic special interest groups, recreational clubs, campus service groups, communications media and performing organizations.

Most student activities are financed by funds from the student activities fee, administered by the Student Activities Fee Committee appointed by the Student Government Association (SGA). The SGA, the central representative body of Holy Cross students, consists of elected officers and students who are appointed to serve on various student-faculty and student committees, as well as appointed to serve as representatives on each active college committee.

Events

In the realm of cultural and entertainment events, many organizations contribute in the planning and presentation of major speakers, social events, symposia, and other activities which range from the intellectually stimulating to the purely entertaining.

The Cross and Scroll Society plays a major role in arranging for the appearance of prominent speakers and symposia. Major event in recent years sponsored by the Cross and Scroll and other organizations have included speeches by Holocaust survivor and prominent author Elie Wiesel; noted scientist B. Gentry Lee; and civil rights activist Coretta Scott King, widow of Martin Luther King. Among recent Commencement speakers have been Reverend Gustavo Gutierrez, known as the "Father" of Liberation Theology; former baseball commissioner Peter Ueberoth; and New York governor Mario M. Cuomo.

On the lighter side, entertainment events by outside groups and individuals, as well as by college organizations, play a major role in Holy Cross extracurricular activities. The Fenwick Theatre Company and the Alternate College Theatre are the major dramatic organizations on campus, while each year's fourth-year class traditionally presents a musical. Recent productions have included *The Marriage of Bette and Boo; Sweeney Todd; Bye, Bye Birdie; The Mystery of Edwin Drood; Godspell; Iolanthe; and Rumours.* Campus musical organizations include the College Choir, Jazz Ensemble, Crusader Marching Band, St. James Chamber Orchestra, Chamber Singers, and Wind Ensemble, which present concerts throughout the year.

Campus Activities Board

The Campus Activities Board (CAB) is the major programming organization that provides social, cultural, and recreational events for the entire Holy Cross community. The group provides a wide variety of activities in the areas of performing arts, outings, special events, social events, and weekly entertainment in the Crossroads Pub and Pizza Parlor. Run by students, some of the bigger events this organization plans and promotes are some of the Orientation activities, which last year featured comedian Paula Poundstone; President's Council; Last Day of Classes events; and Spring Weekend activities, which includes a ma-

jor concert. Performances in recent years have included: The Samples, Arrested Development, and the Smithereens.

Purple Key

The Purple Key Society is a campus service organization that sponsors special events and conducts major campus functions. Among its annual events are New Student Orientation, the Extracurricular Extravaganza, Parents' Weekend, 100 Days Banquet for fourth-year students, and the Sadie Hawkins Charity Ball.

The Women's Forum

The Holy Cross Women's Forum is designed to meet the needs of women students by coordinating their activities on campus. It serves as a vehicle for communication between Holy Cross women and men through a variety of activities, including addresses by prominent individuals, workshops and symposia on important issues, and the annual Women's Week.

Black Student Union

The Black Student Union (BSU) is concerned with African-American students in their campus environment and with awareness of African-American history, culture and future potential. Each year, during African-American Experience Week, a series of events is presented which is intended to reinforce the cultural ties in the African-American community and to make the campus at large more aware of African-American culture. Recent African-American Experience Weeks have included appearances by Stokely Carmichael (Kwarme Ture), Co-founder of the Black Panther Party; Henry Hampton, creator and executive producer of the television documentary *Eyes on the Prize*; social activist and comedian Dick Gregory; Dr. Alvin Poussaint, psychologist, author and advisor for *The Bill Cosby Show*; Susan Taylor, editor of *Essence* Magazine; Reverend George Stallings of the African American Catholic Parish in Washington, D.C. African-American Experience Week also features dramatic productions performed by members of the BSU, poetry readings, convocations and workshops featuring speakers and discussions dealing with social justice, and various social events.

Latin American Student Organization

The purpose of the Latin American Student Organization (LASO) is to create an atmosphere where Latin American students who are not living in their native countries or communities can savor their heritage and educate the Holy Cross community on their traditions and culture. . The organization sponsors campus-wide events such as Latin American Experience Week, lectures, semi-formals, and cultural meals.

Asian Students for International Awareness

The Asian Students for International Awareness (ASIA) has been formed to help coordinate and organize events to promote and assist the campus community with their understanding of Asian cultures, problems and concerns. The group co-sponsors events with the Asian Studies Concentration Faculty to bring speakers, Asian movies, ethnic dances and open dialogue about Asian cultures to Holy Cross. This group also hosts ASIA Week, which offers students a week-long agenda of activities.

The Bishop Healy Multi-Cultural Awareness Society

Like the other groups for students of color, the society is concerned with enhancing the understanding of the many cultures represented at Holy Cross. The club sponsors ethnic dinners, informal discussions with students and teaching assistants from abroad, and conversations about cultural biases, expectations and stereotypes. The club also co-sponsors multi-cultural events, speakers and symposia with the BSU, LASO, and ASIA.

Communication

The communication media at Holy Cross are varied and active. The major organs 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 Women's

Forum Journal; and WCHC-FM radio. The Holy Cross Daily News, a one-sheet, daily publication that lists events and campus news of interest to the entire community, is written and edited by students.

Athletics and Recreation

Men and women interested in athletics find much from which to choose 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, tennis, lacrosse, and crew. The women Crusaders compete in field hockey, basketball, swimming, lacrosse, softball, soccer, crew, tennis, indoor and outdoor track and cross country. Men and women crew together at intercollegiate regattas as members of the Holy Cross Yacht Club.

Holy Cross is a member of the Patriot League, along with Army, Bucknell, Colgate, Fordham, Lafayette, Lehigh, and Navy, and many teams also compete against Ivy League opponents.

Besides intercollegiate teams and clubs, the College provides an active intramural program. Students who want to compete can find levels suitable to their abilities, whether on the varsity football team, the rugby club team, or in men and women's racquetball and volleyball tournaments. Intramural sports include men's softball, women's and men's football, men's hockey and men's and women's basketball.

Athletic facilities at Holy Cross are excellent. The baseball and football fields are maintained in excellent condition by the award-winning grounds staff, and the football stadium was totally renovated in 1986. Intramural and practice fields dot the campus as do 13 tennis courts. In 1988 two playing fields were rebuilt, one composed of Omniturf, a synthetic surface marked for a variety of intercollegiate and intramural sports, including soccer and football, and surrounded by an eight-lane running track. Both fields are lighted, and are used for practices as well as intercollegiate and intramural competition.

The fieldhouse has a Tartan surface and contains basketball courts, a running track, extensive weight-lifting and Nautilus facilities, and locker rooms. Students also use facilities in the Hart Center, which include basketball courts, ice rink, swimming pool, squash, handball and racquetball courts, locker and shower facilities, exercise equipment and a crew practice tank. The Hart Center serves as the home of the Holy Cross basketball swimming and hockey teams as well.

The men's and women's crew teams have the good fortune of rowing on Lake Quinsigamond, scene for many years of the Eastern Sprints rowing regatta and considered one of the world's finest lakes for crew. The lake also serves as the home port for the Yacht Club, while the Crusaders' golf team tees off at nearby Pleasant Valley Country Club in Sutton, a course that has played host to many national PGA tournaments.

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Fordham University.
Vice President for Student Affairs and Dean of Students

Stephen C. Ainlay
Ph.D., Rutgers University
Director, Center for Interdisciplinary and Special Studies

Janice Allen
M.S., Simmons College
Director/Nurse Practitioner, Health Services

Cary M. Anderson
M.A., University of Loyola at Chicago
Assistant Dean of Students

William Bagley, Jr.
J.D., Suffolk University
Director, The Holy Cross Fund

Gregg K. Belevick
B.S., Worcester Polytechnic Institute
Programmer/Analyst, Information Technology Services

William J. Bellerose
A.B., College of the Holy Cross
Associate Director of Athletics and Business Manager

Patricia L. Bizzell
Ph.D., Rutgers University
Director, Honors Program

Ray Blakeney
A.B., University of Dayton
Assistant Director of Admissions, Minority Recruitment

Velma A. Blanchard
Personal Secretary to the President and Secretary of the College

Mary E. Blute
B.S., Framingham State College
Manager, Dining Services, Hogan

Marilyn M. Boucher
M.A., Washington State University
Associate Dean of Students

Jennifer H. Brennan
M.S. Villanova University
Complex Director, Student Life

Curtis Broderick
M.S., Lehigh University
Supervisor, Multimedia Resource Center

Rhonda L. Brown
J.D., Washington College of Law,
American University
Affirmative Action Officer

Robert Brun
M.A., Boston College
Associate Director, Financial Aid

Barbara J. Burke
M.A., Stanford University
Assistant Coordinator, Grants and Research

Cornelius J. Carmody
B.S., Worcester State College
Assistant Director, Public Safety

Brion P. Carroll
Ph.D., Pennsylvania State University
Psychologist, Counseling Center

Gary A. Carskaddan
M.S.Ed., University of Vermont
Assistant Director of Housing

Joan E. Champagne
Manager, Purchasing

Christina Bi Chen
M.A.,University of Pennsylvania
Assistant Director, Center for Interdisciplinary and Special Studies

James David Christie
A.B., Oberlin Conservatory of Music
M.M., New England Conservatory of Music
College Organist

Sheila E. Coakley
M.B.A., Simmons College
Bursar

Irene T. Cole
Administrative Assistant to the Dean of the College

William J. Conley
M.A., Webster College
Director, Administrative Services

Sarah C. Connell
M.A., University of Masschusetts
Recruiter/Trainer, Personnel Department

Lynn A. Cooke
M.S., Jackson College
Lab Supervisor, Biology

James A. Currie
M.A.T., Boston University
Lab Instructor, Physics

Barbara J. Dean-Carskaddan
M.Ed., University of Vermont
Administrative Assistant to the Vice President of Academic Affairs

Gary P. DeAngelis
Ph.D., Boston University/Harvard University
Associate Director, Center for Interdisciplinary and Special Studies

Francis H. Delaney, Jr.
Ed.D., Boston College
Director of Financial Aid and Assistant to the President for Special Projects

Kathy A. Demers
Dining Room Manager, Kimball Dining Service

Donna A. DiLullo
A.B., College of the Holy Cross
Laboratory Supervisor, Chemistry

Catherine M. Dumas
B.S., University of Massachusetts
Associate Laboratory Supervisor, Biology

Phyllis Dumas
Director of Development Services

Rev. Charles J. Dunn, S.J.
S.T.L., Weston College;
M.A., Boston College
Director of Estate Planning

Matthew R. Elliott
Ph.D., Penn State University
Staff Psychologist, Counseling Center

Charles M. Estaphan
B.S., Nichols College
Associate Controller

Cassandra L.V. Flowers
A.B., Alfred University
Assistant Director of Admissions

Robert S. Flowers
M.S., Alfred University
Complex Director, Student Life

Ann L. Flynn
Ed. D., Boston University
Associate Director, Counseling Center

Thomas Foley
Assistant Director, Public Safety

Jane Ford
A.B., Providence College
Telecommunications Manager

Mark Freeman
Ph.D., University of Chicago
Associate Dean of the College

Margaret N. Freije
Ph.D., Brown University
Assistant Dean, Class of 1999

Mary K. Gagliastro
A.B., College of the Holy Cross
Assistant Director, Financial Aid

Diane G. Gallagher
M.S., Simmons College School of Library Science
Serials Librarian

Doreen Genna
A.B., Central New England College
Programmer/Analyst,
Information Technology Services

Julia F. Gentile
A.B., College of the Holy Cross
Assistant Director, The Holy Cross Fund

Linda George
Assistant Business Manager for Athletics

Maurice A. Geracht
Ph.D., University of Wisconsin
Director, Study Abroad Program

Nancy J. Gill
A.B., New Hampshire College
Assistant Manager, Cash Operations,
Dining Services, Hogan

Cheri R. Gowen
A.B., College of the Holy Cross
Assistant Director, Admissions

Lisa M. Gray
M.A., Ohio State University
Coordinator of Multicultural Programming,
Student Activities

Robert E. Grenon
M.B.A., Babson College
Controller

Jeffrey Gull
A.B. Assumption College
Senior Accountant, Information Technology Services

Jacqueline Hanlon
M.S., Bentley College
Manager Restricted Accounting

Judy A. Hannum
M.B.A., Nichols College
Director of Planning and Budget

Rev. Mr. Frederick A. Harkins
Administrator, College Chapels

Robert W. Henry
Microcomputer Specialist,
Information Technology Services

Rev. John J. Higgins, S.J.
S.T.D., Catholic University of America
Associate Director (JHS), Admissions

James E. Hogan
D.A., Simmons College
Director of Library Services

Kurt Hultgren
Costume Designer, Theatre Art

Anna S. Iannuzzi
M.Ed., University of Vermont
Complex Director, Student Life

Lynn M. Jones
B.S., Furman University
Research Assistant (NSF Grant), Biology

Alan M. Karass
M.A., Simmons College
Music Librarian

James M. Kee
Ph.D., University of Virginia
Acting Dean of the College

William C. Kennedy
A.B., St. Michael's College
Director of the Bookstore

Ellen J. Keohane
M.S., Worcester Polytechnic Institute
Associate Director Desktop Services,
Information Technology Services

Richard A. Kerver
M.P.H., University of Texas, Houston
Senior Programmer/Analyst,
Information Technology Services

Stephen King
M.B.A., Babson College
Director, Information Technology Services

Tracy A. King
B.S., University of Connecticut
Assistant Sports Information Director

Grant Kollet
A.B., College of the Holy Cross
Complex Director, Student Life

Arthur Korandanis
M.B.A., Northeastern University
Director of Auxiliary Services

Kenneth F. Krech
B.S., LaSalle College
Senior Programmer/Analyst, ITS

Gudrun Krueger
M.S., Simmons College School of Library Science
Head of Reference Services

Marianne G. Kukulka
A.B., College of the Holy Cross
Associate Director, The Holy Cross Fund

Mary Beth Lambert
M.A., Providence College
Assistant Director of Student Activities

Genevieve A. Larievy
Administrative Assistant to the
Vice President for Business Affairs and Treasurer

Jacqueline L. Latino
M.A., Brown University
Coordinator of Student Alcohol and Drug Education

Ellen Lawrence
M.A., Brown University
Director of The Iris and
B. Gerald Cantor Art Gallery

Serena E. Leiser
Director of Conference Services

Peter J. Lemay
M.S., University of Rhode Island
Senior Laboratory Supervisor, Biology

Esther L. Levine
M.A., Brown University
Program Associate, International Student Advisor

Dean Lewis, Jr.
A.S., Culinary Arts, Johnson and Wales
Executive Chef

James D. Long
Superintendent of Grounds

Mary Frances Loughney
A.B., College of the Holy Cross
Admissions Counselor

Ann Marie Lucas
Administrative Assistant, Development

Joseph H. Maguire
M.A., University of Notre Dame
Assistant Dean, Class of 1997

Patricia L. Maher
Assistant Budget Director

James M. Mahoney
B.L.S., Columbia University
Rare Books Librarian

Frank J. Mastrandrea
J.D., University of Connecticut School of Law
Director, Sports Information

John F. McCann
Executive Housekeeper

Patrick L. McCarthy
B.S., College of the Holy Cross
Director of Alumni Relations

Ann Bowe McDermott
A.B., College of the Holy Cross
Director, Admissions

Richard J. McFadden
A.E.T., Wentworth Institute of Technology
Assistant Director, Physical Plant, Operations

Michael G. McGrath
Ph.D., Massachusetts Institute of Technology
Premed/Predental Advisor and Engineering Program Advisor

David D. McKenna
A.B., University of Vermont
Operations Manager, Bookstore

Katharine B. McNamara
A.B., College of the Holy Cross
Director, Public Affairs

Kenneth McNickles
Chef Manager of Ciampi Hall Dining Services

Evelyn T. Menges
A.B., College of the Holy Cross
Lab Supervisor, Psychology

Scott M. Merrill
M.S., Pennsylvania State University
Assistant Director, Physical Plant, Construction

Bruce I. Miller
M.M., State University of New York at Fredonia
Director, College Choir and Chamber Singers

Richard R. Miller
Experimental Machinist, Science Laboratories

Michael Monaghan
M.M., University of Lowell
Director of the Jazz Ensemble

Sharon A. Moore
M.A., University of Rhode Island
Reference Librarian, Dinand Library

Bruce F. Moran
M.A.M., Worcester State College
Assistant Director, ITS

Mary J. Moran
M.S., University of Rhode Island
Assistant Catalogue Librarian

Patricia F. Morrissette
A.B., Assumption College
Assistant Director of Personnel

Lynne Myers
B.S., Northeastern University
Assistant Director, Financial Aid

Linda Nardella
B.S., Bentley College
Production Manager, Kimball

Rev. Paul J. Nelligan, S.J.
M.A., Boston College;
S.T.L., Weston College
College Archivist

Lisa P. Nester
Cand. Ph.D., Princeton University
Sr. Laboratory Supervisor, Chemistry

Jamie New
M.A., Worcester Polytechnic Institute
Lab Supervisor, Chemistry and Hazard Communications Director

Sally Nichols
M.L.S., M.A., University of Texas
Head of Cataloguing

Lisa A. Nollet
B.S., University of Southern Maine
Assistant Director Athletics for Marketing, Promotions, and Sports Information, Athletics Department

James Noonan
B.S., Central New England College
Desktop Support Specialist, ITS

Jeremiah A. O'Connor
A.B., College of the Holy Cross
Assistant Director, Hogan Campus Center

Yvonne Ortiz-Prince
M.Ed., Rutgers University
Complex Director, Student Life
Special Assistant for Multicultural Affairs

Gay E. Parker
B.S., University of Massachusetts
Dining Room Manager, Kimball

Rebecca Patella
Associate Registrar

Ronald S. Perry
B.S., College of the Holy Cross
Director of Athletics

Marie L. Peters
A.B., College of the Holy Cross
Laboratory Supervisor, Chemistry

Paul Phillips
M.M., College-Conservatory of Music
Director, Chamber Orchestra and Wind Ensemble

Joyce H. Plante
Assistant Food Service Manager, Hogan

Robert J. Plante
Post Office Manager

Rev. Joseph B. Pomeroy, S.J.
M.A., M.S., Boston College
Technical Services Engineer,
Information Technology Services

Stephen J. Pongonis
A.B., College of the Holy Cross
Laboratory Supervisor, Psycology

Robert A. Principe
M.A., University of Connecticut
Director, Crusader Band

Sharam Rao
Dining Room Manager, Kimball

Lisa M. Redpath
M.S.L., Simmons College
Music Librarian

Karen J. Reilly
M.L.S., Southern Connecticut State College
Associate Director of Library Services

Thomas R. Riley
Cand. Ph.D., University of Connecticut
Assistant Director, Public Affairs

Margaret Rollo
Dining Room Manager, Kimball

Merideth C. Rossetti
Dining Services Supervisor, Hogan

Todd P. Rotti
Building Technology, Northeastern University
Clerk of the Works

John C. Rounds
Ph.D., New School for Social Research
Senior Programmer/Analyst,
Information Technology Services

Henry F. Roy
Manager, Graphic Arts

Thomas E. Ryan
A.B., College of the Holy Cross
Director of Development

Elaine J. Rynders
B.S., Worcester State College
Registrar

Scott Sandstrom
Ph.D., C.P.A., J.D., Suffolk University
Prelaw Advisor

Mark W. Savolis
A.B., Holy Cross
Assistant Archivist

Patricia Sawyer
A.B., College of the Holy Cross
Senior Researcher, Development

Kenneth A. Scott
M.Ed., Worcester State College;
M.N.S., Worcester Polytechnic Institute
Academic Support Specialist,
Information Technology Services

Karen C. Seybold
M.S., Syracuse University
Recruitment Coordinator, Career Planning

Kevin E. Shea
A.A., Quinsigamond Community College
Programmer/Analyst,
Information Technology Services

Philip J. Shea
Assistant to the Director of Dining Services

Rosemary A. Shea
A.B., College of the Holy Cross
Assistant Athletic Director

Peter W. Simonds
Ed.D., Columbia University
Associate Dean of Students

Nancy G. Singleton
M.L.S., Indiana University
Assistant Catalogue Librarian

Tracy Spencer
Ph.D., Boston College
Psychologist/Counselor,
Services for ALANA Students

Anthony V. Stankus
M.L.S., University of Rhode Island
Science Librarian

Victoria L. Swigert
Ph.D., State University of New York at Albany
Assistant Dean, Class of 1998

Thomas W. Syseskey
M.L.S., University of Rhode Island
Acquisitions Librarian

Dawn R. Thistle
M.M., New England Conservatory of Music;
M.S., Simmons College School of Library and Information Science
Reader Services Librarian

Matthew A. Toth
Ph.D., Ohio University
Associate Dean of Community Development and Director of Counseling

Peter Van Buskirk
M.Ed., Boston State College
Director, Hart Center

Judy Vedder
M.B.A., Bentley College
Assistant Director, ITS

Joel R. Villa
B.S., College of the Holy Cross
Audio-Visual Coordinator

Lisa M. Villa
A.B., College of the Holy Cross
Assistant Researcher, Development

Rosa Volpe
Ph.D., University of Texas at Austin
Director, Self-Paced Language Program, Research Associate

Jo Ann Marie Weinert
B.S., Georgian Court College
Assistant Director of Student Dining

Charles S. Weiss
Ph.D., Ohio University
Director of Grants and Foundation and Corporate Giving

Thomas W. Wiegand
M.S., Northern Illinois University
Director, Hogan Campus Center

Jeffrey T. Wilcox
M.S., American International College
Director, Public Safety

Robert F. Willis
B.S., University of Massachusetts
Manager, Food Service Business Systems

John H. Wilson
Ph.D., Yale University
Graduate Studies Advisor

John J. Winters, Jr.
Ph.D., Catholic University of America
Coordinator, Career Planning

Ian D. Wood
A.B., University of Leicester, England
Production Services Manager, Information Technology Services

Donna C. Wrenn
Director of Personnel

Ann Zelesky
A.B., Worcester State College
Associate Athletic Director

Gerard A. Zimmermann
M.S., Naval Postgraduate School
Director, Physical Plant

College Chaplains, 1995-1996

Paul F.X. Covino
M.A., University of Notre Dame
Assistant Chaplain

Rev. Michael F. Ford, S.J.
M.A.L.S. (Fine Arts), Dartmouth College;
M.Div., Weston School of Theology
Associate Chaplain

Andrea M Goodrich
B.Mus., Anna Maria College
Adjunct Chaplain

Rev. James M. Hayes, S.J.
M.S., Loyola College
Assistant Chaplain

Marybeth Kearns-Barrett
M.Div., Weston School of Theology
Assistant Chaplain

Rev. Joseph J. LaBran, S.J.
M.A., Boston College;
S.T.L., Weston College
Associate Chaplain

Katherine M. McElaney
M.Div., Weston School of Theology
Director of the Office of College Chaplains

College Medical Staff, 1995-1996

Janice Allen, M.S., R.N.C.
Director/Nurse Practicioner, Health Services

Daniel Frietas, M.D.

James Pease, M.D.

Christine Purington, M.D.

Officers of Instruction, 1995-1996

Hussein M. Adam[1]
Ph.D., Harvard University
Associate Professor, Political Science

Stephen C. Ainlay
Ph.D., Rutgers University
Professor, Sociology

Isabel Alvarez-Borland
Ph.D., The Pennsylvania State University
Associate Professor, Spanish

John B. Anderson
M.A., University of Notre Dame
Associate Professor and Chair, History

John T. Anderson
Ph.D., Brown University
Associate Professor, Mathematics

Charles H. Anderton
Ph.D., Cornell University
Associate Professor, Economics

Jutta Arend
Ph.D., Case Western Reserve University
Senior Lecturer, German

Vassos Argyrou
Ph.D., Indiana University
Visiting Assistant Professor, Anthropology

Lorraine C. Attreed
Ph.D., Harvard University
Associate Professor, History

Alan Avery-Peck
Ph.D., Brown University
Kraft-Hiatt Professor in Judaic Studies

John F. Axelson[1]
Ph.D., Tulane University
Associate Professor, Psychology

Charles A. Baker
Ph.D., University of Illinois
Associate Professor, French

Nancy Rhein Baldiga[3]
M.S., Bentley College, C.P.A.
Assistant Professor, Accounting

Jane Mederos Baldwin
Ph.D., Tufts University
Lecturer, Theatre

Tamara Barreda
Ph.D., Universidad de Habana
Lecturer, Spanish

Ann G. Batchelder
Ph.D., Harvard University
Associate Professor, Classics

Ross W. Beales, Jr.
Ph.D., University of California, Davis
Professor, History

Diane Bell
Ph.D., Australian National University
Henry R. Luce Professor of Religion, Economic Development and Social Justice

Stephen Benson
A.B., Tufts University
Lecturer, Theatre

Susan L. Berman
Ph.D., University of Pittsburgh
Associate Professor, Biology

Anne Bernays
B.A., Barnard College
Distinguished Lecturer, English

Eckhard Bernstein
Ph.D., Case Western Reserve University
Professor, German

Robert I. Bertin
Ph.D., University of Illinois
Professor, Biology

Daniel Bitran
Ph.D., SUNY, Buffalo
Assistant Professor, Psychology

Patricia L. Bizzell
Ph.D., Rutgers University
Professor, English

Walter Block
Ph.D., Columbia University
Associate Professor, Economics

Capt. William S. Boniface, USN
M.S., George Washington University
Professor and Chair, Naval Science

Selma Botman
Ph.D., Harvard University
Associate Professor, Political Science

Suzanne Branciforte
Ph.D., University of California, Los Angeles
Assistant Professor, ian

Donald R. Brand
Ph.D., University of Chicago
Associate Professor, Political Science

Robert L. Brandfon
Ph.D., Harvard University
Professor, History

Dana Brayton
Ph.D., Boston University
Lecturer, Music

Bernadette J. Brooten
Ph.D., Harvard University
Kraft-Hiatt Associate Professor of Christian Studies at Brandeis University and Adjunct Associate Professor, Religious Studies, College of the Holy Cross

Peter G. Bruce
Ph.D., Massachusetts Institute of Technology
Assistant Professor, Political Science

Hanna Buczynska-Garewicz
Ph.D., Warsaw University
Professor, Philosophy

David R. Buffum
Ph.D., University of Pennsylvania
Assistant Professor, Economics

Danuta Bukatko
Ph.D., University of Massachusetts
Associate Professor, Psychology

Geoffrey Burleson[2]
M.M., New England Conservatory of Music
Assistant Professor, Music

Miles B. Cahill
Ph.D., Purdue University
Assistant Professor, Economics

Deborah J. Campbell
Ph.D., University of Wisconsin at Madison
Assistant Professor, Biology

Jennifer Campbell
Ph.D., Brown University
Visiting Assistant Professor, English

Brion Carroll
Ph.D., Pennsylvania State University
Lecturer, Psychology

Richard G. Carson
Ph.D., Brown University
Assistant Professor, English

John R. Carter
Ph.D., Cornell University
Professor, Economics

Noel D. Cary[1]
Ph.D., University of California
Associate Professor, History

Thomas E. Cecil
Ph.D., Brown University
Professor, Mathematics

James David Christie
M.M., New England Conservatory of Music
Distinguished Artist-in-Residence

David K.W. Chu
Ph.D., Indiana University
Assistant Professor, Accounting

Judith A. Chubb
Ph.D., Massachusetts Institute of Technology
Associate Professor and Chair, Political Science

Estrella Cibreiro
Ph.D., University of Connecticut
Assistant Professor, French

Predrag Cicovacki
Ph.D., University of Rochester
Assistant Professor, Philosophy

Denis J. Cleary
M.A.T., Harvard University
Lecturer, Education

Hermann J. Cloeren[3]
Ph.D., University of Muenster
Professor and Chair, Philosophy

Gavin T. Colvert
Ph.D., University of Toronto
Assistant Professor, Philosophy

Carol B. Conaway
Ph.D., Massachusetts Institute of Technology
Assistant Professor, Political Science

Nym Cooke
Ph.D., University of Michigan
Lecturer, Music

Robert K. Cording[3]
Ph.D., Boston College
Professor, English

John T. Cull
Ph.D., University of Illinois
Associate Professor, Spanish

Susan M. Cunningham
Ph.D., University of Maryland
Visiting Assistant Professor, Sociology

Timothy P. Curran
Ph.D., Massachusetts Institute of Technology
Assistant Professor, Chemistry

David B. Damiano
Ph.D., Brown University
Associate Professor and Chair, Mathematics

Gary P. DeAngelis
Ph.D., Brown University
Lecturer, Center for Interdisciplinary and Special Studies

Alice A. Deckert
Ph.D., Stanford University
Clare Boothe Luce Assistant Professor, Chemistry

Jean deMart
M.M., New England Conservatory of Music
Lecturer, Music

Rev. Alfred R. Desautels, S.J.
S.T.L., Weston College; D.d'univ., University of Paris
Lecturer, French

Alisa DeStefano[2]
Ph.D., Dartmouth College
Assistant Professor, Mathematics

Daniel G. Dewey
M.A., University of Kansas
Associate Professor, Mathematics

James J. Dillon
Cand. Ph.D., Clark University
Visiting Instructor, Psychology

Thomas W. Dube
Ph.D., New York University
Assistant Professor, Computer Science

Caren G. Dubnoff
Ph.D., Columbia University
Associate Professor, Political Science

Christopher A. Dustin
Ph.D., Yale University
Assistant Professor, Philosophy

Laurence Enjolras
Ph.D., Brown University
Associate Professor, French

Mary C. Essex
M.A., California State University
Lecturer, Center for Interdisciplinary and Special Studies

Charles C. Euchner
Ph.D., Johns Hopkins University
Assistant Professor, Political Science

Sophia McClennen Exposito
Cand. Ph.D., Duke University
Lecturer, Spanish

Judy Freedman Fask
M.E., Springfield College
Lecturer, Center for Interdisciplinary and Special Studies

Thomas D. Feehan
Ph.D., Brown University
Associate Professor, Philosophy

Oded M. Flascher
Cand. Ph.D., University of Connecticut
Visiting Instructor, Psychology

James T. Flynn
Ph.D., Clark University
Professor, History

Theodore P. Fraser[1]
Ph.D., Brown University
Professor, French

Mark Freeman
Ph.D., University of Chicago
Associate Professor, Psychology

Margaret N. Freije
Ph.D., Brown University
Associate Professor, Mathematics

Andrew M. Futterman
Ph.D., Washington University
Assistant Professor, Psychology

Robert H. Garvey
Ph.D., Pennsylvania State University
Associate Professor, Physics

Gerry Gendlin
Ph.D., Fletcher School of Law and Diplomacy
Visiting Assistant Professor, Political Science

Maurice A. Geracht
Ph.D., University of Wisconsin
Professor, English

Joshua W. Gidding
Ph.D., University of Southern California
Visiting Assistant Professor, English

Osvaldo Golijov[3]
Ph.D., University of Pennsylvania
Assistant Professor, Music

Thomas R. Gottschang[3]
Ph.D., University of Michigan
Associate Professor, Economics

William A. Green
Ph.D., Harvard University
Rev. John E. Brooks, S.J., Chair in the Humanities and Professor, History

Christine Greenway
Ph.D., University of Washington
Charles A. Dana Faculty Fellow, Assistant Professor, Anthropology

Margo Griffin-Wilson
Ph.D., Harvard University
Lecturer, Center for Interdisciplinary and Special Studies

Margarita Halpine
Ph.D., University of Connecticut
Visiting Assistant Professor, Spanish

John D.B. Hamilton
Ph.D., University of Minnesota
Associate Professor, Classics

Marian C. Hanshaw
M.M.,Eastman School of Music
Lecturer, Music

Kenneth F. Happe
Ph.D., Yale University
Associate Professor, Classics

Jane Harrison
M.M., Manhattan School of Music
Lecturer, Music

Robert Harrison
M.F.A., University of New Mexico
Visiting Assistant Professor, Visual Arts

Deirdre Haskell[1]
Ph.D., Stanford University
Assistant Professor, Mathematics

Robert J.P. Hauck
Ph.D., University of Chicago
Lecturer, Center for Interdisciplinary and Special Studies

Margaret R. Hawkins
Cand. Ph.D., University of Massachusetts
Visiting Instructor, English

William R. Healy
Ph.D., University of Michigan
Professor, Biology

Hilde S. Hein[2]
Ph.D., University of Michigan
Associate Professor, Philosophy

Richard S. Herrick
Ph.D., University of North Carolina
Associate Professor and Chair, Chemistry

Deidre H.P. Hill
Cand. Ph.D., Clark University
Lecturer, History

Mary Ann Hinsdale, I.H.M.
Ph.D., University of St. Michael's College (Toronto)
Associate Professor, Religious Studies

Hugh Hinton
M.M., New England Conservatory
Lecturer, Music

Mary E. Hobgood
Ph.D., Temple University
Assistant Professor, Religious Studies

George R. Hoffmann[1]
Ph.D., University of Tennessee
Professor, Biology

Rev. Lionel P. Honoré, S.J.[1]
Ph.D., New York University
Associate Professor, French

Bruce Hopkins
M.M., New England Conservatory of Music
Lecturer, Music

Carolyn Howe
Ph.D., University of Wisconsin-Madison
Associate Professor, Sociology

David M. Hummon
Ph.D., University of California, Berkeley
Associate Professor and Chair, Sociology

Patrick J. Ireland
Ph.D., St. Louis University
Associate Professor, English

Edward Isser
Ph.D., Stanford University
Assistant Professor, Theatre

Ronald M. Jarret
Ph.D., Yale University
Associate Professor, Chemistry

Andrew Johnson
M.F.A., Carnegie Mellon University
Visiting Assistant Professor, Visual Arts

Patricia J. Johnson
Ph.D., University of Southern California.
Assistant Professor, Classics

Glenn C. Jones, Jr.
Cand. Ph.D., Stanford University
Instructor, Chemistry

Justin Kaplan
B.S., Harvard University
Distinguished Lecturer, English

Francis W. Kaseta
Ph.D., Massachusetts Institute of Technology.
Associate Professor, Physics

John M. Kearns
Ph.D., University of California, Los Angeles
Assistant Professor, Classics

James M. Kee
Ph.D., University of Virginia
Associate Professor, English

Edward F. Kennedy
Ph.D., University of Notre Dame
Professor, Physics

Stephen A. Kocs[1]
Ph.D., Harvard University
Associate Professor, Political Science

Shirish K. Korde[2]
M.M., New England Conservatory of Music
Professor and Chair, Music

George Kosicki
Ph.D., Cornell University
Associate Professor and Chair, Economics

George N. Kostich
Ph.D., Harvard University
Associate Professor, Russian

Patricia E. Kramer
Ph.D., Columbia University
Charles A. Dana Faculty Fellow,
Associate Professor and Chair, Psychology

Lynn Kremer
M.F.A., Brandeis University
Associate Professor and Chair, Theatre

Malou Kury
Visiting Instructor, French

Rev. Anthony J. Kuzniewski, S.J.[1]
Ph.D., Harvard University
Associate Professor, History

Alice L. Laffey
S.S.D., Pontifical Biblical Institute in Rome
Associate Professor, Religious Studies

Normand J. Lamoureux
Ph.D., Indiana University
Professor and Chair, French

Hon. George M. Lane
M.A., Tufts University
Ambassador-in-Residence; Lecturer, Political Science

Rev. Vincent A. Lapomarda, S.J.
S.T.L., Boston College; Ph.D., Boston University
Associate Professor, History

Richard Larson
Ed.D., Clark University
Lecturer, Center for Interdisciplinary and
Special Studies

Aldo A. Lauria-Santiago
Ph.D., University of Chicago
Assistant Professor, History

Thomas M.C. Lawler[1]
Ph.D., Yale University
Professor, English

Ellen Lawrence
M.A., Brown University
Lecturer, Visual Arts

Joseph P. Lawrence
Ph.D., Universitat Tubingen
Associate Professor, Philosophy

Mary Lee S. Ledbetter
Ph.D., The Rockefeller University
Professor, Biology

Jerry Lembcke[3]
Ph.D., University of Oregon
Associate Professor, Sociology

Esther L. Levine
M.A., Brown University
Lecturer, Spanish

Todd T. Lewis
Ph.D., Columbia University
Assistant Professor, Religious Studies

Carol Lieberman
D.M.A., Yale University
Associate Professor, Music

Mark E. Lincicome
Ph.D., University of Chicago
Assistant Professor, History

Rev. Brian F. Linnane, S.J.
Ph.D., Yale University
Assistant Professor, Religious Studies

John B. Little, III
Ph.D., Yale University
Associate Professor, Mathematics

Charles M. Locurto[2]
Ph.D., Fordham University
Professor, Psychology

Rev. John J. MacDonnell, S.J.
S.T.L., Weston College; Ph.D.,
The Catholic University of America
Associate Professor, Mathematics

Kornath Madhavan
Ph.D., Annnamalai University
Associate Professor, Biology

Joseph H. Maguire
M.A., University of Notre Dame
Associate Professor and Chair, Education

Capt. Hector Marcayda, USMC
M.A., Ohio State University
Lecturer, Naval Science

Thomas R. Martin[1]
Ph.D., Harvard University
Jeremiah W. O'Connor Professor of Classics

Richard E. Matlak
Ph.D., Indiana University
Professor and Chair, English

John T. Mayer
Ph.D., Fordham University
Professor, English

Theresa M. McBride
Ph.D., Rutgers University
Professor, History

B. Eugene McCarthy
Ph.D., University of Kansas
Professor, English

Sharon McConnell
MFA, The School of the Art Institute of Chicago
Lecturer, Visual Arts

Daniel McCusker
A.B., College at Lincoln Center
Lecturer, Theatre

Michael G. McGrath
Ph.D., Massachusetts Institute of Technology
Associate Professor, Chemistry

Elizabeth McHenry
Ph.D., Stanford University
Visiting Assistant Professor and Holy Cross/W.E.B. DuBois Fellow, English

Paul D. McMaster
Ph.D., Clark University
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Ogretta V. McNeil
Ph.D., Clark University
Associate Professor, Psychology

Christopher Merrill
M.A., University of Washington, Seattle
Jenks Chair Visiting Professor, English

Bruce I. Miller
M.M., SUNY, Fredonia
Lecturer, Music

James J. Miracky, S.J.
Cand. Ph.D., Rutgers University
Instructor, English

Michael Monaghan
M.A., University of Lowell
Lecturer, Music

Maria M. Morrill
Cand. Ph.D., University of California at Los Angeles
Instructor, Mathematics

William R. Morse
Ph.D., Brandeis University
Associate Professor, English

Mary Morton
Ph.D., Dartmouth Medical School
Charles A. Dana Faculty Fellow, Assistant Professor, Biology

Frederick J. Murphy
Ph.D., Harvard University
Professor, Religious Studies

Blaise J. Nagy
Ph.D., Harvard University
Professor and Chair, Classics

James B. Nickoloff
Ph.D., Graduate Theological Union, Berkeley
Assistant Professor, Religious Studies

Raphael Njoroge
Ph.D., University of Nairobi
Lecturer, Center for Interdisciplinary and Special Studies

David J. O'Brien
Ph.D., University of Rochester
Loyola Professor of Roman Catholic Studies, History

Elizabeth O'Connell
Cand. Ph.D., Brown University
Visiting Instructor, Spanish

John D. O'Connell, C.P.A.
M.B.A., Boston University
Associate Professor, Accounting and Economics

John F. O'Connell[3]
Ph.D., University of Wisconsin
Professor, Economics

Jo-An O'Neil
M.Ed., Boston University
Lecturer, Center for Interdisciplinary and Special Studies

Wendy Owanisian-Wagner
Cand. Ph.D., University of Freiburg
Lecturer, German

Peter Parsons
Ph.D., University of Pittsburgh
Associate Professor, Biology

Stephen R. Pelletier
Ph.D., University of Massachusetts
Assistant Professor, Political Science

Peter Perkins[1]
Ph.D., University of California, Berkeley
Professor, Mathematics

Gary A. Phillips
Ph.D., Vanderbilt University
Associate Professor, Religious Studies

Joanne Pierce
Ph.D., University of Notre Dame
Assistant Professor, Religious Studies

James F. Powers
Ph.D., University of Virginia
Professor, History

Rev. James F.X. Pratt, S.J.[2]
Cand. Ph.D., Vanderbilt University
Instructor, Religious Studies

Kenneth N. Prestwich
Ph.D., University of Florida
Associate Professor, Biology

Virginia C. Raguin[1]
Ph.D., Yale University
Professor, Visual Arts

Ram Sarup Rana
Ph.D., Johns Hopkins University
Professor, Physics

Kolleen J. Rask
Ph.D., Yale University
Assistant Professor, Economics

Maurizio Rebaudengo
Cand. Ph.D., University of Connecticut
Lecturer, Italian

Rev. John P. Reboli, S.J.
Ph.D., Ohio University
Associate Professor, Visual Arts

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Ph.D., University of Pennsylvania
Professor, English

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Ph.D., Vanderbilt University
Associate Professor, Religious Studies

Robert W. Ricci
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Professor, Chemistry

Helen F. Roberts
Cand. Ph.D., University of Connecticut
Visiting Instructor, Spanish

Susan Rodgers[1]
Ph.D., University of Chicago
Professor, Anthropology

Claudia Ross
Ph.D., University of Michigan
Associate Professor, Chinese

Randy R. Ross[2]
Ph.D., University of Colorado
Professor and Chair, Physics

Rev. Philip C. Rule, S.J.[1]
Ph.D., Harvard University
Associate Professor, English

William J. Rynders
M.F.A., Wayne State University
Associate Professor, Theatre

Nicolas Sanchez
Ph.D., University of Southern California
Associate Professor, Economics

Scott Sandstrom
C.P.A., J.D., Suffolk University
Associate Professor, Accounting

Cheryl Savageau
B.S., Clark University
Lecturer, Center for Interdisciplinary and Special Studies

Jessica Sayre
A.B., Yale University
Lecturer, Theatre

David L. Schaefer
Ph.D., University of Chicago
Professor, Political Science

Denise Schaeffer
Cand. Ph.D., Fordham University
Instructor, Political Science

David J. Schap
Ph.D., Washington University
Professor, Economics

Constance G. Schick
Ph.D., Pennsylvania State University
Associate Professor, French

Richard C. Schmidt
Ph.D., University of Connecticut
Assistant Professor, Psychology

Susan P. Schmidt
M.F.A., Pennsylvania State University
Associate Professor and Chair, Visual Arts

Marion Schouten
M.F.A., Tufts University
Assistant Professor, Visual Arts

Kenneth A. Scott
M.Ed., Worcester State College;
M.N.S., Worcester Polytechnic Institute
Lecturer, Computer Science

David L. Schweizer[1]
Ph.D., California Institute of Technology
Assistant Professor, Mathematics

Susan Seeber
M.F.A., California Institute of the Arts
Lecturer, Music

Brian C.L. Shelley
Ph.D., University of Minnesota, Wisconsin
Assistant Professor, Biology

Eve Shelnutt
M.F.A., University of North Carolina, Greensboro
Professor, English

Janine Shertzer[3]
Ph.D., Brown University
Associate Professor, Physics

Amy C. Singleton[3]
Ph.D., University of Wisconsin, Madison
Assistant Professor, Russian

Royce Singleton, Jr.
Ph.D., Indiana University
Professor, Sociology

Sarah M. Slavick[1]
M.F.A., Pratt Institute
Assistant Professor, Visual Arts

D. Neel Smith
Ph.D., University of California, Berkeley
Assistant Professor, Classics

Dale E. Snyder, USN
M.S., Old Dominian University
Lecturer, Naval Science

Sarah Stanbury
Ph.D., Duke University
Assistant Professor, English

Cynthia Stone
Ph.D., University of Michigan
Assistant Professor, Spanish

Stephen M. Streeter
Ph.D., University of Connecticut
Lecturer, Center for Interdisciplinary and Special Studies

Karsten R.Stueber
Ph.D., University of Tubingen
Assistant Professor, Philosophy

Geoffrey Sumi
Ph.D., University of Michigan
Visiting Assistant Professor, Classics

Susan Elizabeth Sweeney
Ph.D., Brown University
Associate Professor, English

Victoria L. Swigert
Ph.D., SUNY, Albany
Professor, Sociology

Laurie Conway Tarpey
MBA, Harvard University, CPA
Lecturer, Economics

Maria Tegzes
M.M., New England Conservatory of Music
Lecturer, Music

Melvin C. Tews
Ph.D., University of Washington
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Ruth Thibodeau
Ph.D., University of California at Santa Cruz
Assistant Professor, Psychology

Edward H. Thompson, Jr.
Ph.D., Case Western Reserve University
Associate Professor, Sociology

Hector Torres-Ayala
Cand. Ph.D., University of Minnesota
Visiting Instructor, Spanish

Matthew A. Toth
Ph.D., Ohio University
Lecturer, Psychology

Denise Sakai Troxell
Ph.D., Rutgers University
Visiting Assistant Professor, Mathematics

Karen L. Turner
Ph.D., University of Michigan
Associate Professor, History

Jorge H. Valdés
Ph.D., University of Connecticut
Associate Professor, Spanish

Jane M. Van Doren[1]
Ph.D., University of Colorado, Boulder
Assistant Professor, Chemistry

Vannino Vannini
M.A., Universite degli Studi di Firenze
Lecturer, Italian

Madeline Vargas
Cand. Ph.D., University of Connecticut
Instructor, Biology

Frank Vellaccio
Ph.D., Massachusetts Institute of Technology
Associate Professor, Chemistry

Joel Villa
B.S., College of the Holy Cross
Lecturer, Computer Science

Steve Vineberg
Ph.D., Stanford University
Associate Professor, Theatre

Marsha Vleck
M.M. and Artist Diploma
New England Conservatory of Music
Lecturer, Music

Edward Vodoklys
Ph.D., Harvard University
Lecturer, Classics

Pul J. Wabrek
B.M., University of Lowell
Lecturer, Music

Jessica Waldoff
Cand. Ph.D., Cornell University
Instructor, Music

Kristin Waters
Ph.D., University of Connecticut
Lecturer, Center for Interdisciplinary and Special Studies

Joan Weber
M.A., Indiana University
Lecturer, French

Charles S. Weiss
Ph.D., Ohio University
Associate Professor, Psychology

Helen M. Whall
Ph.D., Yale University
Associate Professor, English

Rev. Andrew P. Whitman, S.J.
Ph.D., The Catholic University of America
Lecturer, Mathematics

Wallace F. Whitney
L.L.B., Harvard Law School
Lecturer, Center for Interdisciplinary and Special Studies

John H. Wilson
Ph.D., Yale University
Associate Professor, English

Amy R. Wolfson
Ph.D., Washington University
Assistant Professor, Psychology

Margaret Wong[2]
Ph.D., Rice University
Assistant Professor, English

Thomas Worcester, S.J.[1]
Ph.D., University of Cambridge
Assistant Professor, History

Joseph Wronka
Ph.D., Brandeis University
Lecturer, Center for Interdisciplinary and Special Studies

De-Ping Yang
Ph.D., University of Connecticut
Assistant Professor, Physics

Stefan Y. Zhurek
Ph.D., Moscow State University
Lecturer, Center for Interdisciplinary and Special Studies

Joanna E. Ziegler
Ph.D., Brown University
Associate Professor, Visual Arts

William J. Ziobro
Ph.D., Johns Hopkins University
Associate Professor, Classics

William L. Zwiebel
Ph.D., University of Pennsylvania
Professor, German

Code Key for Faculty:
[1] On Leave 1995-1996
[2] On Leave Fall 1995
[3] On Leave Spring 1996

Professors Emeriti, 1995 - 1996

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President Emeritus

Edward F. Callahan
Professor Emeritus, English

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Loyola Professor Emeritus, Religious Studies

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Professor Emeritus, Sociology/Anthropology

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Associate Professor Emeritus, History

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Professor Emeritus, Chemistry

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Professor Emeritus, French

Robert F. McNerney
Professor Emeritus, Modern Languages and Literatures

Clyde V. Pax
Professor Emeritus, Philosophy

Terri Priest
Associate Professor Emeritus, Visual Arts

John P. Reardon
Associate Professor, Emeritus, Visual Arts

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Professor Emeritus, English

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Professor Emeritus, Classics

Rev. Joseph S. Scannell, S.J.
Assistant Professor Emeritus, Visual Arts

Patrick Shanahan
Professor Emeritus, Mathematics

Edward F. Wall, Jr.
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Katherine McElaney
Francis X. Miller, S.J.
Gerard Reedy, S.J.
Frank Vellaccio

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Division B
Normand J. Lamoureux (June '97)

Division C
Scott Sandstrom (June '96)

Division D
William A. Green (June '96)

Administrative Faculty
Academic Affairs Division
Francis E. Delaney (June '97)

Student Life Division
Matthew A. Toth (June '96)

Students
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Erik A. Booth, '97
Shawn D. Millerick, '96

Student Life Council

Ex Officio
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Earle L. Markey, S.J.
Katherine McElaney
Peter W. Simonds
Matthew A. Toth

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Patricia L. Bizzell (repl. Prof. Swigert, '95-'96)
Predrag Cicovacki (June '97)
Patricia J. Johnson (June '96)
Victoria L. Swigert (June '96)

Students
Joseph-Allodin L. Cruz, '98
Holly R. Khachadoorian, '96

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Frank Vellaccio, Chair

Speaker of the Faculty, Ex Officio
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Robert H. Garvey, Physics
(repl. Professor Ross, Fall '95)
William R. Healy, Biology (June '96)
John B. Little, III, Mathematics (June '97)
Randy R. Ross, Physics (June '96)
(on leave, Fall '95)

Division B
Charles A. Baker,
Modern Languages & Literatures (June '97)
Osvaldo Golijov, Music (June '97),
on lv., Spring '96
Virginia C. Raguin,
Visual Arts (June '96), on lv., '95-'96
John P. Reboli, S.J., Visual Arts
(repl. Prof. Raguin, '95-'96)
Steve Vineberg, Theatre (June '97)
Helen M. Whall, English (June '96)

Division C
Charles H. Anderton, Economics (June '97)
Charles C. Euchner, Political Science (June '96)
Carolyn Howe, Sociology and Anthropology
(June '97)
Patricia E. Kramer, Psychology (June '96)

Division D
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John D.B. Hamilton, Classics (June '97)
Joanne Pierce, Religious Studies (June '97)
James F. Powers, History (June '96)

Administrative Faculty
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Student Life Division (June '97)
James E. Hogan,
Academic Affairs Division (June '96)

Student
Margaret A. Post, '96

Faculty Speaker
David J. O'Brien

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Committee on Faculty Affairs
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Mary E. Morton, Junior Rank (June '97)

Division B
Susan Elizabeth Sweeney, Senior Rank
(June '96)
Richard Carson, Junior Rank (June '97)

Division C
Selma Botman, Senior Rank (June '97)
David K.W. Chu, Junior Rank (June '96

Division D
Theresa M. McBride, Senior Rank (June '97)
Ann G. Batchelder, Jr. Rank (June '96)
James B. Nickoloff, Junior Rank
(repl. Prof. Batchelder, '95-'96)

At-Large
Alice L. Laffey (June '96)

Committee on Tenure and Promotion

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Stephen C. Ainlay, Division C (June '96)
Ross W. Beales, Division D (June '97)
Maurice Geracht, Division B (June '97)
Thomas R. Gottschang, Division C (June '97), on lv., Spring '96
Patricia E. Kramer, Division C (replacing Prof. Gottschang, Spring '96), Ronald M. Jarret, Division A (June '97), Carol Lieberman, Division B (June '96), Gary A. Phillips, Division D (June '96), Janine Shertzer, Division A (June '96), on lv., Spring '96, John B. Little, III, Division A (replacing Prof. Shertzer, Spring '96)

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Elaine J. Rynders (Ex Officio)
Frank Vellaccio (Ex Officio)
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Eckhard Bernstein (June '97)
Robert K. Cording (June '96), on lv., spring '96
Thomas W. Dube, repl. Prof. Cording, spring '96
David M. Hummon (June '97)

Committee on the Curriculum
Stephen C. Ainlay (Ex Officio)
James E. Hogan (Ex Officio)
Elaine J. Rynders (Ex Officio)

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Division B
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Joanna E. Ziegler, repl. Fr. Rule, S.J., '95-'96

Division C
George Kosicki (June '97)

Division D
Noel D. Cary (June '96), on lv., '95-'96
James T. Flynn, replacing Prof. Cary, '95-'96

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Gary DeAngelis (Ex Officio)
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B. Eugene McCarthy
(African-American Studies Director)
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(Peace and Conflict Studies Director)
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(Women's Concentration Director)
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Susan L. Berman (June '96)
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Mary E. Hobgood (repl. Prof. Batchelder, '95-'96)
Karen L. Turner (June '97)

Committee on Fellowships, Research and Publication
Charles S. Weiss (Ex Officio)

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Division B
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Division C
Selma Botman (June '96)

Division D
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John H. Wilson (June '97)

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Alice L. Laffey (June '98)
Maria Morrill (June '98)
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Mary E. Morton (June '96)
Constance G. Schick (June '96)
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James B. Nickoloff (June '96)

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Royce Singleton (June '97)
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Earle L. Markey, S.J.
Thomas W. Wiegand

The College of the Holy Cross

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

The College of the Holy Cross 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, sexual orientation 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, The College of the Holy Cross, Worcester, Mass. 01610.

The College Catalog is a document of record issued in September 1995. The Catalog contains current information regarding the College calendar, admissions, degree requirements, fees, regulations and course offerings. This 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 judgment 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 re-scheduling 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 ssociation 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.

Policy on Harassment

Holy Cross prides itself as a community that nurtures the growth and development of all its members. In such a community each individual is entitled to respectful treatment from others in an environment free from harassment. To ensure such an environment, the College has adopted the following policy. The goal of the policy is not simply to enforce limitations on harassment encoded in civil rights legislation, but to transcend legal considerations and appeal to principles governing honorable behavior in a just and principled community. Violations of criminal law, such as assault, rape, and hate crimes, will be dealt with accordingly. They are not the subject of this policy. Resources are, of course, available to assist any member of the community who has been a victim of such crimes.

Title VII of the 1964 Civil Rights Act defines sexual harassment as "unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature ... when:

1. submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment;

2. submission to or rejection of such conduct by an individual is used as a basis for employment affecting that individual; or
3. such conduct has the purpose or effect of unreasonably interfering with an individual's work performance or creating an intimidating, hostile, or offensive work environment" (EEOC, *Guidelines on Discrimination Because of Sex*).

Title IX of the Education Amendments of 1972 requires an educational institution to provide an environment free of discrimination on any ground. It thus prohibits discrimination in employment and in the utilization of resources, and it prohibits harassment.

Holy Cross is committed not only to enforcing the law but also to protecting the community from any form of harassment that serves to degrade the status of another human being. Most often harassment objectifies a personal attribute, singling it out for ridicule, attack, or disparagement. Physical attributes include, but are not limited to, race, sex, color, physical or mental handicap, age, ethnic origin, religion, economic class, and sexual orientation. Harassment may include physical contact such as touching or patting, written or verbal comments or suggestions, obscene or offensive pictures or "jokes," hostile or threatening gestures, or other forms of degradation. Though harassment is often malicious in intent, even thoughtless or unpremeditated behavior can have the effect of harassment. Given the inherent imbalance of power, romantic and/or sexual relationships between a faculty member and a student, or between supervisor and employee are strongly discouraged.

A copy of informal and formal procedures for resolving complaints of harassment may be obtained from the Affirmative Action Officer.

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.

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