1964-1965 Catalog

College of the Holy Cross

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Board of Trustees

Very Reverend Raymond J. Swords, S.J., President
Reverend Thomas J. Smith, S.J., Vice-President
Reverend George W. Nolan, S.J., Treasurer
Reverend Maurice F. Reidy, S.J., Secretary
Reverend William L. Lucey, S.J.
Reverend William L. Keleher, S.J.

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Mr. Charles J. Fleming Partner: Hanrahan & Co.
Atty. Edward B. Hanify, Chairman Partner: Ropes and Gray
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Mr. Henry M. Hogan Vice-President (retired), General Motors Corp.
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Mr. Richard J. Rutherford President, Worcester Gas Light Co.
Atty. Francis J. Vaas Partner: Ropes and Gray
Arthur J. Wallingford, M.D., F.A.C.S. Gynecologist-in-chief, Albany Medical Center Hospital
Academic Calendar

September, 1964-June, 1965

FALL TERM

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Event</th>
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<tr>
<td>Sept. 19</td>
<td>Saturday</td>
<td>Registration for Freshmen.</td>
</tr>
<tr>
<td>Sept. 20</td>
<td>Sunday</td>
<td>Freshman Orientation.</td>
</tr>
<tr>
<td>Sept. 21</td>
<td>Monday</td>
<td>Freshman Orientation.</td>
</tr>
<tr>
<td>Sept. 22</td>
<td>Tuesday</td>
<td>Registration for Sophomores</td>
</tr>
<tr>
<td>Sept. 23</td>
<td>Wednesday</td>
<td>Registration for Juniors and Seniors.</td>
</tr>
<tr>
<td>Sept. 24</td>
<td>Thursday</td>
<td>Fall Term begins.</td>
</tr>
<tr>
<td>Nov. 25</td>
<td>Wednesday</td>
<td>After 10:30 A.M., Thanksgiving Recess.</td>
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<tr>
<td>Nov. 30</td>
<td>Monday</td>
<td>Classes resume.</td>
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<tr>
<td>Dec. 8</td>
<td>Tuesday</td>
<td>Feast of the Immaculate Conception, a holiday.</td>
</tr>
<tr>
<td>Dec. 18</td>
<td>Friday</td>
<td>Christmas Vacation after last class.</td>
</tr>
<tr>
<td>Jan. 4</td>
<td>Monday</td>
<td>Classes resume.</td>
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<tr>
<td>Jan. 16</td>
<td>Saturday</td>
<td>First Term Examinations begin.</td>
</tr>
<tr>
<td>Jan. 26</td>
<td>Tuesday</td>
<td>Semester Recess.</td>
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SPRING TERM

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<tr>
<th>Date</th>
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<tbody>
<tr>
<td>Feb. 1</td>
<td>Monday</td>
<td>Second Semester begins.</td>
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<tr>
<td>Feb. 22</td>
<td>Monday</td>
<td>Washington's Birthday, a holiday.</td>
</tr>
<tr>
<td>Mar. 15</td>
<td>Monday</td>
<td>Reading Week.</td>
</tr>
<tr>
<td>Mar. 22</td>
<td>Monday</td>
<td>Classes resumed.</td>
</tr>
<tr>
<td>Apr. 9</td>
<td>Friday</td>
<td>Mid-Semester Survey and Warning.</td>
</tr>
<tr>
<td>Apr. 13</td>
<td>Tuesday</td>
<td>College Retreat begins after last class.</td>
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<tr>
<td>Apr. 20</td>
<td>Tuesday</td>
<td>College Retreat ends; Easter Vacation begins.</td>
</tr>
<tr>
<td>May 22</td>
<td>Saturday</td>
<td>Second Term Examinations begin.</td>
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<tr>
<td>Jun. 1</td>
<td>Tuesday</td>
<td>Examinations end.</td>
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<tr>
<td>Jun. 5</td>
<td>Saturday</td>
<td>Alumni Day.</td>
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<tr>
<td>Jun. 8</td>
<td>Tuesday</td>
<td>Baccalaureate Exercises.</td>
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<tr>
<td>Jun. 9</td>
<td>Wednesday</td>
<td>Commencement Day.</td>
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<tr>
<td>Month</td>
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<tr>
<td>September</td>
<td>1964</td>
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<td>October</td>
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<td>July</td>
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<tr>
<td>August</td>
<td>1965</td>
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</tbody>
</table>
# Officers of Administration

<table>
<thead>
<tr>
<th>Name</th>
<th>Title/Position</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Rev. Raymond J. Swords, S.J., M.A., Harvard University; S.T.L., Weston College</td>
<td>President</td>
<td>Fenwick Hall</td>
</tr>
<tr>
<td>Rev. Maurice F. Reidy, S.J., S.T.L., Weston College; Ph.D., Harvard University</td>
<td>Dean</td>
<td>Fenwick Hall</td>
</tr>
<tr>
<td>Rev. James F. Barry, S.J., M.A., Boston College; S.T.L., Weston College</td>
<td>Assistant Dean of Men</td>
<td>Kimball Hall</td>
</tr>
<tr>
<td>Rev. Richard P. Burke, S.J., S.T.L., Weston College; Ph.D., Gregorian University</td>
<td>Executive Assistant to the President</td>
<td>Fenwick Hall</td>
</tr>
<tr>
<td>Rev. Hubert C. Callaghan, S.J., Ph.D., Catholic University of America</td>
<td>Director of Personnel, Director, Industrial Relations Institute</td>
<td>O'Kane Hall</td>
</tr>
<tr>
<td>Matthew P. Cavanaugh, A.B., College of the Holy Cross</td>
<td>Director of the Alumni Fund</td>
<td>O'Kane Hall</td>
</tr>
<tr>
<td>Paul J. Centi, Ph.D., Fordham University</td>
<td>Director, Counseling Center</td>
<td>Alumni Hall</td>
</tr>
<tr>
<td>Donald A. Dewey, M.A., St. Bernardine of Siena College</td>
<td>Assistant Director of Public Relations</td>
<td>O'Kane Hall</td>
</tr>
<tr>
<td>Rev. Charles J. Dunn, S.J., M.A., Boston College; S.T.L., Weston College</td>
<td>Dean of Men, Director of Health</td>
<td>Kimball Hall</td>
</tr>
<tr>
<td>Eugene F. Flynn, A.B., College of the Holy Cross</td>
<td>Director of Athletics</td>
<td>Intramural Gymnasium</td>
</tr>
<tr>
<td>Frank Gallagher, A.B., College of the Holy Cross</td>
<td>Director of the Alumni Placement Bureau</td>
<td>O'Kane Hall</td>
</tr>
<tr>
<td>William M. Gallagher, A.B., College of the Holy Cross</td>
<td>Manager of the Bookstore</td>
<td>Kimball Hall</td>
</tr>
<tr>
<td>James A. Gross, Ph.D., University of Wisconsin</td>
<td>Assistant to Director, Industrial Relations Institute</td>
<td>O'Kane Hall</td>
</tr>
<tr>
<td>James R. Halpin, M.Ed., Boston College</td>
<td>Assistant Director of Admissions</td>
<td>Fenwick Hall</td>
</tr>
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</table>
Francis A. Jones, B.C.S., Northeastern University
   Bursar

James A. Keenan, Jr., LL.B., Georgetown University
   Assistant Director of Development

Rev. William L. Kelcher, S.J.; M.A., Boston College; M.S., College
   of the Holy Cross; S.T.L., Weston College
   Coordinator of Development

Rev. William L. Lucey, S.J., S.T.L., Weston College; Ph.D., George-
   town University
   Librarian

Rev. Ambrose J. Mahoney, S.J., M.A., Boston College; S.T.L.,
   Weston College
   Director of Admissions

Bernard J. McManus
   Special Projects

John A. Murphy, Jr., M.Ed., University of Massachusetts
   Assistant Registrar

George P. Nagle, A.B., College of the Holy Cross
   Assistant to the Director of Admissions

Rev. George W. Nolan, S.J., S.T.B., Weston College; M.A., M.S.,
   Boston College
   Treasurer

William J. O'Connell, M.A., Clark University
   Registrar

John F. O'Keefe, M.B.A., New York University
   Director of Business and Finance

Joseph A. Perrotta, A.B., College of the Holy Cross; LL.B., Boston College
   Alumni Executive Secretary
   Personal Secretary to the President

John T. Quirk
   Director of Food Services

Paul S. Rosenkrantz, Ph.D., Clark University
   Assistant Director, Counseling Center

Patrick V. Sheehan, B.S.B.A., Clark University
   Assistant Business Manager, Director of Purchasing

Rev. Thomas J. Smith, M.A., Georgetown University
   Administrator

Lewis B. Songer, M.A., Boston College
   Director of Public Relations

Rev. J. Leo Sullivan, S.J., M.A., Boston College
   Business Manager

William F. Tonne, B.S., College of the Holy Cross
   Director of Development
College Chaplains

Rev. Francis J. Hart, S.J., M.A., Woodstock College
College Chaplain
O'Kane Hall

Rev. Joseph J. LaBran, S.J., M.A., Boston College; S.T.L., Weston College
Assistant College Chaplain
Moderator of Sodality
Fenwick Hall

Faculty Committees

ACADEMIC ADVISORY COUNCIL


ACADEMIC STANDING


ADMISSIONS AND SCHOLARSHIPS


FACULTY FELLOWSHIPS AND PUBLICATIONS


GRADUATE STUDIES


HONORS PROGRAM AND SPECIAL STUDIES

FACULTY LECTURE SERIES

PRE-MEDICAL AND PRE-DENTAL

RANK AND TENURE

RESEARCH

STUDENT ACTIVITIES

Officers of Instruction
  *Professor, Latin* Beaven Hall
John B. Anderson, M.A., Notre Dame University
  *Instructor, History* 3 Forsberg St.
Charles A. Baker, Jr., Ph.D., University of Illinois
  *Assistant Professor, French* 14 June S., Oxford
  *Instructor, Classics* Wheeler Hall
  *Chairman, Department of Classics*
Olier L. Baril, Ph.D., Clark University
  *Professor, Chemistry* 91 Eureka St.
  *Director of Chemical Research*
Rev. George F. Barry, S.J., M.A., Johns Hopkins University; S.T.L., Weston College
  *Assistant Professor, Theology and Latin* Wheeler Hall
Rev. Harry E. Bean, S.J., M.A., Georgetown University
  *Professor, Latin and English* Beaven Hall
Richard B. Bishop, M.S., College of the Holy Cross
  *Research Associate* 37 Nelson St., No. Grafton
  *Graduate Chemistry Department*
<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>Address/Location</th>
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<tr>
<td>Instructor, Philosophy</td>
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</tr>
<tr>
<td>Instructor, Philosophy</td>
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<tr>
<td>Richard J. Bourcier, M.A.</td>
<td>Laval University</td>
<td>2 King St.</td>
</tr>
<tr>
<td>Instructor, French</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alfred V. Boursy, M.A.</td>
<td>Lawrence College</td>
<td>16 Janet Circle, Shrewsbury</td>
</tr>
<tr>
<td>Professor, German</td>
<td></td>
<td></td>
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<tr>
<td>William F. Bowen, M.A.</td>
<td>Clark University</td>
<td>5 St. Elmo Rd.</td>
</tr>
<tr>
<td>Professor, French</td>
<td></td>
<td></td>
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<tr>
<td>Rev. Charles E. Buckley, S.J., M.A.</td>
<td>St. Louis University; S.T.L., Weston</td>
<td>Clark Hall</td>
</tr>
<tr>
<td>Associate Professor, Greek and English</td>
<td></td>
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</tr>
<tr>
<td>John M. Burke, M.A.</td>
<td>Fordham University</td>
<td>Box 80, Wood St., Westboro</td>
</tr>
<tr>
<td>Instructor, Russian</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associate Professor, Sociology and Theology</td>
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<tr>
<td>Rev. Joseph F. Busam, S.J., M.A.</td>
<td>Woodstock College</td>
<td>Beaven Hall</td>
</tr>
<tr>
<td>Professor, Biology</td>
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<td></td>
</tr>
<tr>
<td>Rev. Raymond F. X. Cahill, S.J., M.A.</td>
<td>Catholic University of America; S.T.L.; Weston College</td>
<td>On Leave</td>
</tr>
<tr>
<td>Associate Professor, Economics</td>
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<tr>
<td>Associate Professor, Economics</td>
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<tr>
<td>Rev. Hubert C. Callaghan, S.J., Ph.D.</td>
<td>Catholic University of America</td>
<td>Fenwick Hall</td>
</tr>
<tr>
<td>Associate Professor, Economics</td>
<td></td>
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<tr>
<td>Edward F. Callahan, Ph.D.</td>
<td>University of Wisconsin</td>
<td>14 West St., Westboro</td>
</tr>
<tr>
<td>Associate Professor, English</td>
<td></td>
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</tr>
<tr>
<td>Rev. Francis F. Callahan, S.J., S.T.L.</td>
<td>Weston College; Ph.D., Fordham</td>
<td>On Leave</td>
</tr>
<tr>
<td>Associate Professor, Philosophy</td>
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<tr>
<td>William A. Campbell, M.S.</td>
<td>St. Francis College</td>
<td>73 Willow Hill Rd., Cherry Valley</td>
</tr>
<tr>
<td>Associate Professor, Biology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Henry S. Carey, Jr., Major, USAF</td>
<td></td>
<td>17 Mt. View Ave, Auburn</td>
</tr>
<tr>
<td>Associate Professor, Air Science</td>
<td></td>
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<tr>
<td>Rev. William A. Carroll, S.J.; M.A.</td>
<td>Boston College; S.T.L., Weston</td>
<td>Fenwick Hall</td>
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<td>Weston College</td>
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<tr>
<td>Associate Professor, Classics</td>
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</table>
Rev. Francis X. Carty, S.J., M.A., Boston College; S.T.L., Weston College
   Instructor, Greek
   Healy Hall

Rev. William J. Casey, S.J., M.A., Boston College; S.T.L., Weston College
   Professor, Theology
   Fenwick Hall

Rev. William J. V. E. Casey, S.J., M.A., Boston College; S.T.L., Weston College
   Professor, Theology
   Healy Hall

Paul J. Centi, Ph.D., Fordham University
   Associate Professor, Psychology
   15 Commodore Rd.

George J. Charest, M.S., College of the Holy Cross
   Professor, Chemistry
   138 Richmond Ave.

Rev. James K. Connolly, S.J., M.A., Boston College; S.T.L., Weston College
   Professor, Physics
   Fenwick Hall

Rev. Joseph B. Connors, S.J., M.A., Boston College
   Professor, English
   Hanselman Hall

Benjamin J. Cook, III Ph.D., Rutgers University
   Assistant Professor, Biology
   29 Woodland Rd., Holden

Rev. Francis O. Corcoran, S.J., M.A., Boston College; S.T.L., Weston College
   Professor, History
   Healy Hall

Robert S. Crowe, Ph.D., Iowa State University
   Associate Professor, Biology
   6 Eureka St.

Rev. James D. Crowley, S.J., M.A., Boston College
   Instructor, Theology
   Fenwick Hall

Rev. John D. Crowley, S.J., M.A., Boston College; S.T.L., Weston College
   Assistant Professor, Philosophy
   Acting Chairman, Department of Philosophy
   Lehy Hall

Rev. Patrick J. Cummings, S.J., M.A., Georgetown University
   Professor, English
   Fenwick Hall

Rev. John F. Dailey, S.J., M.A., St. Louis University
   Assistant Professor, English
   Fenwick Hall

Eugene F. Daley, M.A., Boston University
   Instructor, German
   Box 84, West Upton
Rev. Cyril R. Delaney, S.J., M.A., St. Louis University; S.T.L.,
Gregorian University
Associate Professor, Theology
Chairman, Department of Theology

Rev. Alfred R. Desautels, S.J., S.T.L., Weston College; Ph.D.,
University of Paris
Associate Professor, French
Chairman, Department of Modern Languages
Advisor, Foreign Students and Foreign Study

Daniel G. Dewey, M.A., University of Kansas
Assistant Professor, Mathematics

Rev. John C. Dewing, S.J., M.A., Weston College
Instructor, Philosophy

Rev. William T. Donaldson, S.J., M.A., Boston College; S.T.L.,
Weston College
Associate Professor, Greek

Rev. John P. Donnelly, S.J., M.A., Boston College; S.T.L., Weston
College
Assistant Professor, Theology
On Leave Fall Semester

John H. Dorenkamp, Jr., Ph.D., University of Illinois
Assistant Professor, English
Advisor, Graduate Studies

Rev. James J. Drohan, S.J., M.A., Boston College; S.T.L.,
Weston College
Associate Professor, Philosophy

Francis A. Drumm, A.B., College of the Holy Cross
Professor, English

Richard L. Eisenmann, S.J., M.A., Boston College
Instructor, Philosophy

Rev. Paul W. Facey, S.J., S.T.L., Weston College; Ph.D.,
Fordham University
Professor, Sociology

Rev. Joseph M. Fallon, S.J., M.A., St. Louis University; S.T.B.,
Weston College
Instructor, Sociology

Rev. Bernard A. Fiekers, S.J., Ph.L., Boston College; Ph.D.,
Clark University
Professor, Chemistry

Hanselman Hall
Lehy Hall
1396 Main St.
Lehy Hall
Fenwick Hall
Fenwick Hall
15 Brownell St.
Hanselman Hall
106 Burncoat St.
Hanselman Hall
Fenwick Hall
Hanselman Hall
Fenwick Hall

14
Donald J. Fitzpatrick, Lt. USNR
_Instructor, Naval Science_ 266 Main St., Oxford

_Associate Professor, Biology_ Carlin Hall
_Chairman, Department of Biology_

James T. Flynn, M.A., Boston College
_Instructor, History_ 9 Beckman St.

S. Edward Flynn, Ph.D., Fordham University
_Professor, French and Spanish_ 9 William St.

Aldo Fortuna, M.A., Johns Hopkins University
_Instructor, English_ R.F.D. Mast Rd., Durham, N.H.

George V. Goodin, Ph. D., University of Illinois
_Assistant Professor, English_ 254 Old Westboro Rd., No. Grafton

Rev. Thomas J. Grace, S.J., S.T.L., Weston College; Ph.D., Oxford University
_Associate Professor, English_ Fenwick Hall
_Chairman, Department of English_

Robert J. Grady, Lt. Ccl., USAF
_Professor, Air Science_ 3 Mayfield Rd., Auburn
_Commanding Officer, AFROTC Unit_

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_Professor, History_ 45 Saxon Rd.

_Instructor, Philosophy_ On Leave

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_Assistant Professor, Economics_ 45 Rollinson Rd.

Roy C. Gunter, Jr., Ph.D., Boston University
_Associate Professor, Physics_ Horne Homestead Rd., Charlton

_Professor, Philosophy_ Carlin Hall

Rev. Frederick A. Harkins, S.J., M.A., Boston College; S.T.L., Weston College
_Professor, Theology_ Fenwick Hall

_Associate Professor, Philosophy_ On Leave
Rev. William J. Healy, S.J., S.T.L., Weston College; Ph.D.,
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Associate Professor, English
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Milburn K. Hemmick, Lt. Cdr., USN
Instructor, Naval Science
36 Brentwood Dr., Holden

Jacob Hen-Toy, M.A., LL.M., Harvard University; M.A.,
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Visiting Assistant Professor, Russian Studies
75 Easton St., Allston

Edward J. Herson, M.A.(T), St. Louis University
Instructor, Classics
15 McGill St.

Rev. George A. Higgins, S.J., S.T.L., Weston College; Ph.D.,
Fordham University
Professor, Political Science
Chairman, Department of History and Political Science
Wheeler Hall

Thomas P. Imse, Ph.D., University of Maryland
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Chairman, Department of Sociology
19 Myrtle St., Westboro

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Weston College
Professor, Latin
Alumni Hall

Edward J. Kealey, Ph.D., Johns Hopkins University
Assistant Professor, History
Lehy Hall

Peter P. Kehoe, Capt., USAF
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88 Auburn St., Auburn

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Acting Chairman, Department of Physics
21 Hazelwood Rd.

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Wheeler Hall

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83 Institute Rd.
Rev. George A. King, S.J., S.T.L., Weston College; Ph.D., Georgetown University
Professor, Political Science
Lehy Hall

Rev. Gerald A. Kinsella, S.J., M.A., Georgetown University; S.T.L., Weston College
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69 June St.

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6 Oberlin St.

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221 Worcester Rd., No. Grafton

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Assistant Professor, Mathematics
Fenwick Hall
Rev. Robert B. MacDonnell, S.J., M.A., M.S., Boston College; S.T.L., Weston College; M.S., Harvard University
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*Instructor, Philosophy*  
53 Waverly St

Rev. Joseph M-F. Marique, S.J., Ph.D., Johns Hopkins University
*Professor, Greek*  
Alumni Hall

Rev. Joseph A. Martus, S.J., Ph.L., Weston College; Ph.D., Clark University
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Director, Graduate Department of Chemistry*  
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On Leave

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Assistant Chairman, Department of English*  
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   Assistant Professor, Theology

Rev. Paul G. McGrady, S.J., M.A., Middlebury College; S.T.B., Weston College
   Instructor, English

   Instructor, Theology

John F. McKenna, Ph.D., Fordham University
   Associate Professor, French

Rev. Owen P. McKenna, S.J., M.A., St. Louis University; S.T.L., Weston College
   Associate Professor, History

Donald N. McKeon, Major, U.S.M.C.
   Instructor, Marine Science

Paul D. McMaster, Ph.D., Clark University
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Robert F. McNerney, Jr., Ph.D., Yale University
   Associate Professor, Spanish

James A. Merino, M.A., Boston University
   Instructor, History

Frank J. Mininni, M.A., St. Louis University
   Instructor, Theology

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   Lecturer, Fine Arts
   Director, Musical Clubs

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   Instructor, Naval Science

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Healy Hall

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Fac. St.-Louis Chantilly
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Andrew P. Van Hook, Ph.D., New York University
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Samuel Van Valkenburg, Ph.D., University of Zurich
Visiting Professor, Political Geography

Edward F. Wall, Jr., M.A., Fordham University
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John H. Wilson, M.A., Yale University
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Donald J. Winn, S.J., M.A., Boston College
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Rudolph L. Zlody, Ph.D., Fordham University
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36 Henshaw St., Leicester
11 So. Flagg St.
On Leave
Fenwick Hall
3 Sunnyhill Dr.
4 Wyoma Dr., Auburn
Hanselman Hall
9 Roseland Rd.
28 Rock Ave., Auburn
The College

HISTORY

Presidents of Holy Cross

1843-1964

1843-45 ............... Very Rev. Thomas F. Mulledy, S.J.
1845-48 ............... Very Rev. James Ryder, S.J.
1848-51 ................ Very Rev. John Early, S.J.
1854-57 ................ Very Rev. Peter J. Blenkinsop, S.J.
1861-67 ................ Very Rev. James Clark, S.J.
1867-69, 1883-87 ........ Very Rev. Robert W. Brady, S.J.
1878-83 ................ Very Rev. Edward D. Boone, S.J.
1887-89 ................ Very Rev. Samuel Cahill, S.J.
1889-93 ................ Very Rev. Michael O'Kane, S.J.
1893-95 ................ Very Rev. Edward A. McGurk, S.J.
1901-06 ............... Very Rev. Joseph F. Hanselman, S.J.
1906-11 ................ Very Rev. Thomas E. Murphy, S.J.
1927-33 ................ Very Rev. John M. Fox, S.J.
1945-48 ................ Very Rev. William J. Healy, S.J.
1954-60 ............... Very Rev. William A. Donaghy, S.J.
In 1843 the Most Rev. Benedict Joseph Fenwick, second Bishop of Boston, founded the College of the Holy Cross. He gave the College the name of his Cathedral with the motto and seal of the Boston Diocese. He entrusted the direction of the College to the Fathers of the Society of Jesus. Classes began on November 2, 1843, and in 1844 the first college building was erected to accommodate ninety students. However, with the exception of the east wing, this building was destroyed by fire on July 14, 1852. With the cooperation of the Bishop of Boston, Most Rev. John B. Fitzpatrick, the Fathers of the Society provided for the building of Fenwick Hall, and the college was reopened in October, 1853, with a newly enrolled freshman class. The first graduation class of this new period was that of 1858. From 1849 to 1853 and from 1858 to 1865, degrees were conferred by Georgetown University. In 1865 the college received its charter from the state and conferred its own degrees.

In 1868 a west wing was added and the central building was raised one story and capped with two stately towers. In 1875 the east wing of the building was raised and extended. In 1893 O'Kane Hall, really a wing of Fenwick Hall, was built, and classes were held in the new addition in the following year. By 1904 the college enrollment had passed the five hundred mark. To take care of the increased enrollment Alumni Hall was built under the direction of the President, Rev. Joseph F. Hanselman, S.J. With continued growth, a new dormitory, Beaven Hall, was opened in 1914, in the Presidency of Rev. Joseph N. Dinand, S.J. It was named after Rt. Rev. Thomas D. Beaven, '70, Bishop of Springfield, who had sponsored its construction.

By 1920 the student body had increased to almost eight hundred so that a new dormitory, Loyola Hall, was opened under the direction of Rev. James J. Carlin, S.J., in 1922. In 1924 St. Joseph's Memorial Chapel was dedicated. The Dinand Memorial Library was opened in 1927, under the Presidency of Rev. John M. Fox, S.J. Kimball Hall, the general student center, was erected in 1935, under the aegis of President Francis J. Dolan, S.J. Wheeler Hall was opened in January, 1940, in the Presidency of Rev. Joseph R. N. Maxwell, S.J.

In 1941 a peacetime Naval ROTC Program was inaugurated, but it was soon converted into the V1, V5, V7 and V12 wartime programs. In the wartime centennial year of 1943, our student body numbered 1,200. On June 26, 1946 the naval wartime programs were discontinued, and the college reverted to its peacetime status.

In 1947 under the Presidency of Rev. William J. Healy, S.J., an intramural Gymnasium was added to the college buildings. In the following year, Station WCHC was dedicated. In 1951, a new Biology Building was dedicated by the President, Rev. John A. O'Brien, S.J. On July 1, 1951, the Air Force Reserve Officers' Training Corps was established at the College, and training began in September. By 1954 the enrollment was over 1,800 so that two Dormitories, Hanselman and Lehy, came into existence under the direction of Rev. John A. O'Brien, S.J. In 1959, in the era of Sputnik and the missile age, the modern emphasis upon science was reflected with the dedication by President William A. Donaghy, S.J. of the Haberlin Science Building. This twelfth building was named in honor of the memory of Rt. Rev. Richard J. Haberlin, P.A., Class of 1906.

On June 16, 1960, Very Reverend Raymond J. Swords, S.J., became the twenty-fourth president of the college. Under his direction two new dormitories have been constructed on the upper campus level. The most ambitious development program in
the history of the college has been undertaken for the addition of a new faculty residence; an infirmary for students, faculty and college personnel; the conversion of Fenwick and O'Kane Halls into an administrative center, with new alumni quarters, and with new office, dining and meeting facilities for the faculty; a social science center with an experimental psychology laboratory and student guidance center; an open stack addition to the college library; renovation of three dormitory buildings; a new student center building with a large auditorium and complete facilities for student recreation and activities programs; a new field house and gymnasium with a seating capacity of 4,000 which will provide the first indoor sports facility designed for intercollegiate games. These seven projects will cost an estimated $10,400,000. Simultaneously, a $10,000,000 endowment fund has been announced to increase faculty salaries and to broaden significantly the scholarship program for students of high academic standing. To accomplish such undertakings, a $20,400,000 campaign for funds has been inaugurated by the college.

But in the intervening years from 1843 to the present, amidst the changes which have come through noteworthy additions to the physical plant, the establishment of new organizations for students and alumni and administrative reorganizations, two strands of unity are clearly visible: namely, the grand and noble purpose of education and the primacy of the spiritual. The first element of traditional unity, constancy of educational purpose, was stressed by President Theodore Roosevelt in his Commencement Address of June 21, 1905, when he stated:

> It is eminently characteristic of our nation that we should have an institution of learning like Holy Cross, in which the effort is constantly made to train, not merely the body and mind, but the soul of man, that he should be made a good American, and a good citizen of our country.

The second unity, that of the primacy of the spiritual, was expressed by Rev. William A. Donaghy, S.J., when he wrote:

> But with all the change that has swirled about this "tall mountain citied to the top, crowded with culture" there are also comforting permanences. The basic undergraduate spirit of friendliness and fraternity, the deep spirituality which morning after morning crowds the altar rails and finds secretive figures in the dim chapel, the bright idealism so much in contrast to the cynicism on all sides, these, thanks to God, have not altered. And I feel certain that if Bishop Fenwick were to return, he would undoubtedly be confused by the material expansion but at the same time he would be consoled by the spiritual continuity.

President Raymond J. Swords, S.J. brought both traditional unities into contemporary focus when he declared:

> Holy Cross is openly and unashamedly committed to the acceptance and propagation of that whole set of values that goes by the name of Christian Humanism—those intellectual, cultural and spiritual values that were originated for us by the Jew and Greek, and must be preserved by us as Christian and American.

> . . . Holy Cross holds a triple portfolio in developing men who will love God intelligently, their country nobly, and their fellowman selflessly.

25
EDUCATIONAL SYSTEM

Objectives

Since the turn of the century, we have been a restless and even rootless people. With the tremendous scientific advances of our time, traditions toppled and old-time certitudes corroded, so that it became the fashion to be intellectually contemptuous of our academic ancestors; respect for history was regarded as an ingenuous nostalgia for what would never return; and man's past was well forgotten because his future seemed so fantastic. True, two of the bloodiest wars of all time, international tensions, the decay of morals, the collapse of so many values which the centuries had canonized, gave pause to thinking men.

No, tradition is not a musty museum in which we see only dusty, shrouded and outmoded ideas. The world changes but man does not. His ideas are constantly refurbished and replaced but his capacity to make decisions, to love or hate or be indifferent does not change. The Jesuit educational system, enamored of the past and yet eager for the future with all that it may hold, is based on this fundamental immutability of man. That system is summed up in the Ratio Studiorum, a schedule of studies which aims at the production of what we might simply call a civilized man. It is obvious that this end product is still worthwhile and is, in fact, desperately needed. Technological training, however excellent, will not in itself flower into such an educational result.

We have discovered how “to manipulate things in the service of human purposes,” writes Elton Mayo of the Department of Business Administration at Harvard, but we have lost the moral perspective necessary to purify those purposes. Lecomte du Nouy observes that our technical achievements have far outstripped our moral capacities and remarks that the great ideas of history, the “lever-ideas” by which man raised himself and his status, have always been religious concepts. The College of the Holy Cross stands firmly convinced of and committed to that historical principle.

“It must never be forgotten,” wrote Pius XI, himself a scholar of formidable stature and international reputation, “that the subject of Catholic education is man whole and entire, soul united to body in unity of nature, with all his faculties natural and supernatural, such as right reason and revelation show him to be; man, therefore, fallen from his original state, but redeemed by Christ and restored to the supernatural condition of adopted sons of God . . . The proper and immediate end of Christian education is to cooperate with divine grace in forming the true and perfect Christian, that is, to form Christ Himself in those regenerated by Baptism. The true Christian does not renounce the activities of this life, he does not stunt his natural faculties; but he develops and perfects them, by coordinating them with the supernatural.” Leo XIII, likewise a giant of mind, had previously confirmed the same outlook.

This is not to confuse piety with the strictest and more comprehensive kind of education. Etienne Gilson well writes: “piety never dispenses with techniques. . . . No one, nor anything obliges the Christian to busy himself with science, art or philosophy, for other ways of serving God are not wanting; but if that is the way of serving God that he has chosen, the end itself, which he proposes for himself in studying them, binds him to excellence. He is bound by the very intention which guides him, to became a good savant, a good philosopher, or a good artist.” Dietrich von Hildebrand has made the
same point. "A Catholic university would have no meaning if it were nothing but a collection of Catholic men of thought and science, while following the model of the modern university in its general atmosphere. It requires the conscious production of an atmosphere filled by Christ, an environment imbued with prayer. . . . The students must breathe a Catholic air and Catholic spirit which will make them into anti-pedantic, humble, faithful, metaphysically courageous men of winged intelligence and yearning, and therefore capable of truly adequate and objective knowledge." He is, of course, in the spirit of Newman who complained bitterly of the segregation of knowledge and religion: "It will not satisfy me, what has satisfied so many, to have two independent systems, intellectual and religious, going at once side by side, by a sort of division of labor, and only accidentally brought together. . . . I want the same roof to contain both the intellectual and moral discipline. Devotion is not a sort of finish given to the sciences; nor is science a sort of feather in the cap, if I may so express myself, an ornament and set-off to devotion. I want the intellectual layman to be religious and the devout ecclesiastic to be intellectual."

That is the educational credo of Holy Cross. It is uncompromisingly intellectual, intransigently Catholic, and the history of the College which was founded in 1843 and her thousands of graduates have proved to us that this traditional approach needs constant review to keep abreast of progress but no basic revision to subscribe to those educational expediencies which from day to day announce themselves as final educative solutions.

**Curriculum**

Holy Cross College, committed to the belief in the excellence of the Liberal Arts in producing "the Christian man," offers integrated programs of studies to train the mind of the student in accurate, logical thinking through courses in Logic, Mathematics and the Natural Sciences. Development of precise oral and written expression is the aim of courses in Composition, Rhetoric and Language, ancient and modern, while the imagination is stimulated by the study of Poetry. The student recognizes the essential immutability of man portrayed in Literature of the past and present and is made aware of the history of man as well as the contemporary scene by studies in History, Sociology, Philosophy and Theology.

This is the basic pattern of the Liberal Arts program at Holy Cross College and it provides an opportunity for the student to build solid undergraduate formation for study in major fields of concentration in the following areas: Biology, Chemistry, Classics, Economics, English, History and Political Science, Mathematics, Modern Languages, Philosophy, Physics, Psychology and Sociology.

**Co-Curricular Activities**

Ancillary to this pattern are carefully planned co-curricular activities which spring from the courses in which the student is enrolled and which offer him the opportunity to explore the values of his curriculum: Debating, Dramatics, Publications, Student Organizations for Economics, History, Languages, Mathematics, Philosophy, Political Science, Science, and Theology.

**Religious Training**

Holy Cross College insists that in every stage of intellectual development religious instruction be interwoven with training in the secular branches of knowledge. This instruc-
tion aims at planting in the heart such principles of rectitude as will afterwards serve as a
guide, a warning, a stimulus. Since Religion is the highest concern of man, Theology is a
prescribed subject for Catholic students.

As a consequence of the belief in the pervasive character of religion, opportunities
for the foundation of life-long practices of Christian virtue are traditional to the Cam-
pus. Integral to the college year and a base for academic pursuits is the Annual Retreat,
during which are given the Spiritual Exercises of St. Ignatius Loyola. Catholic students
are obliged to attend all the exercises of the retreat.

Central in the life of a Christian man is the Holy Sacrifice of the Mass. The Mass is
man's social response to the need of his nature to worship God, while from it he derives
the inspiration and spiritual strength to encounter small obstacles in life with Christian
patience and big ones with the courage for victory. It is a holy tradition at Holy Cross
that all Catholic students attend daily Mass. The tradition is honored by a college
regulation of obligatory attendance.

At the beginning of each year there is offered the student Religion Motivation Week.
At this time, by a series of instructive meditations concerning the personal and spiritual
obligations of the Christian college man, the academic year is inaugurated and motiva-
tion generated for the intellectual and moral discipline of the life of a scholar.

Two Jesuit priests are College Chaplains for the guidance of students in religious
and spiritual matters. These Chaplains are assisted by other Jesuit priests who are as-
signed to the residence halls.

**Discipline**

It is the constant purpose of the College to encourage the growth of personal and
corporate responsibility consistent with "the Christian man." Serious breaches of the
code that demands respect for order, morality, personal honor and the rights of others
will necessitate withdrawal from the College. The Administration reserves the right to
dismiss a student at any time without any definite charge. Detailed regulations and
customs governing discipline are found in the Student Hand-Book.

**Institutes**

The College is conscious of the need to contribute of its intellectual resources and the
skills of its personnel to the community in which it lives. Matching its educational ideal
of civic responsibility, as a civic enterprise it offers Summer Institutes for secondary
school teachers in Mathematics, Science and Modern Languages. (Cf. p. 123). During
the school year it offers In-Service Training, as well as a Language Institute, for teachers
in the city of Worcester school system.

The Institute of Industrial Relations, conducted during the evening hours, and for
which no academic credit is given, aims at the intellectual and moral enrichment of the
life of participants from management and labor unions. Stress is placed on knowledge
of economic conditions in industry, current labor problems, and labor law.

**Affiliations**

The better to promote the educational ideals of the Society of Jesus and to share in
the fruits of the scholarship of other institutions of learning, the College of the Holy
Cross holds institutional membership in the following organizations:


Holy Cross College is a member college of the Harvard University Graduate School of Education “The Twenty-nine College Co-operative Plan.”
CAMPUS BUILDINGS

ALUMNI HALL, given by former students, contains student residences on the upper floors, classrooms and faculty offices on the lower floors. It was opened in 1904.

THE ATHLETIC FIELDS AND INTRAMURAL GYMNASIUM contain the football gridiron, the baseball diamond, the quarter-mile track, tennis courts, basketball courts, and facilities for all other outdoor and indoor sports. The baseball diamond on Fitton Field is bounded on the east by the football gridiron which is surrounded on four sides by stadia seating nearly 23,000. Freshman Field and Alumni Field are suitable for practice and for the games of the intramural teams. On the plateau that crowns the hill south of the College buildings, as well as on the lower east level, are laid out diamonds and gridirons for intramural contests, in which the majority of undergraduates participate. The Intramural Gymnasium was constructed in 1947.

BEAVEN HALL is named in honor of the late Bishop Thomas D. Beaven of Springfield, '70, who sponsored its construction. Opened in 1914, the building contains offices on the first floor and student residences on the upper floors.

BISHOP HEALY HALL was constructed during 1962. It is named for the late Most Rev. James A. Healy, valedictorian of the college's first graduating class of 1849, the first American bishop of Negro ancestry, and the second bishop of Portland, Maine. The building contains living accommodations for students and faculty members and has a student lounge on the first floor.

CAMPION HALL was opened in 1936 to provide living quarters for a limited number of students and converted in the summer of 1962 to a student service facility.

CARLIN HALL was opened under the direction of Very Rev. James J. Carlin, S.J. as Loyola Hall in 1922 and later was re-named for Father Carlin, who was president from 1918-24. Student residences occupy the upper floors and classrooms and faculty offices are located on the lower floors.

CLARK HALL was constructed in 1962 and is dedicated to the late Very Rev. James P. Clark, S.J., president of the college from 1861-67. It contains living accommodations for students and faculty members and has a student lounge on the first floor.

DINAND LIBRARY was opened in 1927 and bears the name of the late Very Rev. Joseph N. Dinand, S.J., president of the college from 1911-18 and again during the years 1924-27. It contains more than 205,000 volumes, the Louise Imogene Guiney and David I. Walsh collections.

FENWICK HALL is the oldest of the college buildings. It is named for the founder of Holy Cross, the late Most Rev. Benedict Joseph Fenwick, second Bishop of Boston, who founded the college in 1843. Fenwick Hall was opened in 1844, destroyed by fire in 1852. It was rebuilt in 1853, with additions in 1868 and 1875. It contains administrative offices on the main floor and faculty residences on the upper floors.

HANSELMAN HALL was constructed during 1954 and bears the name of the late Very Rev. Joseph F. Hanselman, S.J., president of the college from 1898-1906. It contains living accommodations for students and faculty members and has a student lounge on the first floor.

KIMBALL HALL was constructed in 1935 and honors the name of Rev. Charles L. Kimball, S.J., former Classics professor at Holy Cross. It contains the student dining room, a bookstore, postoffice, theatre and the offices of the Dean of Men.

LEHY HALL was constructed during 1954. Dedicated to the late Very Rev. John F. Lehy, S.J., president of Holy Cross during the years 1895-1901. It contains living accommodations for students and faculty members and has a student lounge on the first floor.

O'KANE HALL, built in 1893, stands at the summit of Linden Lane, the main entrance to the college. It honors the late Very Rev. Michael O'Kane, president of Holy Cross from 1889-93. On the main floor is the visitors' reception lounge and on upper floors are administrative and faculty offices.

O'NEIL MEMORIAL HALL was opened in 1951 and is dedicated to the William F. O'Neil family, benefactors of the college. Located on the western side of Beaven Hall, it contains classrooms and facilities of the Biology department.

ST. JOSEPH'S MEMORIAL CHAPEL AND THE MARY CHAPEL are dedicated to the memory of the graduates of Holy Cross. Each of the two chapels contains a seating capacity of 900. The Memorial Chapel was constructed in 1924 and the Mary Chapel, which occupies the lower floor, was opened in 1955.

WHEELER HALL was opened in 1940 and honors the late Rev. John D. Wheeler, S.J., a former college administrator. It contains classrooms on the lower floor and student residences on the upper floors.
General Services

Student Health Service

All resident students at the College of the Holy Cross are entitled to medical service with the following privileges: (1) Consultation with the college physician, daily, if necessary. (2) Visits by the college physician while the student is confined in the college infirmary. (3) Board, room and nursing at the college infirmary. Nursing attendance is rendered by nurses regularly employed by the college. Special outside nurses, if employed, must be paid for by the student.

No student is obliged to patronize the college physician. With the permission of the college Director of Health and at his own expense, a student may consult any physician approved by his parents. When medicines are prescribed the expense is to be borne by the student. The college cannot furnish regular special diets to students who may require such treatment. Expenses incurred for hospital treatment must be defrayed by the individual student.

Accident Insurance

The college has approved a student accident medical reimbursement insurance plan which offers the student maximum benefits at low cost for the calendar year. This supplementary plan may relieve parents of possible financial strain in meeting this type of unanticipated expenses.

Student Employment

Some employment is available at the College of the Holy Cross for students who need to earn part of their college expenses. To merit employment, students must meet certain academic, disciplinary and financial requirements.

The Library

There are approximately 205,000 volumes in the Dinand Library and they represent to a satisfactory degree every major classification of the Library of Congress, according to which system the Holy Cross collection is catalogued. Hundreds of classified pamphlets, periodicals and manuscripts in various fields increase the students’ reference resources. Students are permitted the freedom of the stacks.

In the Reading Room are found the principal reference collections, encyclopedias, dictionaries, bibliographies, yearbooks and concordances.
Occupying the entire lower floor of the east wing is the Browsing Room, designed for comfortable light reading and listening to classical music.

The Periodical Room is above and co-extensive with the Browsing Room. Over three hundred and fifty periodicals, from daily newspapers to annuals, both foreign and domestic, and in several languages, are received on subscription.

The west wing of the main floor houses the Museum, where are exhibited many of the choice, valuable and historic treasures of the college. Valuable paintings, sculptures, coins, books and pamphlets whose antiquity, rarity of edition give them a peculiar value, documents associated with the growth of the college, the history of the Church and the development of the country, autographs and manuscripts are some of the categories represented in the Museum exhibit. Of special interest is the growing collection of Jesuitana, which embraces the works of many early writers of the Society of Jesus.

Natural Science and Mathematics libraries are housed in the Reverend Joseph T. O'Callahan, S.J. Library in Haberlin Hall.

(Cf. Appendix for names of donors to libraries.)

**Counseling Services**

The offices of the Deans, the Registrar, the Director of Student Aid, the Director of Health, the Director of Placement, the College Chaplains, Faculty Prefects of Dormitories and Counseling Center are available to the student for guidance and assistance.

The chairmen of the academic departments are the academic advisors for upperclassmen. Each freshman has a faculty advisor to assist him in academic matters.

Special faculty advisors are appointed to guide the student in preparing for professional careers and in applying for graduate fellowships.

College Chaplains are ready at all times to assist the student in the multitude of problems that assert themselves during college years. Corridor Prefects live in the dormitories with the students and are available for counseling.

**Counseling Center**

In 1961, the college established a Counseling Center, which offers the following programs:

**FRESHMEN TESTING PROGRAM.** All entering freshmen are required to participate in a testing program, the purpose of which is to determine each student's academic potential and to assess his proficiency in the learning skills which are considered important for success in studies.

**ORIENTATION PROGRAM FOR FRESHMEN.** During the first week of school, each freshman section is assigned a member of the faculty who will serve as advisor to the students in that section. During the first semester, each section meets once a week with its advisor. The purpose of the weekly meetings is to acquaint the new students with the numerous programs and opportunities available on campus and to provide the opportunity for the
discussion of common problems. In addition, the faculty advisor is available to the individual student to answer questions concerning courses of study, educational and vocational goals, and the like, and to help the student with any problems which may arise.

READING IMPROVEMENT AND STUDY SKILLS PROGRAM. Since the College realizes that even students of high intellectual promise may not do well in their studies because of poor reading or study skills, the Counseling Center offers during each semester special courses in these areas. Through instruction and intensive practice in these courses, the student acquires effective study skills and the ability to read rapidly with a high degree of comprehension.

EDUCATIONAL AND VOCATIONAL GUIDANCE. Staff members are available to help students to choose worthwhile and appropriate educational and vocational goals. The Counseling Center also maintains an extensive library of literature describing the educational opportunities and the vocational areas available to college graduates.

PERSONAL COUNSELING. Professionally qualified counselors are available to help students who may be having difficulty with their studies because of personal or emotional problems.

The Counseling Center is located in Alumni 61. Students interested in the services provided may make appointments Monday through Friday, 9 A.M. to 5 P.M.

Faculty Advisors to Freshmen


Special Faculty Advisors, 1963-64

African Students .......................... Rev. Richard P. Burke, S.J., Ph.D.
Armed Services ................................ Rev. Charles J. Dunn, S.J.
Business Opportunities ..................... Edward J. Kealey, Ph.D., C.P.A.
Danforth Fellowships ....................... Edward J. Kealey, Ph.D.
Foreign Students and Foreign Study ........ Rev. Alfred R. Desautels, S.J., Ph.D.
Fulbright Fellowships ...................... Rev. Thomas J. Grace, S.J., Ph.D.
Graduate Schools of Business ............... Edward Peragallo, Ph.D., C.P.A.
Graduate Studies .......................... John H. Dorenkamp, Jr., Ph.D.
Holy Cross College Prizes and Scholarships Rev. Maurice F. Reidy, S.J., Ph.D.
Law Schools and Law School Scholarships ..... John H. Dorenkamp, Jr., Ph.D.
Marshall Scholars .......................... John H. Dorenkamp, Jr., Ph.D.
M.A.T. Cooperative Scholarship, Harvard University “29 Plan”
  John H. Dorenkamp, Jr., Ph.D.
Medicine .................................... Rev. Joseph F. Busam, S.J.
National Science Foundation Programs ....... Rev. Robert B. MacDonnell, S.J.
Public Service—Politics .................... Rev. Walter M. Shea, S.J.
Alumni Placement Bureau

The Alumni Placement Bureau was established as a service to all Holy Cross graduates. Undergraduates of all classes are also urged to utilize the facilities of the bureau.

A series of career guidance talks is held during the year in which alumni and other business and professional leaders speak informally of career opportunities.

Campus conferences with personnel officers of businesses and industrial firms, representatives of secondary schools and federal agencies are arranged by the bureau.

Cultural Events

Each year the educational program of the college is enriched by fall and spring programs of lectures, theatrical productions, concerts, classic films series. Eminent artists, distinguished men of letters and science, political and social scientists are invited to the campus for formal and informal presentations.

The Cross and Scroll Society presented in 1963-64: Alec Waugh; C. Northcote Parkinson; Harry Golden; a Chinese Culture Festival including Dr. Chih Meng, the Hu dancers and Dr. Paul K. T. Sih; Norma Cousis; Brand Blanshard; Stephen Spender; Sean O'Faolain and Hans Conried.

Dormitory Accommodations

Under normal conditions the residence halls of Holy Cross have accommodations for fifteen hundred students. Each living room in the student dormitories is provided with the essential articles of furniture, such as desks, chairs, lockers, beds, mattresses, pillows. Students contract privately with a linen service company recommended by the college which will supply and launder two sheets, one pillow case, two bath towels and two hand towels each week of the school year. Room assignments are made by the office of the Dean of Men.

Graduate Studies Advisor

The office of the Graduate Studies advisor has been established to aid students seeking a continuation of their education in graduate and professional schools.

Language Laboratory

A Language Laboratory on the ground floor of Carlin Hall has forty booths equipped with modern electronic instruments: tape recorder, microphone, headset, and a channel
selector to receive any one of the five different programs transmitted from the console.
The work performed in the Laboratory is coordinated with classroom activity and is of
invaluable assistance for the oral-aural approach to language.

**Reserve Officers' Training Corps Program**

The College offers as part of its regular curriculum the ROTC programs of the Air
Force and the Navy. The programs of both services consist of one course each semester
for four years (acceptable for credit towards a degree), one drill period per week, and
at least one summer training camp or cruise.

The Air Force program leads to a commission in the Air Force Reserve and prepares
for specific duties in the Regular Air Force, the Air Force Reserve and the Air National
Guard Units. The Naval ROTC program prepares qualified officers for the Navy and
Marine Corps, the Naval Reserve and the Marine Corps Reserve.
College Expenses

General

Tuition

$1,200 for each year of academic instruction. This tuition fee includes all ordinary charges except special fees.

Board and Room

$1,100 per academic year. This includes infirmary accommodation when required. Some room accommodations will cost $100 less per academic year. These expenses do not include textbooks or incidental expenses.

Payment of Bills

Bills for one half of each of these fees will be issued not later than two weeks prior to the opening of each semester as follows:

Boarding Student: $1,150

Day Student: $600

This semester bill is payable in advance, but in no case later than the day of registration. Bills for other fees are payable when rendered. Make all checks and money orders payable to the Treasurer, College of the Holy Cross. The trustees of the college reserve the right to change tuition rates and to make additional charges within the college whenever they believe it to be necessary. For those parents or guardians who prefer monthly payments toward the cost of tuition and the charges for board and room, arrangements may be made with The Tuition Plan, Incorporated, One Park Avenue, New York, New York 10016.

Withdrawal

During the first six weeks of each semester, there will be a proportional refund of tuition; after six weeks, there will be no refund. Throughout the semester, there will be a proportional refund of board and room charges.
Special

Application Fee:

A fee of $10 (non-refundable) must accompany all applications for admission to the College.

Acceptance Deposit:

Regular candidates, upon receiving final notice of their acceptance, are obliged to forward a non-refundable reservation deposit of $100. For students accepted under the Early Decision Plan and for all Early Scholarship Awardees the required deposit fee will be $200. This fee will be required within two weeks of the date of the candidate’s notification of acceptance and/or Early Scholarship Award and will not, under any circumstances, be refunded. The amount deposited will be deducted from the first semester bill.

Audit: (per semester hour) .................................................. $35
Change of Curriculum: ......................................................... 10
Change of Course: ............................................................... 5
Change of Schedule: ............................................................. 2
Examination, Absentee: ......................................................... 5
Examination, Conditional: (Freshmen, 1st, Semester only) ... 5
Extra Course Fee: (per semester hour) ............................... 35
Graduation Fee: ................................................................. 15
Late Registration Fee: ........................................................... 5
Reading Clinic Fee: (Cf. p. 34 Reading Improvement Program) ... 30
Withdrawal from Course: ....................................................... 5

Breakage Deposit:

There is no breakage deposit required for the Chemistry courses, but the amount of any breakage above the class average is billable to the responsible student.

Property Damage:

Any charges for property damage will be billed directly to the student. The minimum billing for such damage will be $5.
Scholarships and Loans

General Information

A limited number of scholarships are awarded annually to incoming and enrolled students from the income on founded scholarships. This income is supplemented by grants from college funds. A few scholarships, restricted by the donors to definite categories of applicants, offer awards to the amount of full tuition and partial or total expenses for board and room at the college. All other scholarships grant full or partial tuition. For information concerning the joint Hoy Cross College-Government Loan Program, cf. p. 49.

Applicants for admission who are also scholarship candidates must complete, and have mailed to the College by February 1, the Parents' Confidential Statement of the College Scholarship Service. This form, which is the College's required scholarship application, may be obtained at the candidate's high school or by writing directly to College Scholarship Service, P. O. Box 176, Princeton, N. J. The candidate must request the Service to mail a copy of the statement to Holy Cross before the February 15 date. All scholarships, ordinarily awarded in May, are granted on a provisional four-year basis. To warrant renewal, recipients will be required to achieve "B" average in each subject of their college course and to maintain a satisfactory disciplinary record. Scholarships are awarded on the basis of academic excellence and demonstrated financial need. High scholastic achievement, promise of leadership, participation in significant extracurricular activities, character and personality constitute the factors on which scholarship awards are made. Candidates are required to take no examinations beyond the College Board Tests.

For scholarship renewal and new applications, upperclassmen must file with the Treasurer a completed application form not later than April 1. Transfer students are not eligible for scholarship assistance until they have completed one year of study at Holy Cross College.

GENERAL SCHOLARSHIPS

These are open to all incoming and enrolled students. The amount of the award is the income on the gift of the donor.

RESTRICTED SCHOLARSHIPS

These by the intention of the donor are restricted to definite categories of applicants who often must be from a definite locality, parish or high school. An applicant, who wishes to apply for a restricted scholarship, should make certain that he is eligible for this scholarship.

COMPETITIVE SCHOLARSHIPS

Some scholarships by the intention of the donor are awarded on the basis of a competitive examination. The competitive examinations required by the College for eligible scholarship candidates are the College Board Examinations. Only incoming freshmen are eligible for competitive scholarships.
HOLY CROSS SCHOLARSHIPS

General
There are a limited number of tuition or other partial awards that are made from the college funds.

Presidential Scholarships
These scholarships were instituted in 1961 in recognition of those Jesuit Education Association High Schools which regularly send to Holy Cross College excellently prepared students. A full, four-year tuition scholarship will be awarded annually to one senior from each of these Jesuit High Schools. The winner will be named by the college from three finalists designated by the administrators of each high school as outstanding for academic achievement, character, personality, and leadership. The high schools announce this competition annually.

List of Scholarships
THE GOVERNOR AMES SCHOLARSHIP
Established in 1887 by Governor Oliver Ames. (Income on $1,000.00)

THE EUGENE A. BICKFORD SCHOLARSHIP
Established in October, 1932, from the estate of Mrs. Mary A. Magenis of Brookline, Mass., in memory of her brother, the late Eugene A. Bickford, '96. The annual income to provide for the education of a deserving student under such conditions and regulations as imposed by the Faculty of the College. (Income on $5,000.00)

THE REV. CHARLES E. BURKE SCHOLARSHIP
Established in 1895. Appointment to be made from residents of St. Francis Parish, North Adams, Mass. (Income on $3,000.00)

THE JAMES M. BURKE SCHOLARSHIP
Established on April 1, 1950 from the Estate of William H. Burke. The beneficiary is to be selected by the Trustees of the College. (Income on $11,662.69)

THE DR. AND MRS. HARRY P. CAHILL SCHOLARSHIP
Established in June, 1963 from a Trust Fund established by Dr. Harry P. Cahill and the Estate of his wife, Anne R. Cahill. Income to be used to aid students who lack sufficient financial means for their education. Selection is to be made by college authorities. (Income on $55,836.65)

THE ROBERT J. CAIRNS MEMORIAL FUND
Established on September 24, 1953 by bequest from the estate of Alfred F. Finneran, for scholarship aid to worthy students. (Income on $5,000.00)

THE THOMAS CALLAGHAN SCHOLARSHIP
Established in 1914 by the late Thomas Callaghan of Leicester, Mass., limited to residents of Worcester County, “preference to be given to those preparing for the priesthood.” (Income on $2,000.00)

THE HONORABLE JAMES BERNARD CARROLL SCHOLARSHIP
Established in 1939 by Mrs. James Bernard Carroll as a memorial of her husband, the late Justice James Bernard Carroll of the class of 1878. Restricted to graduates of
St. Michael’s Cathedral High School, Springfield, Massachusetts. Selection to be made by the Very Reverend Rector of Holy Cross College and the Reverend Rector of St. Michael’s Cathedral, Springfield, on candidate’s character, scholarship and extracurricular achievements.

THE FRANK D. COMERFORD MEMORIAL FUND
Established by Archibald R. Graustein in 1959. (Income on $15,000.00)

THE CONNECTICUT VALLEY ALUMNI SCHOLARSHIP
Established in 1912 by the Alumni of Connecticut Valley. (Income on $1,725.00)

THE MAURICE CONNOR MEMORIAL SCHOLARSHIP
Established in 1929 by Mr. John T. Connor in memory of his brother, Maurice. The intention of the donor is to provide, for one boy, board, room, tuition and fee charges, as far as the income will provide them. The single beneficiary is to be chosen by the Pastor of St. Mary’s Church, Westfield, Mass. (Income on $16,000)

THE MONSIGNOR GEORGE S. L. CONNOR SCHOLARSHIP
Established on October 18, 1955 by gift of the late Msgr. George S. L. Connor, ’07. Selection to be made by the president of the college who shall give first preference to a worthy applicant who is a member of Holy Name Parish in Springfield, Massachusetts. If no such eligible candidate applies, then such a candidate who graduates from Cathedral High School shall be considered; if none such, then any applicant from the Springfield high schools. Candidates must pass scholarship test as set up and be of good personality with evidence of leadership qualities.

THE THOMAS COSTELLO AND ANN COSTELLO SCHOLARSHIP
Established on December 9, 1947, by bequest of Susan A. Costello in memory of her parents, and by a bequest from the estate of Fanny Goodwin Hobbs. Income to be used to aid a student who lacks sufficient financial means for his education and who has expressed the intention of entering the priesthood. (Income on $10,000)

THE CROWLEY FAMILY MEMORIAL SCHOLARSHIP I.
Established on July 2, 1947, by bequest of Miss Bridget T. Crowley of Springfield, Mass. Beneficiary to be selected by competitive examination and is open to students of the parochial and public high schools of Springfield, Mass., who are morally, mentally and physically worthy and competent and who show promise of ability, but who have such limited financial means that, if not aided by a scholarship, would be unable to attend college. (Income on $13,033.00)

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. (Income on $14,642.14)

THE CROWLEY FAMILY MEMORIAL SCHOLARSHIP III.
Established in 1947 by bequest of Miss Bridget T. Crowley of Springfield, Mass. Conditions same as the Crowley Family Memorial Scholarship I. (Income on $14,122.99)

THE CRUSADER COUNCIL KNIGHTS OF COLUMBUS SCHOLARSHIP
Established in June, 1963 by a gift of $5,000.00 toward the establishment of a $15,000.00 scholarship in honor of Rev. Joseph F. Busam, S.J., and in gratitude for his many years of service as Chaplain of the Crusader Council. Income to be used with preference to be given to pre-medical or pre-dental students. (Income on $5,000.00)
THE RIGHT REV. MONSIGNOR DANIEL F. CURTIN SCHOLARSHIP

Established in 1921 by the Rt. Rev. Monsignor Daniel F. Curtin, Glens Falls, N.Y., to be appointed by the pastor of St. Mary's Church, Glens Falls, N.Y. (Income on $10,000.00)

DR. AND MRS. CARL J. DE PRIZIO SCHOLARSHIP

Established on October 30, 1959 by gift of 300 shares of Boston Fund, Inc. Income to be used for award to deserving student in the sciences.

THE DANIEL T. DEVINE SCHOLARSHIP

Established in October 1945 from the estate of Mary F. Devine in memory of her brother, Rev. Daniel T. Devine. To be awarded as a result of competitive examination to the member of the graduating class of St. Mary's Parochial School, Milford, Mass., who has attended said high school for four years and who has been a member of St. Mary's Parish throughout his high school course. (Income on $15,000.00)

THE JAMES F. DONNELLY, '99 SCHOLARSHIP

Established on May 11, 1956 by gift from Sylvan Oestreicher Foundation. (Income on $15,000.00)

THE EASTERN CONNECTICUT HOLY CROSS CLUB SCHOLARSHIP

Established on February 2, 1955 for a deserving student from that area.

THE EASTMAN KODAK COMPANY SCHOLARSHIP

Established on September 16, 1960. (Income on $7,200.00)

THE THEODORE T. AND MARY G. ELLIS SCHOLARSHIP FUND

Established in 1941 by the estate and through the generosity of the late Theodore T. and Mary G. Ellis. From the income of this fund, several scholarship awards of full or partial tuition are annually granted to residents of the City of Worcester. (Income on $283,834.49)

THE REV. PATRICK J. FINNEGAN, P. R. SCHOLARSHIP

Established on November 28, 1955 by bequest from the estate of Rev. Patrick J. Finnegan. Income to be used to assist needy boys from Portsmouth, N.H. (Income on $5,032.60)

GENERAL MOTORS COLLEGE PLAN SCHOLARSHIP

A four year scholarship offered annually by General Motors Corporation. The amount of the award varies with the financial need of the recipient as determined by the General Motors Scholarship Committee.

THE "IN MEMORY OF DAVID GOGGIN" SCHOLARSHIP

Established in 1925 by Mrs. Catherine M. Goggin, in memory of David Goggin. Preference to be given a relative. (Income on $1,000.00)
THE THOMAS F. GROGAN SCHOLARSHIP
A memorial of the deceased father of Dr. Richard H. Grogan, '35, and his brother, Fr. Thomas Grogan, S.J.

THE MONSIGNOR GRIFFIN SCHOLARSHIP
Established in 1895, limited to residents of St. John's Parish, Worcester, Mass. (Income on $1,000.00)

THE MARY AGNES HABERLIN FOUNDATION
For worthy students chosen by the president or faculty of the college. (Income on $249,111.14)

THE JOHN H. HALLORAN SCHOLARSHIP I.
Established in 1909 by Mr. John H. Halloran of New York, as a memorial of his brother, the late William J. Halloran, of Worcester, competition open to the country. (Income on $12,000.00)

THE JOHN H. HALLORAN SCHOLARSHIP II.
Established in 1921 by Mr. John H. Halloran of New York, as a memorial of his brother, the late William J. Halloran, of Worcester. Selection to be made from the students of the public and parochial schools of Northampton, Mass., by means of competitive examinations. (Income on $12,000.00)

THE REV. THOMAS STEPHEN HANRAHAN SCHOLARSHIP
Established in January, 1963 by a bequest from the Estate of Margaret Ellen Kearney as a memorial to the Rev. Thomas Stephen Hanrahan. Income to be used to aid a worthy student. (Income on $5,000.00)

THE REV. JEREMIAH J. HEALY SCHOLARSHIP I.
Established in 1912 by the Rev. Jeremiah J. Healy, of Gloucester, Mass., for a candidate for the priesthood worthy of financial aid. (Income on $1,500.00)

THE REV. JEREMIAH J. HEALY SCHOLARSHIP II.
Same as the "Rev. Jeremiah J. Healy Scholarship I." (Income on $1,500.00)

THE RICHARD HEALY SCHOLARSHIP
Established in 1908 by Mr. Richard Healy of Worcester, open to competition for residents of Worcester County regardless of creed. (Income on $8,000.00)

THE MR. AND MRS. RICHARD HEALY SCHOLARSHIP
Established in 1916 by Mr. and Mrs. Richard Healy of Worcester, for benefit of a direct relative of donors. (Income on $12,000.00)

THE REV. FREDERICK W. HEANEY, S.J. SCHOLARSHIP
Established in 1920 by Miss Lillian Heaney, in memory of her deceased brother, the Rev. Frederick W. Heaney, S.J. (Income on $2,500.00)

THE JOHN W. HODGE SCHOLARSHIP
Established in 1946 by a bequest from the late John W. Hodge to aid some worthy Catholic boy from Cambridge, Mass., the terms and conditions of which are to be fixed and regulated by the college. (Income on $4,466.20)
THE JOHN T. HOLLAND '17, MEMORIAL SCHOLARSHIP
Established on January 2, 1954 by gift from Matthew M. Berman. To be used for worthy students selected by the president of the college. (Income on $8,500.00)

THE HOLY CROSS COLLEGE SCHOLARSHIPS
These are a limited number of tuition or other partial awards that are made from the college funds, at the times and to the amounts that the financial position of the college permits.

KATHERINE H. HOY SCHOLARSHIP
Established on December 14, 1959 by bequest of $5,000.00 from the Estate of James M. Hoy, '05. Income to be used to assist a student with preference given to a needy and deserving boy of St. Stephen's Catholic Parish of Worcester.

THE JOHN COLLINS HURLEY SCHOLARSHIP
Established on April 28, 1953 by bequest from the estate of Margaret M. Hurley. Income to be used for education of worthy graduate of Durfee High School, Fall River, Mass. (Income on $5,026.67)

THE WARREN JOSEPH HURLEY SCHOLARSHIP
Established in 1929 by Mrs. Jeremiah J. Hurley in memory of Warren Joseph Hurley, '29, for the benefit of one or more worthy students aspiring to the priesthood. Selection to be made by the President of the College. (Income on $5,000.00)

THE "IN MEMORIAM" SCHOLARSHIP
Established in 1915 by an alumnus of the college for a deserving student. (Income on $8,000.00)

THE REV. CHARLES L. KIMBALL, S.J. SCHOLARSHIP
Established in June, 1961 by a bequest from the Estate of Rev. Arthur B. Kimball. Income to be used to aid a worthy student selected by the faculty. (Income on $4,551.40)

THE OTTO SEINDENBURG KING SCHOLARSHIP
Established in October, 1954 by gifts from Atty. John King, '25. Income to be used for a deserving student. (Income on $10,000.00)

THE REV. MICHAEL H. KITTREDGE SCHOLARSHIP
Established in 1917 by Rev. Michael H. Kittredge, '75. (Income on $5,000.00)

THE MASSACHUSETTS STATE COUNCIL OF KNIGHTS OF COLUMBUS SCHOLARSHIP FUND
Established in 1937 by the Massachusetts State Council Knights of Columbus; open to members and sons of members of the Knights of Columbus residing and having their membership in the Order in Massachusetts. Award to be made by competitive scholastic examinations under the administration of the College of the Holy Cross.

THE PATRICK W. LALLY MEMORIAL SCHOLARSHIP
Established in March, 1954 from the estate of James Lally to be awarded to a worthy graduate of St. Mary's High School, Milford, Mass., who will be selected by the President of the College of the Holy Cross. (Income on $5,221.60)
THE MICHAEL J. LAWLOR SCHOLARSHIP
Established in February, 1949, by bequest from the late Retta M. Lawlor. Income to be used to aid a bright and needy student, resident of Waterbury, Conn., who in the opinion of college authorities, shall be deserving of financial assistance. (Income on $5,000.00)

WILLIAM E. LEAHY, '07 MEMORIAL SCHOLARSHIP FUND
Established on May 8, 1959 by The Holy Cross Alumni Club, Washington, D.C.

W. H. LEE MILK COMPANY ENDOWMENT FUND
Established on September 4, 1959 with a gift of 25 shares of Eastman Kodak with the provision that the income from these shares be added to the principal until September 1, 1973. After September 1, 1973 the income is to be used for scholarship aid in accordance with specifications as set down in the agreements.

THE JOHN J. LEONARD SCHOLARSHIP OF THE M.C.O.F.
Founded in 1926 and restricted to members, or sons of members, of the M.C.O.F., selection to be made by competitive examinations. (Income on $6,000.00)

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 this college. (Income on $20,000.00)

THE HENRY VINCENT McCABE SCHOLARSHIP
Established in 1916 by the late Mary McCabe of Providence, R. I., for a deserving student. (Income on $5,000.00)

THE REV. DENIS F. McCAFFREY SCHOLARSHIP
Established on September 29, 1953 by bequest from the estate of Rose A. McCaffrey. (Income on $700.00)

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. (Income on $24,702.63)

THE PETER McCORD SCHOLARSHIP
Established by Mary Lambert McCord for a deserving student.

THE REV. DAVID F. McGRATH SCHOLARSHIP I.
Established in 1907 by the Rev. David F. McGrath, '70, beneficiary to be selected by competitive examinations. Restricted to graduates of St. Mary's Parish School, Milford, Mass., if there be more than one eligible candidate. If but one such, graduates of Milford Public High School may be admitted to competition; if but one candidate from both schools, anyone otherwise eligible in the State to be admitted to competition. (Income on $6,000.00)
THE REV. DAVID F. McGRATH SCHOLARSHIP II.
Established in 1920 by the Rev. David F. McGrath, '70; conditions same as the "Rev. David F. McGrath Scholarship I." (Income on $6,000.00)

THE REV. DAVID F. McGRATH SCHOLARSHIP III.
Established in 1920 by the Rev. David F. McGrath, '70; conditions same as the "Rev. David F. McGrath Scholarship I." (Income on $8,000.00)

THE DR. FREDERICK J. McKECHNIE SCHOLARSHIP
Established in December, 1962 by a bequest from the Estate of Mary I. Dunn. (Income on $6,223.76)

THE MONSIGNOR JOHN W. McMAHON SCHOLARSHIP
Established in 1938 under provision of the will of Rt. Rev. Msgr. John W. McMahon, '67, to give scholarship aid to a Holy Cross student to be designated by the Reverend Pastor of St. Mary's parish, Charlestown, Boston, Massachusetts, preference being given to students coming from St. Mary's parish. (Income on $5,000.00)

THE PATRICK J. MURPHY SCHOLARSHIP
Established in 1914 by Mrs. Ellen M. Murphy, as a memorial to her husband, the late Patrick J. Murphy, Worcester, Mass. (Income on $1,500.00)

THE MONSIGNOR RICHARD NEAGLE SCHOLARSHIP
Established in 1943 by His Excellency the Honorable Alvan T. Fuller, former Governor of the Commonwealth of Massachusetts, in memory of the late Right Reverend Monsignor Richard Neagle of the Class of 1873, to assist boys qualified, in the opinion of the faculty, but who otherwise could not afford such an expenditure as would be necessary to enjoy the educational and religious advantages of the College of the Holy Cross. (Income on $35,000.00)

THE DENIS F. AND LORETTO RADEL O'CONNOR SCHOLARSHIP
Established on May 26, 1955 by Dr. Denis F. O'Connor, '93, to be used for a worthy student to be selected by college authorities. (Income on $30,000)

THE O'DRISCOLL SCHOLARSHIP
Established in 1874, for a student (limited to residents of the City of Worcester), who is a candidate for the priesthood and is selected by the Bishop of Worcester or his delegate. (Income on $3,000.00)

THE MAY AND SYLVAN OESTREICHER SCHOLARSHIP
Established on December 30, 1957 by gift of Sylvan Oestreicher. (Income on $34,591.74)

THE MARY C. O'NEIL FUND FOR BRISTOL COUNTY STUDENTS
Established on January 7, 1955 by gifts from Margaret T. O'Neil, to be used to aid a student from Bristol County. (Income on $2,900.00)

THE REV. DANIEL H. O'NEILL SCHOLARSHIP I.
Established in 1895, limited to residents of St. Peter's Parish, Worcester, Mass. (Income on $1,000.00)
THE REV. DANIEL H. O'NEILL SCHOLARSHIP II.
Established in 1908, limited to the residents of the City of Worcester. (Income on $1,500.00)

PENHALL-O'ROURKE SCHOLARSHIP
Established on September 9, 1958 by bequest of $1,000.00 from the estate of Dr. James J. O'Rourke, '09 to be used for scholarship purposes in aiding a deserving student.

THE REV. DR. PATRICK B. PHELAN SCHOLARSHIP
Established in 1917 by Rev. Dr. Patrick B. Phelan, '69; open to competition for graduates of the Sacred Heart School, Holyoke, Mass. (Income on $16,000.00)

THE DAVID H. POSNER AND MARY MURPHY POSNER FOUNDATION
Established on July 1, 1957 by bequest from the estate of Mary M. Posner. Income to be used toward tuition of worthy students. (Income on $14,922.68)

THE REV. JOHN J. POWER SCHOLARSHIP
Established in 1907 by the late Rev. John J. Power, D.D., limited to residents of St. Paul's Parish, Worcester, Mass. (Income on $1,500.00)

THE MARY A. PRENDERGAST SCHOLARSHIP
Established in 1945 under the will of the late Mary A. Prendergast for deserving orphan students. (Income on $4,948.40)

THE PURPLE PATCHER SCHOLARSHIP
Established in June, 1963 by the staff of the yearbook, the Purple Patcher, Class of 1963. The first gift was in the amount of $8,031.85 and it is anticipated that future staffs will augment the fund. The Scholarship will become available in September 1966.

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. (Income on $8,000.00)

THE PATRICK W. RAFFERTY SCHOLARSHIP
Established in 1920 and open to competition among deserving students of the City of Worcester. (Income on $2,000.00)

IN MEMORY OF DENNIS M. AND JOSEPHINE F. REARDON SCHOLARSHIP
Established on January 11, 1952 by bequest from the estate of Josephine F. Reardon. Income to be used to aid a worthy student preparing for the holy priesthood. (Income on $10,575.39)

THE JOHN REID SCHOLARSHIP
Established in 1894, limited to residents of Worcester. (Income on $1,500.00)

THE CATHERINE F. REILLY SCHOLARSHIP
Established on June 1, 1955 by bequest from the estate of Joseph J. Reilly, '04, in memory of his mother. Income to be used for a worthy student to be selected by College authorities. (Income on $12,500.00)
THE JAMES H. REILLY SCHOLARSHIP
Established on June 1, 1955 from the estate of Joseph J. Reilly, '04, in memory of his father. Income to be used for a worthy student to be selected by college authorities. (Income on $12,500.00)

THE REILLY MEMORIAL SCHOLARSHIP
Established in 1922 by the late Joseph J. Reilly, '04. (Income on $1,000.00)

THE MARY J. ROBINSON SCHOLARSHIP
Established in 1943 by the late Mary J. Robinson in memory of her mother and father and brothers to assist deserving young men of the Roman Catholic faith in obtaining a collegiate education at the College of the Holy Cross. (Income on $11,297.86)

THE ROCHESTER ALUMNI SCHOLARSHIP
For a deserving student from Rochester, N.Y.

THE REV. WILLIAM H. ROGERS SCHOLARSHIP
Established in 1918 by Rev. William H. Rogers, '68. (Income on $10,000.00)

THE HON. JOHN E. RUSSELL SCHOLARSHIP
Established in 1907 by a Friend of the College. (Income on $1,500.00)

TIMOTHY A. SHEA SCHOLARSHIP FUND
Established by bequests totaling $101,918.16 from the estate of Timothy A. Shea in memory of his parents, Mr. and Mrs. Daniel M. Shea; a brother, Michael F. Shea; and sisters, Katherine and Elizabeth. Income to be used exclusively for non-resident students residing in the City of Worcester and awarded on a competitive basis.

THE ELIZABETH SPANG SCHOLARSHIP
Established in 1936 by the will of Elizabeth Sprang of West Haven, Connecticut. This income to be used toward the education of a "student of Holy Cross College whom the governing body of said College may deem to be in need of financial assistance for his college work and worthy of said scholarship." (Income on $5,000.00)

THE SPRINGFIELD CLUB SCHOLARSHIP
Established by the Holy Cross College Alumni Club of Springfield, Massachusetts. The recipient of the award will be selected by Board of Admissions at the College. It is subject to renewal under usual conditions. Preference will be given candidates from the City of Springfield or the Springfield area.

IN MEMORY OF HELEN M. AND JOHN F. TINSLEY SCHOLARSHIP
Established on November 20, 1953 by bequest from the estate of John F. Tinsley. Income to be used to assist worthy students selected by the president of the college. (Income on $55,000.00)
THE SCHOLLER FOUNDATION SCHOLARSHIP
Established on October 24, 1955. (Income on $1,000.00)

THE REV. DAVID W. TWOMEY, S.J. SCHOLARSHIP
Established on October 10, 1955 by gifts from family and friends of Fr. Twomey, S. J. Income to be used to aid a worthy student. (Income on $21,000.00)

THE REV. ROBERT WALSH SCHOLARSHIP
Established in 1895, limited to residents of the Immaculate Conception Parish, Worcester, Mass. (Income on $1,000.00)

THE STEPHEN W. WILBY SCHOLARSHIP
Founded by the Naugatuck Valley Alumni Association and friends in Connecticut. (Income on $7,514.01)

WORCESTER FEDERAL SAVINGS AND LOAN ASSOCIATION EDUCATIONAL FUND
Established on April 1, 1960 by gift of $2,500.00

National Defense Student Loans

Loans will be available from the College of the Holy Cross to qualified students under the National Defense Education Act of 1958 in varying amounts determined by the applicant's need and by funds available to the college at the time of the application. Complete information and application forms may be obtained by upperclassmen from the Treasurer's Office.

Accepted freshmen should write to the Office of the Dean of Admissions for information and application forms.
Admission to the College

General

Candidates for admission to the College of the Holy Cross must meet certain standards of quantitative and qualitative excellence and give evidence of motivation, maturity and emotional stability.

The Committee on Admissions will evaluate the applicant's qualifications in terms of the traditions and standards of the college. Possession of the required scholastic credentials is not to be construed as a guarantee of acceptance. More pertinent is the unspoken promise of the applicant that he will achieve the fullness of dignity of Christian manhood in the arts, the sciences, a profession or in business.

Application

All correspondence pertaining to admissions should be addressed to The Director of Admissions.

Completed application forms must be filed in the Office of Admissions prior to the first day of April. A certified statement of good health from a physician must be submitted prior to the first day of August.

Entrance Examinations

All applicants must take the College Entrance Board Scholastic Aptitude Test in December or January of their last year in secondary school, as well as the College Board Achievement Tests in December, January, or March. The three achievement tests must include the test in English composition, one in a foreign language, preferably modern, which has been studied two years in secondary school, and a third to be freely chosen by the student.

The General Educational Development Test and the Navy College Aptitude Test are not accepted for entrance into college in place of the College Entrance Board Tests.

Quantitative Admission Requirements

Students approved for admission to the freshman class are selected from applicants who are graduates of approved secondary schools and who offer sufficient credits to satisfy the minimum admission requirements of fifteen entrance units in approved subjects.

All units submitted to satisfy entrance requirements must be recognized by the secondary school as credits towards graduation in a college preparatory course. Commercial, vocational or industrial subjects will not be accepted as entrance units. Candidates for admission may submit entrance units in the following subjects: Foreign Language, ancient or modern, 2 units; English, 4 units; Mathematics, 3-4 units; History, 1 unit; Science, 1 unit.

Applicants for the Bachelor of Arts degree must offer at least 3 units in Latin. Other units may be made up from additional units in the above subjects or in other high school subjects, excluding commercial or industrial arts courses.
Unit Requirements for the Various Programs

A specified number of units in required subjects must be offered. Elective subjects, sufficient to bring the total to 15 units, will be accepted but these additional units must be included in the list of approved subjects. The following table summarizes the required and elective units to be offered by candidates for the various degrees:

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</thead>
<tbody>
<tr>
<td>Latin</td>
<td>3-4</td>
<td>3-4</td>
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</tr>
<tr>
<td>English</td>
<td>4 - 4</td>
<td>4 - 4</td>
<td>4 - 4</td>
<td>4 - 4</td>
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<tr>
<td>Math</td>
<td>3 - 4</td>
<td>3-4</td>
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<td>3-4</td>
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<tr>
<td>History</td>
<td>1 - 1</td>
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<tr>
<td>*ML (Recommended)</td>
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<td>2</td>
<td>2 - 2</td>
<td>2 - 2</td>
</tr>
<tr>
<td>Greek (Recommended)</td>
<td>2-4</td>
<td>2-4</td>
<td>1-5</td>
<td>1-5</td>
<td>1-5</td>
</tr>
<tr>
<td>Electives</td>
<td>1-5</td>
<td>1-5</td>
<td>1-5</td>
<td>1-5</td>
<td>1-5</td>
</tr>
<tr>
<td>Science</td>
<td>1 - 1</td>
<td>1 - 1</td>
<td>1</td>
<td>1 - 1</td>
<td>1 - 1</td>
</tr>
</tbody>
</table>

*No credit will be allowed for a single year of a foreign language. Candidates who present no secondary school credit in a modern foreign language must register in one or other of the elementary courses offered in modern foreign languages and continue their study of the language chosen throughout sophomore year. A comprehensive examination will be given at the completion of the sophomore year language course.

Basis for Admission

The decision of the Board of Admissions will be based on the following factors: (1) graduation and academic performance in secondary school; (2) the recommendation of the principal, headmaster, or student counselor; (3) the results of the pre-college tests (Cf. p. 50); (4) the health, moral character, extra-curricular interests and achievements of the candidate.

Early Decision Program

Holy Cross offers an Early Decision Program which allows a superior student, who has taken all required College Board Examinations in junior year, to submit an application prior to October 1 of his senior year. In accordance with the policies of this program, common to those colleges which offer Early Decision Programs in order to obviate the need of multiple applications, candidates requesting an early decision must file with their application a statement certifying that they have applied to no other college, and will not, until they have received from Holy Cross a decision of admission, rejection, or, in doubtful cases, postponement of a final decision until the month of May. Postponement will be in no way prejudice a decision in May. The college will require the candidate to repeat during senior year all the required College Board Examinations.
Advanced Placement

Holy Cross College policy presupposes that the candidate has pursued in high school, a strictly Freshman-college-level course in the subject(s) in which he seeks advanced placement, and has attained, in the Advanced Placement Test of the College Board program, a test-score of 3, 4, or 5. Each candidate's record is studied individually, and the decision regarding advanced placement is made on the merit of each individual's record of achievement.

Early Admission Plan

Through its program of Early Admission, by which outstanding candidates enter college one year early, the college welcomes the applications of superior high school juniors, who, in the judgment of principals, counselors, and teachers, have attained a high degree of personal maturity and social adjustment. Candidates for Early Admission must submit an application, completed with their three year high school record, prior to August 1. The required College Board Examinations (Cf. p. 50) must have been taken during the Junior year of high school.

Foreign Students

Students from foreign countries are encouraged to seek admission to the college. If applicants need financial aid, they should communicate with U. S. Education Commission of the Institute of International Education prior to making application to Holy Cross. The college is a member of the African Scholarship Program of American Universities. African students should contact the ASPAU representative in their area for assistance in filing their applications.

Acceptance Deposit

Regular candidates, upon receiving final notification of their acceptance, are obliged to forward a non-refundable reservation deposit of $100. Early decision, early admission, and scholarship candidates must forward a non-refundable reservation deposit of $200.

Registration

Accepted Freshmen will receive all information relative to registration sometime early in the summer preceding their matriculation.

All students must report to the college at the appointed place and time and fill out enrollment cards for the semester.

For failure to register at the appointed time, students will be charged a late registration fee of five dollars.

Orientation Program

The Orientation Program begins immediately following the student's matriculation and continues in formal and informal meetings during the first term of Freshman year.
It is designed to initiate the student into the climate of learning and the way of living at Holy Cross. Through discussions with Administrators, Faculty, and outstanding upper-classmen, the student's intellectual sights are set on the wide horizons of the educational adventure before him; the level of expectation of the student is lifted to those standards of responsible pursuit of learning which is the joint enterprise of faculty and students.

Readmission

Students who have withdrawn in good standing and wish to be readmitted to the college must apply to the Dean of the college. Applications for the fall semester should be made prior to June 1, and prior to January 1 for the spring semester. Readmission is not automatic, although the college will give some measure of preference to such an application. Because of space limitations, applications for readmission will be considered in the light of many new applications to the college.

Admission to Advanced Standing

Application for admission to advanced standing in Holy Cross College by transfer from another college must be made prior to June 1 to the Dean of the College. Students are admitted only at the beginning of the Fall Semester.

Applicants must present (1) formal admission application, accompanied by a non-refundable $10 application fee; (2) a complete, official transcript of secondary school records; (3) a complete, official transcript of college records, including a statement of good standing; (4) estimates of character and ability given by two former college teachers; (5) official records of the Scholastic Aptitude Test of the College Entrance Examination Board; (6) statement of good health by a physician.

Admission will be granted only to those who have completed with high grades (at least B) courses equivalent to the courses completed by the class to which they are making application.

Transfer students are not eligible for scholarship assistance during their first year at the college.

Admission of Special Students

Occasionally applicants who fulfill all the requirements for admission may, with the approval of the Committee on Admissions, choose special courses without following a complete degree program. Such applicants will follow the procedures outlined for advanced standing applicants.
Academic Information

GENERAL

The college year begins in the third week of September and ends on the second Wednesday of June, with recess periods at Christmas and Easter. It is constituted of two semesters of sixteen weeks each.

A semester hour represents a course which meets once a week throughout the semester. In ordinary lecture courses, the class period is of fifty minutes duration; in all laboratory work, the length of a period required to give a semester hour credit is twice the length of the ordinary lecture period. There are eight class periods each day, Monday through Friday. Class or laboratory periods begin at 8:30 A.M. Students are required to attend all academic and chapel exercises.

Grading System

A student's standing will be determined by the results of examinations, classroom work and assignments. The quality of the student's work will be graded as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
</tr>
<tr>
<td>B+</td>
<td>Good</td>
</tr>
<tr>
<td>B</td>
<td></td>
</tr>
<tr>
<td>C+</td>
<td>Fair</td>
</tr>
<tr>
<td>C</td>
<td></td>
</tr>
<tr>
<td>D+</td>
<td>Low Pass</td>
</tr>
<tr>
<td>D</td>
<td>Failure</td>
</tr>
<tr>
<td>FA</td>
<td>Failure because of excessive absence</td>
</tr>
<tr>
<td>WF</td>
<td>Withdrawal from course while failing</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete</td>
</tr>
<tr>
<td>ABS</td>
<td>Absence from Final Examination</td>
</tr>
<tr>
<td>WP</td>
<td>Withdrawal from course while passing</td>
</tr>
<tr>
<td>COND</td>
<td>Condition (Freshmen only) (Applies first semester only)</td>
</tr>
</tbody>
</table>

Incomplete grade may be removed with approval of the Dean by submission of work not later than one week after the final examination in the course.

Absence from Final Examination—approval of Dean is necessary for deferred examination.

A semester grade of D is a Passing Grade.

A semester grade of F is a Deficient Failure Grade. A student who fails to attain a semester average of D in any course is deficient in that course and, to obtain credit for it, he must repeat the course.

There will be but one grade each semester for each course for each student. This grade will be submitted to the Registrar after the final examination. This grade will be the composite grade for recitations, reading assignments, tests, etc., and the final examination. In arriving at the composite grade approximately one-third weight will be given to the final examination.
Grades will not be translations of numerical scores, but will be interpreted in the following context:

a) Well organized preparation and presentation of subject matter.
b) Correct oral and written usage of English.
c) Successful completion of course assignments, tests, readings, examinations.
d) Constant attendance and classroom application.
e) Initiative.

Reports of academic grades are sent to parents or guardian at the end of each semester.

Quality Points

Quality Point in a given course is the product of the number of credits assigned to the course, multiplied by the numerical value given to the grade achieved. Quality Point Average or Index is determined by dividing the total number of quality points achieved in all courses by the number of credit hours assigned to these courses.

Grade points determine the student's general average and measure the quality of the student's work as credit hours measure the quantitative requirements.

The grade “A” is assigned 4.0 points for each credit hour completed.
The grade “B+” is assigned 3.5 points for each credit hour completed.
The grade “B” is assigned 3.0 points for each credit hour completed.
The grade “C+” is assigned 2.5 points for each credit hour completed.
The grade “C” is assigned 2.0 points for each credit hour completed.
The grade “D+” is assigned 1.5 points for each credit hour completed.
The grade “D” is assigned 1.0 points for each credit hour completed.
The grade “F,” “FA,” “WF” is assigned 0 for each credit hour.

Honor Grades

The following criteria determine honor grades:

Graduation Honors

Summa Cum Laude: Cumulative average of 3.87 or above
Magna Cum Laude: Cumulative average of 3.70-3.86
Cum Laude: Cumulative average of 3.50-3.69

Dean's List

First Honors: A non-cumulative average of 3.7 or above
Second Honors: A non-cumulative average of 3.5-3.69
Requirements for Advancement

To be eligible for academic advancement a student must be free of all deficiencies and must meet the required Q.P.I. for each semester (Cf. below).

A student who will remove a deficiency by achieving a satisfactory grade (C or better) in an approved summer school will not be liable to academic probation, provided his Q.P.I meets the requirement set for each semester. Deviation from this rule will be allowed by the Committee on Academic Standing only in cases of extreme hardship.

Freshman Year

Any student whose quality point average at the end of the first semester is below 1.5 will be on probation for the second semester.

Any student not having at least 1.0 at the end of the second semester will be dismissed.

Any student having 1.0 or more but less than 1.5 will be on probation for the first semester of second year. A student who has a cumulative average of 1.5 or better at the end of freshman year advances unconditionally.

Sophomore Year

Students who do not attain a non-cumulative average of 1.75 at the end of the first semester will be liable to dismissal or placed on probation at the discretion of the Committee on Academic Standing.

A student must have a cumulative average of 2.0 to advance unconditionally to junior year.

Any student with a cumulative average greater than 1.75 but less than 2.0 will be placed on probation for the first semester of junior year.

Any student with a cumulative average lower than 1.75 will be liable to dismissal.

Junior Year

Students not attaining a cumulative average of 2.0 at the end of the first semester will be liable to dismissal or placed on probation at the discretion of the Committee on Academic Standing.

Any student who does not have a cumulative average of 2.0 or better at the end of junior year will be liable to dismissal.

Senior Year

Students not attaining a cumulative average of 2.0 at the end of the first semester will be placed on probation.

Students who do not have a cumulative average of 2.0 or better will not graduate.

Special Studies Program

The Special Studies Program at Holy Cross covers the four years and meets the outstanding and promising student on his own level of ability and promise. By means of advanced sectioning, seminars, tutorials and independent study, the gifted student is challenged on the level of his interest and intellectual capability. The goal of the
program is the full development of the student toward intellectual self-reliance, scholarly resourcefulness, and the fruitful exploration of his potential as a scholar and an intellectual leader in his community.

There are two divisions of the Special Studies Program: FRESHMAN STUDIES, and the HONORS PROGRAM, which encompasses the Sophomore, Junior and Senior years. Although both programs are under the Committee on Special Studies, the two are separate, and inclusion in the Freshman seminars and special projects does not guarantee the student automatic admission to the Honors Program. At the same time, participation in the Freshman Studies Program is not a requisite for Honors candidacy.

**Freshman Studies**

The Freshman Studies Program for the promising student aims toward further articulation of advanced high school work with study on the collegiate level. It provides for advanced placement, special sectioning, freshman seminars, and tutorial study. It is open to students whose background and ability warrant special attention in the planning of their curriculum. The degree of advanced work possible for each student is determined by his special qualities and the requisite background demanded by the various academic disciplines.

**Freshman Seminars**¹

Seminars of no more than ten students each are offered, in lieu of the required Freshman Course in the Seminar area, by departments to those students whose high school work has been on an advanced or honors level. The student may apply for any seminar which he feels qualified to undertake. Application is to be made to the Special Studies Office during the summer prior to the Freshman year. A detailed outline of high school work in the field and a full statement concerning personal and academic qualifications should accompany the letter of application. Enrollment in a seminar will be permitted to those students who have demonstrated advanced ability in the field.

In 1963-1964, the following Seminars and Tutorials were conducted:

- **Latin:** Backgrounds to the Augustan Age.
- **Greek:** Hellenic Tradition Seminar: The Drama of Euripides.
- **English:** Literary Forms in the 18th Century.
- **English:** Stylistic Analysis of Major English Poets.
- **History:** The Elements of Western Civilization: Roman Law.
- **Mathematics:** Problems of Algebraic Structure and Elementary Analysis.
- **French:** French Thought from Rationalism to Romanticism.
- **German:** The Age of German Romanticism.
- **Spanish:** Spanish Literature of the Golden Age.
- **Sociology:** The Structure of Soviet Society.
- **Theology:** Ecumenism.
- **Theology:** Fundamental Theology.

*Six credit hours each.*

**The Honors Program**

The Honors Program is concerned with a selective group of students who, through Freshman academic performance, faculty recommendation, national testing scores, and individual interviews, show outstanding capability and promise in their chosen academic

¹ Course title and content may vary from year to year.
field. For these students, the curriculum, though covering the fundamental requirements, is geared toward independent, responsible research and educational development.

The program has two major divisions: Sophomore Honors and Upper Division Honors. Both divisions follow in a sequential pattern with the desired end, the gradual training and encouragement of the student in directed research and independent study.

**Mid-Semester Survey and Warning**

Mid-way in each semester, students whose semester records are dangerously low are advised that failure to improve scholastically during the remainder of the semester may result in dismissal. A note to this effect is also sent to parents or guardian.

**Academic Probation**

Academic Probation is not a penalty but is a warning and an opportunity to improve. A student who has a deficient failure or who does not meet the required Q.P.I. at the end of any semester will be placed on probation (provided he is not liable to dismissal for failure to meet the minimum Q.P.I.) A student placed on probation will be notified of this status and his parents will be apprised of it. The student will be assigned an advisor and will be instructed to make use of the aids available in the Counseling Center.

Academic Probation will be of one semester duration. If, however, further failures are incurred, or if the Q.P.I. required is not met at the end of one semester of probation, the student may be placed on probation for another semester (unless he has become liable for dismissal).

A student liable to a third successive semester on probation may be dismissed.

To remove probationary status, the student must achieve a passing grade in all courses and achieve the required Q.P.I. at the end of the semester of probation. All deficient failures must be cleared prior to progress to a higher grade.

A student on Academic Probation may participate in extracurricular activities with the approval of the Dean or the Assistant Dean. This approval is necessary in each individual case.

**Academic Failure**

Students who come under the following classifications will be considered to be academically unsatisfactory and will be asked to withdraw from the College:

1. A student who at the end of a semester is deficient in three or more courses. (A course is organized subject matter in which instruction is offered during a semester and for which 2, 3, or 4 credits toward graduation are given.)

2. A student who is deficient in three or more courses at the end of an academic year.

3. A student who during his college course has accumulated an excessive number of deficient failures, even if these have been removed by attendance at Summer School.
**Conditional Failure**

Freshmen who present satisfactory work in any course during the first semester but fail the final examination will be allowed a re-examination on the recommendation of the instructor. The highest grade for the course after the examination will be a passing grade. By failure in this second examination the freshman incurs a deficiency.

**Credit for Summer Session Work**

The approval of the Dean of Studies is requisite to gain credit for work done in summer school at another college. Summer school courses must be passed with a grade of C or better to be recognized by the College as degree credits.

The grade achieved in summer school will be evaluated to the intent of the corresponding grade in the system of grades and quality points explained on page 56. The Q.P.I. of the student will include not only the grade and points (grade of F achieves no points) of the course in which the student failed, but also those of the course taken in summer school.

To improve the quality points achieved in any given course at Holy Cross College, a student may attend a summer school session with the approval of the Dean. The quality points and grade earned in the summer session will be recorded in his permanent academic records and will be considered as contributory to his degree credits but not to Dean’s List or Graduation Honors.

If a student should be dismissed from the College because he has failed to maintain the required Quality Point Index, grades and quality points earned in a summer school will not be recognized and will not be recorded in his permanent academic records as contributing to a degree granted by Holy Cross College.

**Extra Courses**

A student in either Sophomore or Freshman class is not permitted to carry a greater number of hours than the normal number required in his course. Upperclassmen with a general average of B or over may, with the approval of the Dean, register for an extra course.

**Withdrawal from a Course**

Students who wish to withdraw from a course must have the approval of the instructor and the Dean.

Students withdrawing from a course during the first two weeks with the necessary approvals will be recorded as “W” (Withdrawn). After the second week permanent records of students withdrawing will carry “WF” (Failing), or “WP” (Passing). The estimate will be made by the Instructor. Withdrawal after the 10th week of course will be recorded as “WF” (Failing).

**Curriculum and Course Change**

Ordinarily the student must follow the program of the curriculum under which he is registered. If a change of course within a curriculum is advisable, this will be accomplished with approval of the Chairman of the Department affected and the written
permission of the Dean. No changes of course are permitted after the first 2 weeks of instruction.

Sometimes a change in a major program, sc. from a B.S. History to a B.S. Biology or Social Sciences, etc. may be requested by the student or recommended by his Advisor. Such a curriculum change will be authorized by the Dean.

**Foreign Study**

In the Junior year students who have achieved B+ academic work have the option of studying in Europe or remaining at Holy Cross. If the student elects to study in Europe, and is approved by the Faculty he must follow a course of study at an approved University.

**Voluntary Withdrawal from College**

A student who withdraws voluntarily from the college is entitled to honorable separation under the following conditions:

1. He must not be liable to dismissal for disciplinary reasons.
2. He must return all college property.
3. All financial indebtedness must be settled with the college.
4. He must give proper notification to the Dean of his intentions to withdraw from the college.

**Transcripts of College Record**

On leaving the college, each student is entitled to a transcript of his record free of charge if his financial obligations to the college have been fulfilled. For additional transcripts a fee of one dollar will be charged.

No transcripts will be issued during the periods of Commencement, Registration and Examinations.
Requirements for Degrees

The College of the Holy Cross offers curricula leading to the degrees of Bachelor of Arts (A.B.), Bachelor of Science (B.S.) and Master of Science (M.S. in Chemistry).\(^1\)

BACHELOR OF ARTS DEGREE

This program is established to foster studies in the ancient classics. Holy Cross considers the program, based as it is on the principles of the Ratio Studiorum, a perfect instrument to develop fully and harmoniously the intellectual, moral and aesthetic powers of the student. Courses in Latin, Greek or Mathematics, Philosophy, English Literature, Modern Language, History and Theology form the substance of the curriculum during the Freshman and Sophomore years. It should be noted that the student must have 3 or 4 units of Latin to be enrolled in this curriculum. In the Junior and Senior years the student may choose a field of concentration in preparation for graduate or professional school. Concomitantly with his studies in his major the student engages in courses in Philosophy, Ethics, Theology, and one course in an elective science. Holy Cross requires these courses in the firm belief that they bring a maturing influence into the life of the student.

BACHELOR OF SCIENCE DEGREE

The program of studies leading to the Bachelor of Science Degree artfully balances training in the required subjects of English Literature, Mathematics, History, Modern Language, Philosophy, Psychology, Ethics, Theology, the Natural and Social Sciences. These liberal subjects are integrated with courses that satisfy the career interest of the student or prepare him for graduate school work in the area of his choice. In some curricula of this program the general educational development of the student is stressed in the Freshman and Sophomore years, when the student is enrolled in basic college courses in English, Mathematics, Modern Language, History, Theology, Social Science, Philosophy. In the Junior and Senior years the student engages in his major field of concentration concomitantly with courses in Philosophy, Ethics, and Theology. In other curricula of the program courses in the field of career interest are taken simultaneously with the Liberal Arts subjects. Holy Cross believes that this program of studies and the curricular requirements offer a thoroughly liberal education. (Cf. pp. 64 sq.)

ORAL EXAMINATIONS IN PHILOSOPHY

Oral examinations in Philosophy are a privilege accorded Dean's List students.

\(^1\) Cf. p. 120.
PUBLIC PRESENTATIONS

In May of each year professors from other colleges are invited to examine certain qualified students publicly in Philosophy and in a chosen area of Greek studies. Students selected for these Public Presentations are excused from the end-of-course examinations in these subjects.

HONORS

Gifted students enrolled in the curricula leading to the Bachelor's Degree in either the Arts or Sciences are invited to participate in the Honors Program (Cf. p. 58).

PREPARATION FOR PROFESSIONAL STUDY

The college offers programs of study that will prepare the student for the professional schools. These programs are carefully integrated with liberal subjects and lead to the degrees of Bachelor of Arts or Bachelor of Sciences (Cf. p. 64).

The Department of Chemistry is approved by the Committee on Professional Training of the American Chemical Society for its curriculum leading to the Bachelor of Science Degree.

Holy Cross offers no special program of courses to prepare students for the study of law. Students who wish to make such preparation are referred to their academic advisers.

R.O.T.C. STUDENTS

Appropriate substitution for courses in all programs is made for students enrolled in the Air Force and Naval R.O.T.C. Units.
Curriculum Requirements

The Bachelor of Arts Degree

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<thead>
<tr>
<th>FRESHMAN</th>
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<tbody>
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JUNIOR

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</tr>
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SENIOR

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<tr>
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</tr>
<tr>
<td>Electives in Field</td>
<td>Electives in Field</td>
</tr>
</tbody>
</table>

¹ Courses required for admission to Medical School may be chosen under the direction of the student's Faculty Advisor.

² To fulfill the science requirements of Junior Year, one of the following may be taken: Biology 41, 42; Chemistry 41, 42; Physics 41, 42; Physics 43, 44. Applicable to all curricula.

³ Elective courses may be chosen from one of the following fields: English Literature, Classical Languages, Modern Languages, History, Economics, Education, Political Science, Psychology, Sociology, Mathematics and the Natural Sciences. At least 8 courses must be completed in the major field in the Junior and Senior Years.
The Bachelor of Science Degree

A. BIOLOGY

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<td>41, 42</td>
<td>55, 56</td>
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B. CHEMISTRY

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<td>65, 66</td>
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1 In effect 1963-1964.
2 German is required for those who desire certification by the American Chemical Society.
### C. MATHEMATICS

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<tbody>
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#### JUNIOR

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#### SENIOR

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<tr>
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<tbody>
<tr>
<td>Electives(^1)</td>
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\(^1\) Mathematics Department requires 4 courses in Social Sciences or Humanities.

### D. PHYSICS

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#### SENIOR

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## E. ECONOMICS

### I. Accounting

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<tr>
<td>Economics</td>
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### II. Economics

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<sup>1</sup> 9 credit hours in Economics

<sup>2</sup> 6 credit hours in other electives
### F. ENGLISH

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| Elective Science | 41, 42 | Electives in Field |
| Electives (4 courses) | Electives in Field |
| Electives (2 courses, social sciences) |

### G. SOCIAL SCIENCES

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<td>Philosophy</td>
<td>57, 58</td>
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</table>

| Elective Science | 41, 42 | Electives in Field |
| Electives in Field (4 courses) | Electives in Field |
| Electives |

1 Students interested in a career of secondary school teaching may register for two courses in Education in the senior year. Concentration must be in subject matter of teaching.
DEPARTMENT OF

Biology

Professors: Busam, Malumphy
Associate Professors: Campbell, Crowe, Flavin (Chairman)
Assistant Professors: Cook, Lingappa

The primary objective of the biology curriculum is to provide a broad and solid foundation in the biological sciences and to stimulate the interested student to pursue graduate study in this field. As a secondary, though important objective, the program of courses is designed to satisfy the entrance requirements for the professional schools of medicine, dentistry and veterinary medicine.

A major in biology will consist of at least 24 credit hours in biology together with 16 credit hours in chemistry, including organic chemistry.

Honors work in biology is intended to offer an introduction to the purposes and methods of biological research. Candidates for the degree with honors in biology must have completed by the beginning of the senior year at least 20 credit hours in biology. Honors candidates must elect Biology 71, 72.

Biology 11.
General Botany.

Typical representatives of the plant kingdom are studied, progressing from the simplest to the most complex forms. Structure, function and physiology are dealt with in an integrated manner at all levels of plant organization. Three lectures and one (four-hour) laboratory period.

Four credit hours.

Biology 12, (55).
General Zoology.

The invertebrate and vertebrate animals that best illustrate general biological principles are selected for study. Particular emphasis is given to a study of protoplasm, the structure of cells, the principles of heredity and the structure and functions of the major groups of animals. Three lectures and one (four-hour) laboratory period.

Four credit hours.

Biology 21, (66).
Vertebrate Embryology.

A description of developmental processes in the vertebrates, including an analysis of those factors which serve to integrate and co-ordinate developmental processes. Three lectures and one (four-hour) laboratory period.

Four credit hours.

Biology 41, 42.
General Biology

In introduction to the major themes and principles of modern biology. Two lectures and one (two-hour) laboratory period.

Six credit hours.

Biology 51, (56).
Mammalian Anatomy.

A detailed study of the rabbit, stressing skeletal and other anatomical features. Two lectures and two (two-hour) laboratory periods.

Four credit hours.
Biology 54.  
Comparative Anatomy.  
A study of the anatomy, evolution and taxonomic relationships of vertebrates. Three lectures and one (four-hour) laboratory period.  
*Four credit hours.*

Biology 61.  
Genetics.  
A study of the principles and mechanisms of inheritance and variation. Three lectures and one (four-hour) laboratory period.  
*Four credit hours.*

Biology 62.  
General Physiology.  
A study of cellular function in relation to structure, with special emphasis on surfaces, cellular energetics and the reactions of macromolecules. Three lectures and two laboratory periods.  
*Four credit hours.*

Biology 63.  
Biochemistry.  
A study of the fundamental chemical processes of living matter. Three lectures and two laboratory periods.  
*Four credit hours.*

Biology 64.  
Microbiology.  
A study of bacteria, yeasts and molds, with emphasis on their morphology, physiology and genetic relationships. Three lectures and two laboratory periods.  
*Four credit hours.*

Biology 65.  
Histology.  
A study of the microscopic and submicroscopic structure of vertebrate tissues and organs. Three lectures and one (four-hour) laboratory period, plus one (four-hour) laboratory period for four weeks in Microtechnique.  
*Four credit hours.*

Biology 71, 72.  
Biology Honors.  
All senior honors students in Biology will take this course. The work consists of seminars and individual research.  
*Eight semester hours.*
Courses of Instruction

DEPARTMENT OF

Chemistry

Professors: Baril, Charest, Fiekers, VanHook
Associate Professors: Martus (Chairman), Tansey
Assistant Professors: McMaster, O'Hara, Ricci
Research Associate: Bishop

The Department of Chemistry serves students with concentration in chemistry, biology, physics, pre-medicine and pre-dentistry. The Department offers an elective in general chemistry to students in the Junior year who wish to satisfy curriculum requirements. The aim of the Department is to provide a sound training in the fundamental principles and basic techniques of the science rather than to deal with specialized branches of the subject. The curriculum of the Department of Chemistry has been approved by the Committee on Professional Training of the American Chemical Society. A research thesis is normally required for the Bachelor's degree. Arrangements for transfer to chemistry and/or pre-medical, pre-dental studies from other curricula are often feasible and the degree with major in Chemistry can be awarded, even though professional certification cannot be allowed.

A student who desires a Bachelor of Science degree in chemistry, without certification by the American Chemical Society, is required to take the following courses in the Department of Chemistry: 11, 12, 21, 22, 53, 54, 55, 56, 65, 66.

Those who desire the A.C.S. certification, or recommendation for graduate studies in chemistry, are required to elect, in addition to the above courses: Chemistry 57, 58, 61, 62. By arrangement with the Chairmen of the Departments involved a student may elect an upper division course in physics and/or mathematics or another upper division chemistry course in place of Chemistry 61 and/or Chemistry 62.

Chemistry 11.
General Principles of Chemistry 1.

A study of the fundamental theories and general laws of chemistry is made. Sub-atomic and kinetic molecular structure of matter is emphasized. The periodic table of the elements is introduced with sufficient descriptive chemistry to illustrate theory. Chemical calculations constitute a large part of the course. Experiments of a quantitative nature are stressed in the laboratory.

As a prerequisite it is strongly recommended that the student have had high school courses in both chemistry and physics.

Three lectures and one four-hour laboratory period per week.  
Four credit hours.

Chemistry 12.
General Principles of Chemistry II and Qualitative Analysis.

This course is a continuation of Chemistry 11. It includes a study of solution chemistry, ionic equilibria, acid-base equilibria and oxidation-reduction reactions in electro-chemical cells. Introductory concepts of thermochemistry and the energies involved in chemical reactions are also introduced. Again chemical calculations are strongly stressed. The laboratory is devoted largely
to a systematic qualitative study of the common cations and anions. 
A prerequisite for all continuing courses in chemistry. Required for majors in chemistry, biology, physics and pre-medical students.
Three lectures and one four-hour laboratory period per week. Four credit hours.
Chemistry 21. (Formerly 51)
Organic Chemistry I.
This course consists of lectures designed to introduce the student of Organic Chemistry to modern structural theory and reaction mechanisms. Emphasis is placed on atomic and molecular structure, covalent bonding, acidity and basicity, reaction rates and equilibrium, transition state and energy of activation, isomerism, and conformations. These theories are applied to the synthesis and reactions of aliphatic and aromatic hydrocarbons, halides and ethers. Alcohols are similarly studied. Inductive and resonance theories are developed. Synthesis is emphasized in the laboratory.
Three lectures and two four-hour laboratory periods per week. Four credit hours.
Chemistry 22. (Formerly 52)
Organic Chemistry II.
This course is a continuation of Organic Chemistry I. The theories previously developed are applied to the synthesis of organic acids, amines, phenols and carbonyl compounds. Polynuclear aromatic, heterocyclic and protein chemistry are presented. Synthesis is again emphasized in the laboratory.
Three lectures and two four-hour laboratory periods per week. Four credit hours.
Chemistry 23. (Formerly 65)
Organic Chemistry I.
This course is essentially the same as chemistry 21 but for a shorter laboratory requirement. Required of pre-medical students and biology majors.
Three lectures and one four-hour laboratory period per week. Four credit hours.
Chemistry 24. (Formerly 66)
Organic Chemistry II.
This course is essentially the same as chemistry 22 but for a shorter laboratory requirement. Required of pre-medical students and biology majors.
Three lectures and one four-hour laboratory period per week. Four credit hours.
Chemistry 41, 42.
General Chemistry.
This course intends to give students, who are not otherwise preoccupied with science, an insight into the material make-up of the world about them. It ranges from sub-atomic particles through atoms, molecules and the modern "giant molecules" that have been emphasized in plastics, synthetic fabrics and textiles as well as in living tissue. Descriptive matter for this course is chosen from economic substances such as sulfuric acid, petroleum, coal tar, rubber, plastics, foods, vitamins, hormones and steel. The laboratory part is selected from the traditions of general chemical laboratory instruction at the start of the course; towards its conclusion, however, a survey of chemical methods of analysis, instrumentation, organic and physical chemistry is made. Demonstrations are used; the scientific method is emphasized. Two lecture hours with demonstration and one (two-hour) laboratory period per week. Six credit hours.
Chemistry 53. (Formerly 21)
Analytical Chemistry I.
This course is designed to give the student a working knowledge of the analytical methods and techniques used in chemistry. The lectures stress: 1) the chemical principles fundamental to quantitative analysis; 2) the theory of physical and physico-chemical methods of analysis. The laboratory exercises encompass a variety of volumetric and gravimetric experiments, including acid-base titrations, oxidation-reduction titrations and the Kjeldahl Nitrogen determination.
Two lectures and one four-hour laboratory period per week. Four credit hours.
Chemistry 54.
Analytical Chemistry II.
This is a course in instrumental analysis and treats the theory and practice of the application of instrumental methods to quantitative analysis. The methods studied will include spectrophotometry, chromatography, polarography and electro-analytical techniques. Organic as well as inorganic compounds will comprise the materials under study.
Two lectures and one four-hour laboratory period per week. Four credit hours.
Chemistry 55, (Formerly 56)
Physical Chemistry I.

A study is made of the fundamental principles and methods by which the behavior of matter in its various states and forms is interpreted. A study of gases, liquids and solids, molecular constitution, thermochemistry, thermodynamics and the quantitative laws of solution is undertaken. Laboratory training in this and the following course is designed to test the more important physico-chemical laws; to inculcate physico-chemical technique; and to develop the habit of quantitative interpretation of such phenomena.

Three lectures and five hours of laboratory per week. Four credit hours.

Chemistry 56. (Formerly 57)
Physical Chemistry II.

This is a continuance of Physical Chemistry I. Homogeneous and heterogeneous equilibria, reaction kinetics, electrical conductance, electromotive and ionic equilibria are studied. Selected topics from chemical thermodynamics, quantum theory, photochemistry and particle structure are included.

Three lectures and five hours of laboratory per week. Four credit hour.

Chemistry 57.
Inorganic Chemistry.

The lectures in this course comprise a study of the structure of inorganic compounds and the interrelations of elements and compounds according to the periodic chart. Valence studies are stressed and the ideas of Werner, Pauling, Price and current workers in the field are emphasized. The laboratory part of the course begins with inorganic preparations and progress into instrumental, analytic and advanced methods, such as liquid ammonia syntheses and the like. Industrial analysis is touched upon.

Three lectures and one four-hour laboratory period per week. Four credit hours.

Chemistry 58.
Adv. Physical Chemistry.

This course is designed to acquaint the student with the forces which exist between and within atoms. The structure of the atoms and electronic configuration will be considered, as well as brief discussion of quantum theory and the electronic theory of valence. The nature of the chemical bond will be discussed and the molecular-orbital and atomic-orbital treatments will be applied. A study of the experimental methods used in determining molecular structure will also be included.

Three lectures per week. Three credit hours.

Chemistry 61.
Advanced Organic Chemistry I.

This course is comprised essentially of semi-micro qualitative organic analysis. The laboratory part includes the identification of the following unknown types: solid, liquid, liquid mixture, drug, dye, alkaloid and a commercial product. In preparation for a part of the work in second semester, lectures are given on semi-micro, ultimate and functional group, quantitative organic analysis. For this course, a reading knowledge of scientific German is highly desirable.

Two lectures and four hours of laboratory per week. Four credit hours.

Chemistry 62.
Advanced Organic Chemistry II.

This course is devoted to a study of the ionic mechanisms in organic reactions. It includes the following topics: structure and bonding of organic molecules, resonance and steric effects; methods for determining reaction mechanisms; electrophilic and nucleophilic; substitutions in aliphatic and aromatic systems; elimination and addition reactions; molecular rearrangements. The laboratory includes advanced topics in synthetic organic chemistry.

Two lectures and one four-hour laboratory period per week. Four credit hours.
Chemistry 63. (Formerly 26)  
Quantitative Analysis.

This course is designed to instruct the pre-medical student in the theory and practice of quantitative analysis. The lectures briefly consider some of the more common physicochemical methods of analysis as well as offering a foundation in the fundamentals of quantitative analysis. Acid-base titrations, oxidation-reduction titrations, application of the solubility product principles and the Kjeldahl determination of nitrogen are included in the laboratory exercises. Required of all pre-medical students.

Two lectures and one four-hour laboratory period per week. Four credit hours.

Chemistry 65.

Once a week senior chemistry majors meet with the staff and graduate students in seminar.

For information on graduate courses in chemistry, refer to page 120.

Chemistry 66.  
Undergraduate Investigation in Chemistry.

This involves an original and individual experimental investigation with associated literature study in one of the fields of chemistry under the supervision of a member of the staff. Preliminary reading and a weekly colloquium is required. The time spent in laboratory experimentation should not exceed 45 hours. This is equivalent to a three-hour laboratory period per week for one semester. Two credit hours.
Courses of Instruction

DEPARTMENT OF

The Classics

Professors: Ahearn, Bean, Izzo, Marique, Sampey
Associate Professors: Buckley, Donaldson
Assistant Professors: G. Barry, Carroll
Instructors: Banks (Chairman), Carty, Herson, Lavery, Loewy

The literature of Greece and Rome as formulative factors of primary importance in the culture of the West is the dominant note in the study of Plato, the dramatists, the orators of Greece and their Latin imitators. Direct and remote influences by Greek and Latin authors on the style and content of European literature and especially on English are capital considerations in the study of Cicero and Plato, Horace and Sophocles and the whole series of incomparable masterpieces which have shaped our literatures. Hence, an accurate and detailed study of the original is indispensable to savor and know what our debt is and what absolute values still stand as the model of clear, cogent and graceful writing and speech.

I. GREEK

Greek 11, 12.
Elementary Greek.
Orthography, oral reading and memory of short Greek sentences. Study of grammar with results tested in composition work.
Six credit hours.

Greek 13.
Intermediate Greek.
Intensive review of grammar. Herodotus—selections from the Histories and a study of Athenian culture. Prerequisite: 2 years of high school preparation.
Three credit hours.

Greek 14.
Intermediate Greek.
Plato’s Apology with readings from the Crito and Phaedo. A study of Athenian culture and Plato’s influence on literature.
Three credit hours.

Greek 15.
Plato.
Plato’s Apology with readings from the Crito and Phaedo. A study of Athenian culture and Plato’s influence on literature.
Three credit hours.

Greek 16.
Lyric Poetry—Theocritus.
A survey of the rise and development of elegiac, iambic, and melic forms among the Greeks.
A study of the mime, pastoral verse and its persistence in later literature.
Three credit hours.

Greek 17, 18.
Greek Rhetoric and the Education of Western Man.
A seminar study of language communication from Homer to Demosthenes and the impact of the Greek achievement on the West.
Six credit hours.
(Not offered 1963-64).

Greek 21.
Intermediate Greek.
Intensive grammar review. Plato’s Apology and references to the Crito and Phaedo. A study of Athenian culture and Plato’s influence on literature. Prerequisite: Greek 11, 12.
Three credit hours.

Greek 22.
Intermediate Greek.
Euripides’ Medea. A study of Greek tragedy and the special contribution of Euripides to this field.
Three credit hours.
Greek 25.
Advanced Greek.

A close reading of the *Oedipus Tyrannus* in the original and several other plays in English from the viewpoint of the Sophoclean idea of tragedy. *Three credit hours.*

Greek 26.
Advanced Greek.

Selected readings from Thucydides with concentration on his historical and political ideas. *Three credit hours.*

Greek 40.
Ancient Political Philosophy.

A study of the ancient literature concerning the state and its forms. The evolution of political thought from its beginning in early Greek poetry through Plato and Aristotle to Polybius will be considered in relation to the historical development of actual political institutions.

The course will be open to both those who read Greek and those who do not. *Three credit hours.*

Greek 42.
Plato's Philosophy.

A study of the mature works of Plato's "middle" period. The reading will be done, as far as possible, in Greek. *Three credit hours.*

Greek 44.
Greek Colloquium.

A class designed to meet the individual requirements of qualified students on an author or period in Greek civilization to be selected at the beginning of the semester by consultation between student and instructor. *Three credit hours.*

Students intending to go into Classics in graduate school will be expected to audit the following series of several, non-credit lectures.

Methodology of Classics.

A brief history of classical scholarship, especially from the Renaissance, forms part of the course. The "disciplines" involved are textual criticism, epigraphy, palaeography, lexicography and the other subsidiary sciences which make it possible to know classical civilization more accurately and more intimately.

Hellenic Tradition Seminar.

Students majoring in the Classics engage in the following courses and are expected to gain a certain mastery of the authors studied and the influence of their works on later literature. The Hellenic Tradition Seminar does not study Greek literature in isolation but with constant attention to *Fortleben* in all aspects relevant to the author under consideration.

Greek 55, 56.¹
The Drama of Euripides.

First Term: Alcestis, Andromache, Hecuba, Hippolytus and Medea. Second Term: Orestes, Bacchae, Iphigenia in Tauris, Ion and Electra. Influence of Euripidean drama on future literatures is specially considered. Intensive consideration is given to metrics, stage directions and antiquities and textual criticism. *Six credit hours.*

Greek 61, 62.
Plato, nine dialogues.

The translation and critical appreciation of the text; philosophical and literary criticism.

(Offered in 1958-59) *Six credit hours.*

Greek 71, 72.
Thucydides, the Histories.

All 8 books are to be covered completely and the students are responsible for translation and explanation of the text; historical and critical background; the influence of Thucydides and his qualities as an historian.

(Offered in 1957-58) *Six credit hours.*

Greek 73, 74.
Sophocles.

The works of the great tragic writer in the original; a thorough familiarity with important literature on the subject; the

¹ Special Studies Program. Cf. p. 58.
influence of Sophocles on subsequent literatures of western civilization.  
(Offered in 1959-60) **Six credit hours.**

**Greek 75, 76.**
**Herodotus.**

The text of the 9 books of the Histories; a study of the art form of the work; the antecedents of historical writing; Herodotus as a scientific writer: Greek History from the Persian wars to 431 B.C.; the contemporaries of Herodotus; his influence on later literatures.  
(Offered in 1960-61) **Six credit hours.**

**Greek 77, 78.**
**Aeschylus.**

A study of the drama of Aeschylus to complete the Honors Program's investigation of the Greek Drama. This involves familiarity with the text, dramatic principles and historical background.  
(Offered in 1961-62) **Six credit hours.**

**Greek 79, 80.**
**Attic Greek Orators.**

A study of the education of Western Man from the rhetoric of Homer to Demosthenes with special emphasis on the Attic Orators.  
(Offered in 1962-63) **Six credit hours.**

II. LATIN

**Latin 11.**
**Cicero, Horace.**

*Pro Archia*—Translation of text and a study of Cicero in Roman Life and Letters.  
*Ars Poetica*—Translation of text and a study of Horace as the fountainhead of Western Literary Criticism.  
**Three credit hours.**

**Latin 12.**
**Horace, Catullus, Livy.**

Selections from the odes of Horace and Catullus with a study of the philosophy of life and literature therein reflected. Livy—Readings from Book XXI and a study of Livy as an historian.  
**Three credit hours.**

**Latin 15, 16.**
**Intermediate Latin.**

A course for those who have had two years of high school Latin. The first semester is devoted to a review of grammar, composition and the First Catiline of Cicero.  
1 Special Studies Program. Cf. p. 58.

The second semester is devoted to a study of Cicero, Virgil, Horace and Catullus.  
**Six credit hours.**

**Latin 17, 18.**
**The Image of Rome.**

The purpose of this seminar is to give a more than ordinarily thorough grounding in Latin language and literature as well as in Roman history. Special attention is given to the techniques of literary analysis and to the problem of literary genres in the ancient world since both are unlike modern literary forms and techniques. Currently, the seminar centers chiefly on the works of Livy, Catullus and Virgil.  
**Three credit hours.**

**Latin 17, 18.**
**Backgrounds to the Augustan Age.**

**Latin 21.**
**Tacitus.**

Agricola or Selections from the Annales. Study of Tacitus as a stylist and historian. Advanced work in Latin Composition.  
(Not offered 1963-64).  
**Three credit hours.**

**Latin 22.**
**Juvenal and Cicero.**

Juvenal—selected satires. Study of Roman satire and satirists. Cicero—*Pro Lege Manilia*—a thorough study and application of the principles of Oratorical Composition.  
**Three credit hours.**

**Latin 25, 26.**
**Roman Satire and Tacitus.**

This course is planned for Advanced Placement students. In the first semester the origins and development of Roman Satire will be studied with emphasis on the texts of Horace and Juvenal. In the second semester Tacitus will be studied as a historian through selections from his 'Annales' and 'Historiae'. (If the student's Advanced Placement Course in High School has not covered the Odes of Horace and the poems of Catullus, the first semester will begin with a study of these authors, then move into satire followed by Tacitus.)  
**Six credit hours.**

**Latin 27, 28.**
**Classics in Translation.**

This course is a required course for students majoring in English and Mathematics. Cf. English 27, 28.  
**Six credit hours.**

Students in the Honors Program majoring in the Classics engage in the following courses and are expected to gain a certain mastery of the authors studied and the influence of their works on later literature.
Latin 40.
Cicero’s Republic and Laws.
A study of the De Republica and De Legibus with attention to Cicero’s theory of state and with the reflections in these works of the political realities of the Ciceronian period.  Three credit hours.

Latin 42.
Vergil’s Aeneid.
A comprehensive study of the Aeneid with a survey of ancient and modern criticism. Special emphasis will be placed upon the imagery and structure of the epic.  Three credit hours.

Latin 56.
Medieval Latin II.
Reading and criticism of secular and religious literature from the eighth century on.  Three credit hours.

Latin 57.
Renaissance Latin.
This course which concentrates on the Latin documents and literature of the Renaissance periods can be conceived as a continuation of Medieval Lat. I & II.  Three credit hours.

Latin 66.
The Latin Elegiac Poets.
Selections from the elegiac verse of Propertius, Tibullus, and Ovid; a survey of the principal themes of the genre; the specific contributions that each poet made to the tradition; the continuation of the tradition in the love poetry of the Latin Middle Ages.  Three credit hours.

Latin 91, 92.
A tutorial for advanced Latin students. Program to be arranged by consultation with the Chairman of the Department.  Six credit hours.

The following courses are offered to a Classics Major who may want a minor in Hebrew.

Hebrew 21, 22.
Intermediate Hebrew.
An intermediate course for students who have already had a year of grammar with concentration on advanced grammar and readings from the Old Testament.  Six credit hours.

Hebrew 25.
Advanced Hebrew.
An introduction to textual analysis according to the methods of biblical criticism. Special stress on the Hebrew text compared with the Septuagint (Greek).  Three credit hours.

Hebrew 26.
Advanced Hebrew.
Modern Hebrew readings in unvocalized texts.  Three credit hours.
Courses of Instruction

DEPARTMENT OF

Economics

Professors: Peragallo (Chairman)\(^1\), R. F. X. Cahill\(^2\), B. W. McCarthy
Associate Professors: T. J. Cahill\(^2\), Callaghan, R. J. Smith
Assistant Professors: Gross, O’Connell, Petrella, Reid
Instructors: D. King, Palmer

The curriculum of the department has been conceived with the one major objective of providing the student with as broad and well balanced an education as possible. Specialization is kept to a minimum. Course content is basically theoretical and aimed at developing the student’s analytical and critical faculties, at stimulating his powers of interpretation, synthesis and understanding, and at training him to exact thinking. The emphasis is on the understanding of our economic system and on the analysis of its economic and business problems. The student is thus prepared to continue his education at the graduate level or to enter effectively into the business world. The curriculum is broadly integrated and in accordance with the liberal arts tradition.

**Economics 11, 12 (41, 42).**
Principles of Economics.

A study of the basic institutions and principles underlying the operation of the economic system. Particular attention is given to the factors of production, the laws of demand, supply and price, the conditions of pure and imperfect competition, monopoly, the laws of distribution, money and banking, interregional trade, government and business, business cycles, labor problems and comparative economic systems.

*Six credit hours.*

**Economics 15, 16 (43, 44).**
Financial and Administrative Accounting.

A study of the fundamental principles of accounting and of the theory upon which these principles are based. Topics covered include the steps in the accounting cycle leading to the preparation of the balance sheet and income statement, the valuation of current and fixed assets, accounting for payroll, and the special problems involved in partnership and corporation accounts. Two practice sets are done outside of class.

*Six credit hours.*

1 On leave (Spring Semester 1963-64)
2 On leave (1963-64)
the geometry of modern demand and of utility. It analyzes production functions and competitive pricing. It contrasts the markets of monopoly and oligopoly. The assumptions and limitations of the classical models of economics are closely scrutinized.

Economics 26.
Economic Theory—Macro-Economics.

This is a post-Keynesian analysis that studies, not the individual firms, but the aggregates in the economy.

The broad topics considered are: The Measurement of Economic Activity—The Level of Economic Activity; Growth and Fluctuations; Problems in the Control of Economic Activity.

More specifically: gross national product accounts; the theory of income determination; the level of investment; the money market; the level of employment; theories of growth; inflation; fiscal policies; foreign trade and the level of incomes. Prerequisite: Eco. 11, 12. Three credit hours.

Economics 27.
Introduction to Current General Psychology.

Given by the Department of Philosophy. Three credit hours.

Economics 28.
Principles of Sociology.

Given by the Department of Sociology. Three credit hours.

Economics 31, 32 (45, 46).
Asset and Equity Accounting.

This course provides instruction in corporation accounting with special emphasis on the preparation and interpretation of corporate financial statements. A thorough study of the balance sheet is made from the viewpoint of content and proper valuation procedures, with special emphasis on pertinent American Institute of Accounting Bulletins. Statements are analyzed by means of horizontal and vertical analysis and through ratio analysis. Training is also given in the preparation of statements from incomplete data, and in the preparation of the statement of application of funds. Six credit hours.

Economics 45, 46.
Business Law.

Required of all students majoring in accounting. The course includes contracts, agency, sales, negotiable instruments, the legal aspect of business associations, insurance, and property, both real and personal. The course is intended to correlate the accounting and legal aspects in reference to common business transactions. It is also intended to aid in the understanding of the social significance of law and the part it has played in the development of our economic life. Six credit hours.

Economics 49.
Labor Economics.

The economic and institutional aspects of the labor management relation are developed. Discussed are a theoretical framework for the study of union-management relations, the union in American institutional life, the philosophy of the American labor movement, bargaining power, the influence of unions on labor mobility, unions and productivity, the influence of strikes on the economy, wage setting in organized and unorganized industries, the monopoly power of unions, the economics of minimum wage legislation, full employment and inflation and union influence on the distribution of income. Prerequisite: Eco. 25, 26. Three credit hours.

Economics 51.
Corporation Finance.

After first considering the corporation vis-a-vis other forms of business organization this course treats of the organization and control of corporations, alternative methods of financing both long-term and short-term requirements for funds, characteristic financial policies and structures of important industry groups, and the role of the promoter and of the investment banker in business finance. Attention is also given to the preparation of cash budgets and the analysis of financial statements. Prerequisite: Eco. 11, 12. Three credit hours.

Economics 52.
Statistical Analysis.

The course is intended to orient the student in the use of statistical methods in economic analysis. The basic concepts of statistical inference, probability theory, and correlation analysis are applied to investi-
gations of price and income data and theory, decision theory, and an introduction to stochastic models. Prerequisite: Eco. 11, 12 and Math 16.

Three credit hours.

Economics 53.
Money and Banking.

The purpose of this course is to introduce the student to the economic principles governing modern monetary arrangements, credit and banking in the economic system. Special emphasis is placed upon an understanding and evaluation of the control mechanisms in the central banking system and the integration of modern income and monetary theory. Prerequisite: Eco. 11, 12.

Three credit hours.

Economics 58.
Public Finance.

This course covers the basic concepts of governmental expenditure, taxation, debt, budget, fiscal policy, intergovernmental fiscal relations, and foreign public finance systems. The economic consequences of public fiscal policies are emphasized.

Two credit hours.

Economics 61, 62.
Cost Accounting.

An introductory study of basic cost accounting principles, practices, and procedures, with a special emphasis on job order costs, process costs, standard cost, and estimated costs; managerial control through the use of cost accounting data and procedures; and special applications of cost accounting procedures. Prerequisite: Eco. 31, 32.

Six credit hours.

Economics 63.
Auditing.

A study of the theory and practice of auditing. The laboratory work covers a test audit of a small manufacturing concern. A written thesis is required and it must be reported upon and defended in an open discussion group. Prerequisite: Eco. 61, 62.

Three credit hours.

Economics 65, 66.
Federal Income Taxation.

A study of the federal income tax laws as they affect individuals, partnerships, and corporations. Consideration is also given to the history of the federal income tax statutes, various proposals for tax reform, and the use of tax policy as a tool to stimulate economic development and counteract cyclical fluctuations. Prerequisite: Economics 31, 32.

Six credit hours.

Economics 67.
Advanced Accounting.

Parent and subsidiary accounting relationships are studied and a critical analysis is made of the principles and postulates of accounting based upon the study of the Accounting Research Bulletins of the American Institute of Accountants and the Accounting Releases of the Securities and Exchange Commission. Research topics are assigned and reported upon. The course is organized on a group discussion basis. Prerequisite: Eco. 61, 62.

Three credit hours.

Economics 71.
History of Economic Thought.

The aim of this course is to stress critically the development of ideas and theories which now dominate economic science, by viewing these various contributions at their sources. Prerequisite: Eco. 25, 26.

Three credit hours.

Economics 72.
Modern Economic Theories.

This course deals with the ideas and theories which are now current, examining the biographical background of the various authors, the genesis of their contributions, and instituting a critical evaluation of their work. Prerequisite: Eco. 25, 26.

Three credit hours.

Economics 73.
Comparative Economic Systems.

An historical and critical analysis of the various systems of economy is made. The origin, nature, function and economic significance of Communism, Socialism, Nazism, Fascism, Capitalism are explained.

The broad foundations of social philosophy underlying each system are emphasized, as are the variants between theory and practice. The social goals and economic institutions of the various systems are compared. Prerequisite: Economics 25, 26.

Three credit hours.

Economics 75, 76.
Government in Economic Life.

This course presents an investigation of the philosophical basis of government-business relationship together with an historical
development of control. It includes also a study of American constitutional tools and the practice of enforced competition, special problems of control relative to trusts, public utilities, transportation, extractive industries, exchanges and labor. Prerequisite: Eco. 11, 12.

Six credit hours.

Economics 77.
Pro-Seminar in Economic Order.
Reading and research under direction on a series of economic problems with individual reports and group discussion. Three credit hours.

Economics 78.
International Economics.
This course is primarily a study of the theory of international trade. It is concerned with the theoretical basis for international trade, the determination of the terms of trade among nations, the price and income adjustment processes in a nation's balance of payments and the effect of restrictions such as tariffs and import quotas upon a trade situation. Prerequisite: Eco. 25, 26.

Three credit hours.

Economics 95, 96.
Collective Bargaining and Union Management Negotiations.
This course attempts to survey the major aspects of contemporary Collective Bargaining. Both the lecture method and the case study method are used to give a general knowledge of Union and Management Power, the Negotiation of the Agreement, the Administration of the Agreement, and Third Parties in Labor Disputes. Prerequisite: Eco. 91 Six credit hours.
Courses of Instruction

DEPARTMENT OF

Education

Instructor: Maguire (Acting Chairman)

To meet the needs of those students who wish to become secondary school teachers upon graduation or thereafter, the Teacher Preparation Program offers a number of courses in Education to juniors and seniors. All courses are by arrangement with the instructor, to enable the student to develop his potential to the fullest, and to allow the greatest freedom in courses. The program is especially geared to the requirements for public secondary school teaching in Massachusetts.


This course introduces the future teacher to the area of guidance in the schools. It gives the student an acquaintance with the various subdivisions of guidance, such as counseling, educational and occupational information, and group guidance. Three credit hours.

Education 65. (Formerly Education 14) History of Education in the U. S.

A study of the history of American education, including higher education, from the mid-seventeenth century to the present. Three credit hours.

(Not offered 1963-64)

Education 67. Educational Psychology.

The student is introduced to many of the relationships existing between psychology and education. The nature of the learner, the teaching-learning process, and the role of the teacher in the widest development of the child, are studied. Three credit hours.

Education 68. Philosophy of Education.

This course acquaints the student with the thinking of Aristotle, Augustine, Aquinas, Dewey and Maritain. Three credit hours.

(Not offered 1963-64)

Education 70.
Student Teaching.

A strictly supervised program, for selected students, of practice teaching and observation in a public secondary school. Three credit hours.

Education 72.
Student Teaching.

A strictly supervised program, for selected students, of practice teaching and observation in a public secondary school. Six credit hours.

Education 75. Principles and Methods of Secondary School Education.

The principal stress of this course is on general methods of teaching and curriculum planning. Three credit hours.

Education 76. (Formerly Education 22) Tests and Measurements.

A study of the tests and evaluation devices used by schools and counseling agencies. Administration, use, and testing theory are discussed. Three credit hours.

(Not offered 1963-64)
Courses of Instruction

DEPARTMENT OF

English and Fine Arts

Professors: Bean, Connors, Cummings, Drumm, McCann
Associate Professors: Grace (Chairman), Buckley, E. F. Callahan, Healy
Assistant Professors: Dorenkamp, Goodin, Lewis, L. J. McCarthy (Assistant Chairman), Dailey, Madden, Ryan, Scannell
Instructors: Fortuna, P. McGrady, Skelly, Wilson
Lecturers: Mirliani, Reardon

The English courses in the first two years, required of all undergraduates, combine analysis of various forms of literature with composition for the purpose both of developing the ability to read with comprehension and of improving the writing and speaking skill of the student. For those with deficiencies in the background necessary for this kind of work, a brief program in basic expression is provided at the beginning of freshman year.

The English course for majors, either A.B. or B.S., offers a variety of authors, periods, and forms of literature so that the student may choose a sequence of courses fitted to his development and future needs, whether in graduate school, law, business or some other field. The emphasis in all the courses is on the development of critical judgment grounded in sound historical understanding. Two term papers in each of the junior and senior years will be required of all majors.

In addition to the regular sequence of courses, for Honors students and those interested in graduate studies, a series of seminars and tutorials is available by arrangement with the Chairman of the Department. This program allows the superior student to work more independently and probe more deeply into problems than he would ordinarily be required to do.

English 11, 12.
Introduction to Literature.

An introductory course to the main genres and periods of English literature, prose and poetry, with the exception of the epic and drama. Composition is a concomitant and essential part of the course.

_Six credit hours._

English 15, 16.
Advanced Placement Rhetoric Seminar.

A seminar in Rhetorical approaches to literature offered in lieu of the two year English requirement for advanced placement students. Admission is open to students who have achieved high scores on the Advanced Placement Examination and promising students of advanced background.

(Not offered in 1963-64). _Six credit hours._

English 17, 18.
Satire and Sentimentalism in the 18th Century.

A study of the verse essays and satires of Dryden and Pope and the prose of Addison, Steele, and Swift. The second semester will investigate the development of the novel in the 18th century from Defoe...
to Sterne, including the works of Richardson, Fielding, Goldsmith, Johnson, and Smollet. (Not offered in 1963-64). Six credit hours.

English 17, 18.1
Literary Forms in the 18th Century.

English 19, 20.
The Drama: Problems and Explanations.
A seminar inquiring into the nature of tragedy and comedy, and the tragic and comic experience. (Not offered in 1963-64). Six credit hours.

English 19, 20.1
Stylistic Analysis of Major English Poets.

English 21, 22.
Rhetorical Analysis.
A study of the principles of classical rhetoric and the rhetorical analysis of essays and speeches, satire, epic and drama. Advanced composition and oral delivery is an integral part of the course. Six credit hours.

English 27, 28.
Classics in Translation.
The objective of this course is the attainment of a reasonable understanding and appraisal of Classical literature through the application of Classical theories of literary art to the following works: Homer, The Iliad; Euripides, Medea, Alcestis; Sophocles, Oedipus the King, Antigone; Aeschylus, Agamemnon, Prometheus Bound; Aristophanes, The Frogs; selections from the histories of Herodotus, Thucydides, Xenophon; Aristotle, The Poetics; Demetrius, On Style; Longinus, On the Sublime; Plato, The Apology of Socrates, The Crito, The Phaedo; Vergil, The Aeneid; Plautus, The Haunted House, The Menacechi, The Rope; Terence, Phormio, The Woman of Andros; selections from the histories of Polybius, Livy, Sallust, Suetonius, Tacitus; Horace, The Art of Poetry, the Odes; Quintilian, On Education. (This course is given by the Classics Department.) Six credit hours.

English 41.
Anglo-Saxon Literature.
A survey of the writings in England between the seventh and the eleventh centuries; beginning with the Anglo-Latin, and progressing through the popular, courtly, religious, and heroic traditions in poetry. Emphasis is given to the poetic forms and especially to the heroic work, Beowulf. The literature is read in translations, but provision is made for students with a reading knowledge of Anglo-Saxon. Three credit hours.

English 45.
Chaucer.
Reading and critical discussion of the complete text of The Canterbury Tales. Three credit hours.

English 46.
Introduction to Middle English.
An introduction to the language and literature of mediaeval England by a careful study of selected texts, with special attention to the Gawain poet and Langland. Three credit hours.

English 51.
English Renaissance Literature, Non-Dramatic.
A survey of the writings (exclusive of drama) in England during the 16th Century; in prose, beginning with the Oxford Reformers, through the Behavior Book writers, critical essayists, and romancers, to the later Elizabethan polemicists; in poetry, beginning with Skeltonic verse, through the lyric and narrative poets, to Spenser's Faerie Queene. Three credit hours.

English 55, 56.
Shakespeare.
A careful study of the principal plays with special emphasis on Shakespeare's development as a dramatist. Analysis and study of the outstanding characters and a consideration of the historical and theatrical background of the plays. Lectures, reading and written papers. Six credit hours.

English 57.
Tudor and Stuart Drama.
The purpose of the course is to treat the important Elizabethan dramatists apart from Shakespeare; from Marlowe to Shirley. Three credit hours.

English 61.
English Literature (excluding drama) of the first half of the Seventeenth Century.
This course, which stresses metaphysical poetry, acquaints the student with representative selections from the following authors: Bacon, Donne, Burton, Hobbes, Herrick, Herbert, Walton, Carew, Browne, Waller, Suckling, Crashaw, Lovelace, Cowley, Marvell and Vaughan. Three credit hours.

English 62.
Milton's Poetry and Selected Prose.
This course proceeds from a study of Milton's early poems to the reading of
Paradise Lost, Paradise Regained and Samson Agonistes. Certain prose pamphlets are read either in their entirety or in selections. Three credit hours.

English 65.
Dryden, Swift and Pope.

While emphasizing the work of Dryden, Swift and Pope, this course (which omits the novel) also includes selections from Samuel Butler, Pepys, Rochester, Prior, Defoe, Steele, Addison, Shaftesbury, Mandeville, Gay, Thomson, Young, Blair and Shenstone. Three credit hours.

English 66.
Johnson and the later Eighteenth Century.

This course (which omits the novel) acquaints the student with Collins, Gray, Boswell, Johnson, Christopher Smart, Macpherson, Churchill, Walpole, Goldsmith, Sheridan, Beattie, Chatterton, Cowper, Burns, Crabbe, Burke, Paine and Blake. Three credit hours.

English 71.
Poetry of the Nineteenth Century, 1798-1832.

The general characteristics of the romantic movement. Wordsworth, Coleridge, Byron, Shelly, Keats. Three credit hours.

English 74.
The English Novel in the Eighteenth and Nineteenth Century.

A survey of the novel from Richardson and Fielding to the end of the nineteenth century. Three credit hours.

English 75.
Prose of the Nineteenth Century.

A study of the prose writings (excluding The Novel) of the Romantic and Victorian periods. Three credit hours.

English 76.
Poetry of the Victorian Period.

A survey of poetry from Tennyson and Browning to the end of the 19th Century. Three credit hours.

English 81.
British and American Drama.

The purpose of this course is to survey the developments in modern drama in English since the dramatic revival of 1890. It will consist of background lectures and careful examination and discussion of the texts of representative plays of the movement. Three credit hours.

English 82.
Modern British Literature.

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

English 83.
American Literature in the 19th Century.

The purpose of this course is to acquaint the student with the major figures of 19th Century American Literature. The content of the course accordingly deals with Emerson, Thoreau, Hawthorne, Melville, Poe, Emily Dickenson, Henry James. Three credit hours.

English 84.
American Literature since 1900.

This is a continuation of English 83. The purpose of the course is to acquaint the student with the American novel as form. The content moves from Howells to Faulkner. Three credit hours.

English 91, 92.
History of the English Language.

A chronological study of English as a linguistic phenomenon. The first semester introduces the student to the language in its earlier stages, and includes a basic course in phonetics. The second semester completes the historical analysis and handles contemporary linguistic principles and problems in some detail. The two semesters must be taken as a unit. Six credit hours.

English 93.
Introduction to Criticism.

The purpose of the course is to read the major critical texts of English Literature. The content moves from Sidney to T. S. Eliot. Three credit hours.

English 96.
Seminar, Bibliography and Method.

For Seniors only.

English 99.
Honors reading.
COURSES IN FINE ARTS

Fine Arts 51.
Art Appreciation and History I.


Fine Arts 53.
Art Appreciation and History III.


Fine Arts 61, 62.
Appreciation of Music.

A general cultural course, in lecture form, tracing the development of music from early civilization to modern times, studied through history and analysis. This course is designed specifically to give the lay-musician and music-lover a cultural background with which to enjoy, understand and appreciate music in its many forms and phases. Six credit hours.

Fine Arts 65, 66.
Harmony.

An introduction to harmony; a study in the construction and uses of chords; elementary composition and a background for instrumentation and arranging; a cultural course to aid in the harmonic analysis of music. Six credit hours.

Fine Arts 71.
Studio Painting and Drawing I.

An introduction to the methods of creative expression with emphasis on the techniques of pictorial organization. Perspective, light and shade, line, form, and color are applied to drawing and painting projects from still-life, landscape and imagination. These are developed in the basic techniques including pencil, pen and ink, charcoal, pastel, and oil painting. Three credit hours.

Fine Arts 72.
Studio Painting and Drawing II.

Continues the development of creative expression and sound craftsmanship in the basic techniques. Extensive emphasis is placed on figure drawing, anatomical research, and portrait painting. Compositional elements, color dynamics and design factors are stressed, especially in relation to contemporary art expression. Previous art training or experience are not a requirement for Fine Arts 71 and 72. Three credit hours.

Fine Arts 73.
Studio Painting and Drawing III.

An intermediate course in creative art which stresses the major modes of expression and techniques. Emphasis is placed on the complex and evolving dynamics in creative design, especially as it applies to large scale figure composition, abstract expressionism, non-objectivism, and the functioning of form and color symbols in art expression.

Prerequisite: Fine Arts 71, 72, or equivalent. Three credit hours.

Fine Arts 74.
Studio Painting and Drawing IV.

A continuation of the study of essential pictorial compositional factors with added emphasis on method, the psychological and physical impact of color and form, and the development of personal style. Experience in three-dimensional media and practical experiments with some of the rarer techniques such as encaustic, egg tempera, serigraph, etc., are required.

Prerequisite: Fine Arts 71, 72, or equivalent. Three credit hours.
Courses of Instruction

DEPARTMENT OF

History and Political Science

Professors: Higgins (Chairman), Corcoran, Grattan, G. King, Lucey
Associate Professors: Kinsella, O. McKenna, Schiff
Assistant Professor: Kealey
Instructors: Anderson, J. Flynn, Merino, Powers, Wall
Visiting Professor: Van Valkenburg
Visiting Lecturer: E. Shea

HISTORY COURSES

History is one of the great traditional areas of intellectual concern. It deals with human nature, with what man has thought and said and done, with the persistent problems of human existence, with the totality of man's experience in the past. The aim of history is to give an account of "how things actually happened." The process of discovering the facts, of tracing the connection between events, of uncovering the influences and motive behind past action, of recording the causal relations and development of socially significant past human activities is the study of history. It sweeps back through the centuries to Herodotus "the Father of History." Cicero called history the life of man's memory, and he emphasized that "not to know what took place before you were born is to remain forever a child." In the same vein, in our modern age, it has been said that not to know history is to be condemned to repeat the errors of the past.

The soul of history is truth. As Leo XIII stated: "It is the first law of history that it dare say nothing which is false nor fear to utter anything that is true, in order that there may be no suspicion either of partiality or of hostility in the writer." With this noble ideal impressed upon his mind, it is calculated that the study of history will enable the student to know the past and to interpret its true significance.

History 11.
European History from Christain Antiquity to 900.
An analytical study of the political, social, economic and cultural history of Europe from the beginning of the Christian era through the reign of Arnulf, Carolingian Emperor of Germany. Three credit hours.

History 12.
European History from 900 to 1648.
A continuation of History 11 to the Peace of Westphalia. Three credit hours.

History 17, 18.2
The Elements of Western Civilization: Roman Law.
A seminar dealing with the development of Roman law, its qualities and codification up to the time of Justinian, and its impact upon both the middle ages and modern times. Six credit hours.

History 21.
The political and Cultural History of Europe: 1648-1815.
An analytical study of the political, social, economic and cultural history of Europe.

1 On leave (1963-64)
2 Special Studies Program. Cf. p. 58.
from the end of the Thirty Years War to
the era of Napoleon. Three credit hours.

History 22.
The Political and Cultural History
of Europe Since 1815.
A continuation of History 21 to the era
of the Cold War. Three credit hours.

History 25. (41)
A Survey of Western Civilization
from Christian Antiquity to 1648.
A broad survey of the development of
Western Civilization in its more notable
movements and institutions to the termina-
tion of the Thirty Years War.
Three credit hours.

History 26. (42)
A Survey of Western Civilization
Since 1648.
A continuance of History 25 to the pres-
et. Three credit hours.

History 43.
Historical Methodology.
The science of history and its relation to
the social sciences; method of historical re-
search and criticism; historians and his-
torical writings. Required of all students
majoring in History. Three credit hours.

History 46.
The United States from the Colonial Period
to the Civil War.
A study of the political, social, economic,
and cultural history of the United States
from the colonial period to the end of the
Civil War.
Lectures, assigned readings, reports, term
paper. Required of all students majoring in
History. Three credit hours.

History 47.
The United States Since the Civil War.
A study of the political, social, economic,
and cultural history of the United States
since the Civil War.
Lectures, assigned readings, reports, term
paper. Required of all students majoring in
History. Three credit hours.

History 48.
The United States in the Twentieth Century.
Some of the salient political, social, eco-
nomic and religious problems and trends of
the United States are selected for investiga-
tion and appraisal. Three credit hours.

History 51, 52.
Diplomatic History of the United States.
A study of the foreign relations and poli-
cies of the United States, with regard to
Europe, Latin America, Canada, and the
Far East. Six credit hours.

History 61.
A one semester upper division course.
Weekly discussion on reading assignments.
This course emphasizes religious, political
and economic factors from the beginning of
the reign of Henry VII to the end of the
reign of Elizabeth I. Three credit hours.
(Not offered 1963-64)

History 62.
Stuart England: 1603-1715.
A one semester upper division course.
Frequent discussion of reading assignments.
This course emphasizes religious, political
and intellectual factors from the beginning
of the reign of James I to the end of
the reign of Anne. Three credit hours.
(Not offered 1963-64)

History 63, 64.
The Renaissance of the Twelfth Century,
1050-1200.
A study of how two conceptions (the
changing values of feudalism and the growth
of a reformed Papacy) combined to create
a new Medieval World based on increasingly
strong monarchies (England and France)
and heightened intellectual speculation (St.
Anselm, the rise of the universities). Rome,
the Empire, England, and France are the
focal points in this study which will stress
source readings and independent investi-
gations. Six credit hours.
(Not offered 1963-64)

History 65, 66.
Europe in the Nineteenth Century.
Napoleonic Era; Congress of Vienna;
Political and Social Revolutions; Unifica-
tion of Germany and Italy; Russia; the Brit-
ish Empire; Social Theories.
Six credit hours.
(Not offered 1963-64)

History 67, 68.
Europe since 1914.
The causes of World War I; the Versail-
les Treaty; the League of Nations; Russia
and Bolshevism; Nazism; Fascism; the Far
Eastern Situation; the Spanish War of
1936; World War II. Six credit hours.
History 71, 72.
History of Latin America.

A study of colonial and national histories of Latin American Republics.

Six credit hours.

History 73, 74.
The Far East in Modern Times.

A survey of the political, social and economic history of the Far East: China, Japan, Philippine Islands, India, Pakistan, Burma, Indo-China, Malaya and Indonesia.

Six credit hours.

History 77, 78.
History of Russia.

A study of the economic, social, religious, political and cultural history of the Russian people from the period of ancient Kiev to the present.

Six credit hours.

History 79, 80.
History of Africa.

A survey of the political, social and economic history of the nations of Africa.

Six credit hours.

History 81.
Reading Course in History and Government.

Reading of a selected list of documentary and authoritative works under direction with individual reports and discussion. Students enrolled in this course must receive approval of the Department.

Three credit hours.

History 83.
Pro-Seminar in History.

Research with individual reports and class discussion on the subject of the term paper or any selected topic. Students enrolled in this course must receive approval of the Department.

Three credit hours.

POLITICAL SCIENCE COURSES

For centuries Government was regarded as a branch of moral philosophy or ethics, but in the nineteenth century it became a separate discipline. It stretches back to two of the world’s great thinkers, Plato and Aristotle. In his classic work “The Republic,” Plato considered the problem of justice and injustice and its effects upon the individual and society. Aristotle collected and studied the constitutions of the city states of his time, and wrote a classic treatise on the science and art of Government, the “Politics.” Aristotle, and later St. Thomas Aquinas, considered political science to be the master science since it integrated all other sciences concerned with the community.

Political Science is the systematic study of the political aspects of man’s nature and of the state. It studies human nature in its behaviour as it is affected by changing political processes and situations, the motivation and action of individual leaders, public officials, social and economic groups, public opinion, the process by which public policy is fashioned and patterns of political activity develop. It investigates the nature and purpose of the state, the principles on which it rests, the justification of political authority, the struggle for control of the state, problems of legislation and administration, the relationship between man and his government, the role of the state in achieving the “good life,” the legal aspects of political phenomena, the organization, practice and principles underlying court systems, the nature and development of the great, human freedoms, the governmental procedures of different countries, and the relations of states in the family of nations.

The study of Government is calculated to enable the student to know the political ideas of the great thinkers down through the ages, and the forces behind the control of the state.
Political Science 11, 12.
An Introductory Course in Political Science.
A study of the nature and functions of the State; types of government; development and essentials of representative government; constitutional government; problems of administration. Required for a major in political science. Six credit hours.

Political Science 41, 42.
American Government
An examination of the origin of the federal republic and the content of the Constitution of the United States; national, state and municipal government; modern problems. Required for a major in political science. Six credit hours.

Political Science 45, 46.
International Relations.
A study of the basic factors in international relations; the multi-state system; power factors; geography, population, natural resources; economic development and system; political system; foreign policy; diplomacy; atomic problems; international organizations; the United Nations, achievements and problems; World Government. Six credit hours.

Political Science 51, 52.
Diplomatic History of the United States.
A description of this course will be found under History 51, 52. Six credit hours.

Political Science 55.
Origin and development of the parliamentary system and the common law. Three credit hours. (Not offered 1963-64)

Political Science 57, 58.
History of Political Thought.
An examination of the political ideas and theories of the pre-Christian writers, the early Christian era, of the scholastics, moderns and contemporaries. Six credit hours.

Political Science 61.
American Political Parties.
The function of political parties and the history of political parties in the United States. Three credit hours.

Political Science 62.
Public Administration.
A study of the theory, organization and problems of public administration. Three credit hours.

Political Science 65, 66.
Constitutional History of the United States.
An examination of the origin and content of the Constitution, of the nature of the federal republic and the presidential system, of the development of the Constitution and of current constitutional problems. Prerequisite: PS 41, 42. Six credit hours.

Political Science 71.
The U.S.S.R.
A study of Soviet Russia offered by the Department of Sociology in the course listed under Sociology 71. Three credit hours.

Political Science 73, 74.
Comparative Modern Governments.
A study and comparison of modern governments. Six credit hours. (Not offered 1963-64)

Political Science 75, 76.
Government in Economic Life.
A study of the philosophical basis and salient problems of governmental business relationship. This course is offered by the Department of Economics under Economics 75, 76. Six credit hours.

Political Science 79, 80.
Political Geography.
Major political problems of the world as related to geographic factors and applied to selected regions. Six credit hours.

Political Science 83.
Pro-Seminar in Political Science.
Research with individual reports and class discussion on the subject of the term paper or any selected topic. Students enrolled in this course must receive approval of the Department. Three credit hours.
Courses of Instruction

DEPARTMENT OF

Mathematics

Professors: McBrien (Chairman), Nestor
Associate Professor: Shanahan
Assistant Professors: Dewey, J. MacDonnell, J. R. McCarthy
Instructor: Perkins

The program in mathematics is based upon the awareness of the increasing contribution of mathematics to contemporary culture as well as its key role in scientific and humanistic education. Because mathematics has undergone basic changes in content as well as in point of view, there is strong emphasis in all courses on a synthesis of old and new concepts. This approach invokes the interest of the sincere student and quickly brings him to a better understanding and use of mathematics.

Seminars; individual discussion and research projects are an integral part of the department program. Mathematics majors have the use of a Common Room for informal discussion with staff members and fellow-students. The O'Callahan Science Library has a fine selection of classical and contemporary mathematics books, monographs and journals available to all students in the college.

Mathematics 11, 12.
Principles of Analysis I, II.

For the benefit of students taking a concurrent first course in physics there is at the outset of Mathematics 11, 12 a four weeks intuitive introduction to concepts and drill in the differential and integral calculus. The course then goes on to cover the following topics: the basic algebra of sets, subsets of the plane and coordinate geometry, functions and the algebra of functions, intuitive construction of the real and complex numbers, algebraic systems—groups, rings, fields and vector spaces. In the second term the following topics are considered: real sequences and limits using the neighborhood topology of the line, continuity and differentiability in the space of real functions, anti-differentiation of elementary functions; the concept of an area function, content and measure in the plane, the Riemann integral and application to elementary functions, the role of linear operators in the calculus. Six credit hours.

Mathematics 15.
Introductory Analysis.

An elementary introduction to analysis for students majoring in the biological and social sciences. Topics covered include fundamental notions on sets and the number system. Cartesian products and the real plane, subsets of the plane, functions, neighborhood topology of the real line, limits and continuity, the derivative function and the definite integral, applications to the biological and social sciences. Three credit hours.

Mathematics 16.
Introduction to Finite Mathematics.

An introduction to finite mathematics for students majoring in the biological and social sciences and business administration. Topics covered include logical relations and truth tables, probability measure, the binomial distribution and normal law, Markov chains, vectors and matrices, linear programming, applications to the biological and social sciences. Three credit hours.

1 On leave (1963-64).
Mathematics 17, 18.1
Problems of Algebraic Structure and Elementary Analysis.

The course first considers those topics of algebraic structure necessary for a careful introduction to analysis: the concepts of set and function; the algebra of sets and of functions; and formal algebraic systems—groups, rings, fields, vector spaces. An informal development of the number systems is also included.

Real sequences, real functions, continuous real functions, differentiable real functions, and integrable real functions are the topics considered in the elementary analysis. The basic tool here is the neighborhood topology of the line.

The seminar covers the material of Mathematics 11 and 12, but in a manner which allows the student, working with the professor, to probe more deeply into topics which especially interest him.

Six Credit Hours.

Mathematics 21, 22.
Principles of Analysis III, IV.

This course continues the study of analysis and uses the algebraic and topological ideas developed in the freshman year. Topics covered in the first term include the neighborhood topology of $E^n$, functions from $E^m$ to $E^n$, the partial derivative function with applications to extrema, the differential function, volume as a set function, multiple integrals of functions from $E^m$ into the real numbers, line integrals and some elementary combinatorial topology. During the second semester a formal development of linear differential equations is taken up including some numerical solutions and the use of functions from the complex numbers into the complex numbers. For majors in physics and chemistry, special attention will be given to such basic equations in mathematical physics as Legendre and Bessel Equations.

Six credit hours.

Mathematics 41, 42.
Advanced Calculus I, II.

The purpose of this course is to introduce the student to analysis in general and especially to the study of continuous transformations, vector analysis, and complex variables. The content of the course includes the following topics: brief review of the real and complex number systems, with extension of the trigonometric and exponential functions to the complex numbers; topology of $E^n$, Heine-Borel theorem and continuous transformations; a brief treatment of linear transformations leading to the concept of differentials; the chain rule for differentiable transformations; the gradient of a real valued function; Jacobians and the implicit function theorem; Riemann-Stieltjes integration and multiple integrals; transformation of integrals; line integrals and Green's theorem; theorems of Gauss and Stokes; Cauchy integral theorem, Laurent expansions and residues. Prerequisite: Math. 11, 12, 21, 22. Six credit hours.

Mathematics 43, 44.
Introduction to Theory of Complex Functions.

This course begins with a brief review of the algebraic structure of the complex numbers and those basic topological concepts associated with the ideas of limit and continuity. The notion of an analytic function is then introduced and in the light of this notion a thorough study is made of elementary functions. Subsequent topics include contour integration, the Cauchy integral formula with its consequences, the Taylor and Laurent series-expansions, and the residue theorem with its applications. Mapping properties of complex functions and some examples of conformal mapping are also presented. With the fundamentals of complex function-theory established, some of the uses of this theory in the field of applied mathematics are considered. Prerequisite: Principles of Analysis 11, 12 Principles of Analysis 21, 22 Six credit hours.

Mathematics 45, 46.
Introduction To Algebraic Topology, I, II.

The following topics are studied: basic point set topology, including the concepts of compactness and connectedness; the classification problem for topological spaces; one- and two-dimensional manifolds; closed surfaces, Euler characteristic, connectivity numbers; homology and homotopy of curves on a surface; the singular homology theory with proofs of theorems on exactness, homotopy and excision; computation of singular groups of certain spaces with application to classification of surfaces; axioms for homology theory; polyhedra and the simplicial homology groups; cohomology groups; homotopy theory. Six credit hours.

1 Special Studies Program. Cf. p. 58.
Mathematics 51, 52.
Introduction to Abstract Algebra.

The purpose of this course is to provide a systematic development of algebraic systems and to study those topics which are most useful in the application of algebra to other parts of mathematics and to other sciences. Topics covered include quotient groups, exact sequences, the isomorphism theorems, vector spaces and linear transformations, field extensions with some Galois theory, modules, tensor products, and topics on Noetherian rings.

Mathematics 53, 54.
Introduction to General Topology and Measure Theory.

Part I covers elementary general topology and includes these topics: sets and mappings of sets considered generally, indexed sets, De Morgan's theorems; the real line—Cauchy sequences, open sets, connected sets, limit points and closed sets, closed and bounded sets, continuous functions and properties of continuous functions; topological spaces—the T-spaces, metric spaces, elementary properties of topological and metric spaces, mappings and subspaces, connected sets; metric spaces—elementary properties of metrics and metric spaces, local connectivity and the introduction of an M metric, second countable spaces, the Euclidean spaces. Part II covers Lebesgue measure in E^n and furnishes a brief introduction to abstract measure theory. The general topics are: Jordan content in E^n; Lebesgue measure in E^n; the Riemann integral; the Lebesgue integral; the relationship between integration and differentiation for functions from E^1 into E^1; abstract measure and integration. Prerequisite: 11, 12, 21, 22.

Six credit hours.

Mathematics 61, 62.
Special Topics I, II.

Special topics involving extensive reading in mathematical literature. The subject matter may vary to suit the requirements of the student. This course is intended for students who will have completed, with high honors, four complete upper division courses in mathematics, or who participate in an undergraduate research program sponsored by the department.

Six credit hours.

Mathematics 63, 64.
Mathematical Logic.

Several systems of pure logic and applied logic will be discussed within a general framework which consists of three basic aspects of symbolic languages: grammatical construction, interpretations, and deductive systems. The major results relative to completeness, incompleteness and decidability will be considered within this framework.

Six credit hours.

Mathematics 65, 66.
Honors Seminar.

The chief aim of the mathematics seminar is to provide an opportunity for individual and group investigation of topics not covered in course work by the mathematics majors. The method employed in the seminar is active participation on the part of the students. The general topic of discussion varies from year to year.

Six credit hours.
Courses of Instruction

Military Science

A. Department of Air Science

Professor: Lieutenant Colonel Grady (Chairman)
Associate Professor: Major Carey
Instructors: Captain Kehoe, Captain Morrill

The mission of the Air Force Reserve Officers' Training Corps is to select and prepare students, through a permanent program of instruction at civilian educational institutions, to serve as officers in the Regular and Reserve components of the United States Air Force.

The College of the Holy Cross is one of more than one hundred and seventy Colleges and Universities throughout the country which have Air Force ROTC Units.

The program of instruction of the Air Force ROTC at Holy Cross is divided into two courses—the Basic Course, normally completed during the Freshman and Sophomore years, and the Advanced Course—normally completed during the Junior and Senior years. During the Basic Course, the Air Force furnishes the AFROTC student with the distinctive Air Force blue uniform. The college is allotted the sum of one hundred dollars per student for the purchase of uniforms for advanced course students. Text books required are furnished by the Air Force. In addition the AFROTC advanced student is entitled to commutation of subsistence which amounts to approximately twenty-seven dollars per month, and between his Junior and Senior year he attends a four to six week summer camp, for which he is paid at the rate of seventy-five dollars a month.

Advanced cadets scheduled for pilot training after commissioning will be given a flight training course during their Senior year. This flight instruction program is designed to determine a cadet's aptitude for flying. This course may lead to certification by the Federal Aviation Agency for a private pilot's license.

Students who meet certain qualifications and who are selected by a board of officers, military and institutional, are granted a deferment from induction into the service under the Selective Service Act, provided they sign a deferment agreement, in which they agree among other things, to serve on active duty for a period of time as prescribed by the Secretary of Air Force.

ELIGIBILITY REQUIREMENTS

A candidate for enrollment must be a citizen of the United States between the ages of 14 and 23 years at the time of enrollment, be of high moral character and take such physical examinations as may be prescribed by proper authority and/or present a certificate of health from a doctor.

A general survey of air power designed to provide the student with an understanding of the elements of air power and basic aeronautical science. This course includes Potentials of Air Power, Air Vehicles and Principles of Flight, Military Instruments of National Security and Professional Opportunities in the United States Air Force. Two lectures. One hour leadership training laboratory. Two credit hours.

AS 22. Foundations of Air Power—II.

Encompasses a broad scope of specialized information concerning the organization, mission and functions of the United States Air Force to include: The Evolution of Aerial Warfare, Elements of Aerial Warfare, United States Air Force Operations in the employment of Air Forces and Space Problems and Possibilities. Two lectures. One hour leadership training laboratory. Two credit hours.

AS 41, 42. Air Force Officer Development.

A year-long treatment of the knowledge and skills required of a junior officer in the Air Force with special emphasis on staff duties and leadership. Includes Air Force Leadership doctrine, staff organization and functions, communicating, instructing, problem solving techniques, leadership principles and practices, and the military justice system. Eight credit hours.

AS 51, 52. Global Relations.

A study designed to provide a depth of understanding required of the Air Force officer in international relations and world political geography. This course also prepares the cadet for transition to military life as a junior officer and exposes him to the basic skills of navigation and weather interpretations. Four lectures: One hour Leadership Training Laboratory. Eight credit hours.

B. Department of Naval Science

Professor: Captain Rooney (Chairman)
Associate Professor: Commander Klein (Executive Officer)
Instructors: Major McKeon, Lieutenant Commander Hemmick, Lieutenant Fitzpatrick, Lieutenant Moser, Lieutenant Watts

The Department of Naval Science, a recognized department of instruction within the college, has as its purpose the providing of instruction in professional subjects dealing with the Navy and Marine Corps, which, when added to the other academic instruction provided by the college, will meet the purpose for which the Naval Reserve Officers Training Corps was established.

The purpose of the Naval Reserve Officers Training Corps, (The Corps consists of the NROTC Units at fifty-two colleges and universities throughout the United States) is to provide a steady supply of well-educated junior officers for the Navy and Marine Corps, and to build up a reserve of trained officers who will be ready to serve the country at a moment's notice in a national emergency. Students enrolled in the NROTC are of two categories—Regular and Contract. All procedures, benefits and requirements described hereinafter apply to both categories of NROTC students unless specifically indicated as pertaining to only one of the two types.

MILITARY STATUS

NROTC students wear the uniform only on such occasions as prescribed by the Professor of Naval Science. Normally, this will be at drills, ceremonies, and on cruises.
In addition to the ordinary requirements of gentlemanly conduct, they are subject to naval discipline and must conduct themselves at all times in a military manner when under naval jurisdiction, that is, when attending naval science classes, drills and exercises, and during summer training periods.

With the exception of the above described instances, NROTC students are in the same category as other students of the College.

**STATUS ON GRADUATION**

Contract students: After completion of their academic requirements for a baccalaureate degree and the four years of Naval requirements, which include the summer training, contract students are commissioned as ensigns in the U.S. Naval Reserve or second lieutenants in the U.S. Marine Corps Reserve. They are eligible for call to active duty as indicated below under “Draft Deferment.”

Regular students: Upon graduation, regular students are commissioned as ensigns in the U.S. Navy or second lieutenants in the U.S. Marine Corps. They are normally required to serve on active duty for a period of four years. Their seniority as Regular Navy ensigns or Regular Marine Corps Second Lieutenants is integrated with the Naval Academy Class of their graduating year, and as Regulars, requests to remain on active duty are unnecessary.

**SUMMER TRAINING**

Regular students: All regular students are required to take two summer cruises and one summer period of aviation-amphibious indoctrination, usually of eight weeks' duration each. The cruises are made on board modern warships. The aviation indoctrination is usually conducted at Corpus Christi, Texas, and the amphibious indoctrination is usually conducted at Little Creek, Virginia.

Contract students: Contract students are required to take only one summer cruise during the summer between their junior and senior years, the cruise being of approximately six weeks' duration.

Travel expenses for both regular and contract students from the College to the summer training site and return are furnished by the government. In addition, all students receive active duty pay during summer training amounting to approximately $75.00 per month.

**EMOLUMENTS**

Regular students: For regular students the cost of tuition, fees, and textbooks is paid by the government. Necessary uniforms are provided and students receive retainer pay at the rate of $600 per year.

Contract students: Contract students receive no emoluments during the first two years in the program. During the last two years they receive a subsistence allowance which amounts to approximately $27.00 a month. They are issued the necessary uniforms and Naval Science textbooks at no expense.
ELIGIBILITY REQUIREMENTS

A candidate for the NROTC must:

1. Be a male citizen of the United States.
2. At the time of his enrollment, if a minor, have the consent of his parent or guardian.
3. Be not less than seventeen nor more than twenty-one years of age on July 1 of the year in which he enters the program. (Contract students may be enrolled if sixteen years of age on July 1 of the year in which he enters the program.)
4. Gain his own admittance to the college.
5. Agree to remain unmarried until commissioned.
6. Be physically qualified, in accordance with the requirements for the U.S. Naval Academy, except that the vision requirements for Contract students are 20/40 each eye, corrected by lenses to 20/20, and for regular students 20/40 each eye, correctible to 20/20 is permissible, if the student scores in the highest 10% in the national examination.
7. If a contract student, he signs an agreement to accept a commission, if tendered, as an ensign, U.S. Naval Reserve, or second lieutenant, U.S. Marine Corps Reserve, and serves three years on active duty upon completion of college training, if called by the Secretary of the Navy.
8. If a regular student, he signs an agreement to accept a commission, if tendered, to retain this commission for a period of six years and to serve not less than four years on active duty as an officer, if called by the Secretary of the Navy.

SPECIAL PROCEDURES

Contract students are enrolled by the Professor of Naval Science upon their own application and are subject to selection and physical examination at the college within a limited quota as assigned by the Navy Department. These students are taken primarily from the entering freshman class at the beginning of the fall semester.

Inasmuch as the selection of contract students is completed during the first week of the fall semester and in view of the fact that the contract quota is limited, all eligible students who desire to be considered for the NROTC program should apply prior to the first day of classes in the fall. An application is not binding, and, even after enrollment in the program, a contract student may withdraw from the program, without prejudice, upon his own request at any time within the first two years.

However, enrollment is normally for four years and there is no change from “basic” to “advanced” status when entering the junior year of college.

Regular students enter the NROTC through a nation-wide test and selection system conducted by the Naval Examining Selection; Science Research Associates, 104 Pearl Street, McHenry, Illinois. The competitive examination is conducted in the late fall of the year, approximately nine months before enrollment of the applicant.

Transfer from contract to regular status; Contract NROTC students may compete for regular status and if selected will be enrolled as regular students without loss of standing.
THE NAVAL SCIENCE STUDENT

Disqualified NROTC applicants may take the Naval Science course for the purpose of acquiring advanced standing to be used when applying for NROTC enrollment at a later date in the event of removal of the disqualification. Also, the Naval Science course may be taken by those students who have no interest in NROTC enrollment, but who wish the instruction. Students in either of the above categories are known as Naval Science Students.

Naval Science students receive credit for satisfactory completion of the Naval Science course, but have no official status in the NROTC Program, and receive none of the advantages of the Regular and Contract NROTC students other than the training and background gained. This training would prove to be beneficial should the graduated Naval Science student apply for a commission through sources normally available to college graduates other than the NROTC Program.

DRAFT DEFERMENT

A student enrolled in the Naval ROTC will be deferred from the draft (Selective Service of 1948 and Universal Military Training Act of 1951) if he satisfactorily pursues the Naval ROTC course for four full years, including the summer training period applicable to his status as contract or regular student.

A contract student who is disenrolled loses his draft deferment.

A regular student who is disenrolled will be transferred to enlisted status in the U.S. Naval Reserve or U.S. Marine Corps Reserve.

The Naval Science student is not deferred from induction for service under the Selective Service Regulations.

CURRICULA

General: In order to obtain a commission either in the U.S. Navy, U.S. Naval Reserve, U.S. Marine Corps, or U.S. Marine Corps Reserve, students are required to obtain a baccalaureate degree and complete twenty-four semester hours in the Department of Naval Science.

The following courses may not be taken by a regular student:

Pre-Medicine, Pre-Dental, and Pre-Theological. A contract student may take such courses but it is to be remembered that all NROTC graduates usually go on immediate active duty upon graduation, and so additional training for one of those professions will be delayed until completion of the period of obligated naval service. Educational tours for regular NROTC midshipmen may be extended in individual cases, upon approval of the Chief of Naval Personnel, to permit attainment of doctorate degree.

During each semester every student is required to attend two laboratory periods of one hour's duration each week. He is also required to complete mathematics through trigonometry, or a semester of college mathematics, by the end of his sophomore year. In addition, each regular student must complete one year of college physics. Two separate curricula in naval science subjects are offered in the junior and senior year, leading to commissions in the Line of the Navy, and the Marine Corps.
NS 11.
Sea Power and Orientation.
A study of the Department of Defense, the basic customs and traditions of the Navy, the present-day Navy and the student's part in it. Three credit hours.

NS 12.
Sea Power and Orientation
A study of the influence of Sea Power upon global history. The stimulation of a living interest in the Navy and an appreciation of the contributions of Sea Power to the past, present, and future progress of the United States. Three credit hours.

NS 21.
Naval Weapons.
A study of the fundamentals of naval weapons and weapons' systems, stressing basic principles and their application to the control of the seas. The following major areas are covered: Basic weapons delivery problems, basic sciences, basic gunnery, typical fire control systems, anti-submarine warfare, guided missiles, nuclear weapons, space technology and the employment of naval weapons; a realistic and practical coverage of the duties of a Gunnery Department officer including specific problems and solutions, responsibilities, and authority. Three credit hours.

NS 22.
General Psychology.
A study of the psychological nature of the individual and of groups, and the influences effecting human action and interpersonal relations. (This course will be taught by a member of the Department of Philosophy.) Three credit hours.

NS 41.
Naval Operations.
A study of the responsibilities of naval officers in shipboard operations; such as relative movement, tactical communications and instructions, and rules of the nautical road. To afford a basic understanding of fleet communications and an introduction to electronic countermeasures. A study of the operational importance of the weather. Three credit hours.

NS 42.
Navigation.
A study of the theory and technique of surface navigation. Familiarization of the student to the extent that he will be able to assist intelligently the Navigator of a ship to conduct it safely by modern methods of navigation. A study of the fundamentals of naval tactics. Three credit hours.

NS 51.
Naval Engineering.
A study of basic naval engineering, including main propulsion steam plants, diesel engines, and ship stability. Three credit hours.

NS 52.
Naval Administration.
A study of the general responsibilities of administration, discipline, and leadership, which the student must assume upon acceptance of a commission. Three credit hours.

Candidates for commission in the Marine Corps will be required to complete NS 11, 12, 21, and 22. In place of NS 41, 42, 51, and 52, they will take courses in Marine Corps subjects as follows:

NS 45.
Evolution of the Art of War.
An historical study of the evolution of warfare, including: Principles of War, Offensive Combat, Defensive Combat, and studies of warfare in specific eras. Three credit hours.

NS 46.
Evolution of the Art of War and Modern Basic Strategy and Tactics.
A continuation of the historical study of the evolution of warfare developing into a treatment of modern basic strategy and tactics. Three credit hours.

NS 55.
Amphibious Warfare, Part I.
A study of the development of amphibious warfare operations and their employment in World War II. Three credit hours.

NS 56.
Amphibious Warfare, Part II.
Leadership, and the Uniform Code of Military Justice.
A continuation of the study of amphibious warfare concentrating on tactics, equipment, and modern methods of employment. A study of the general responsibilities the student must assume when commissioned, in the fields of leadership, discipline, and naval justice. Three credit hours.
DEPARTMENT OF

Modern Languages and Literatures

Professors: Boursy, Bowen, S. E. Flynn
Associate Professors: Desautels (Chairman), Lowe, J. McKenna, McNerney
Assistant Professor: Baker
Instructors: Bourcier, J. Burke, Daley, Kopp, Lamoureux, Zwiebel
Visiting Assistant Professor: Hen-Tov

The purpose of the study of modern languages in a college with liberal arts traditions is the gradual acquisition of proficiency in those languages. Language proficiency means ability in the four skills: understanding, speaking, reading and writing, as well as some familiarity with the culture and civilization of the country concerned. More precisely: a) The student should be able to understand an educated speaker talking at a normal rate of speed on subjects within the range of the student's experience. b) He should be able to express himself orally with a satisfactory accent on subjects within the range of his experience. c) He should be able to read without the aid of a dictionary prose of normal difficulty dealing with non-technical subjects. d) He should be able to put into writing with reasonable correctness his views on subjects within the range of his experience. These are the aims of the Modern Language Department at Holy Cross College. They coincide with those of the most reputable liberal arts colleges in the country as well as those of the Association of Modern Languages.

I. FRENCH

French 11, 12.
Elementary French.

The aim of this course is to teach the student to speak, read and write simple idiomatic French. Three hours weekly, and one period of laboratory practice.

Six credit hours.

French 15B, 16B.
Lower-Intermediate French.

An intensive review of the elements of the French language, with readings from standard authors, to supplement 2 years of average secondary school preparation. Three hours weekly, and one period of laboratory practice.

Six credit hours.

French 15A, 16A.
Upper-Intermediate French.

A systematic review of the fundamentals of the language, with intensive and extensive reading of selected texts. Three hours weekly, with one period of laboratory practice. Prerequisite: French 12, or better than average score on the placement test.

Six credit hours.

French 17, 18.1
French Thought from Rationalism to Romanticism.

French 21B, 22B.
Advanced French I.

Advanced composition with a survey of selected masterpieces from the Middle Ages to the twentieth century. Three hours weekly. Prerequisite: Lower-Intermediate French, 16B.

Six credit hours.

1Special Studies Program. Cf. p. 58.
French 21A, 22A.
Advanced French I.

The aim of this course is to acquaint the student with the literary masterpieces of French literature from the Middle Ages to the end of the 17th century. Three hours weekly, with one period of laboratory practice. Prerequisite: Upper-Intermediate French, 16A, or outstanding performance on placement test. Six credit hours.

French 25, 26.
Advanced French II.

This course will acquaint the student with the social, philosophical and literary ideas of the 18th and 19th centuries. Three hours weekly. Prerequisite: Advanced French, 22A. Six credit hours.

French 35, 36.
Survey of French Literature.

The masters of French literature in a comprehensive survey. This course is mainly for students who have not had French 25, 26. Six credit hours.

French 43.
French Literature of the Middle Ages.

An introduction to epic and lyric poetry, as well as prose masterpieces. Three credit hours.

French 44.
The Sixteenth Century.

The major writers of this period: Rabelais, Ronsard, Montaigne, etc. Three credit hours.

French 45, 46.
The Age of Enlightenment.

Montesquieu, Diderot, Voltaire, Rousseau, etc. Six credit hours.

French 51.
A History of Romanticism.

Three credit hours.

French 53.
Seventeenth Century Prose and Poetry.

Selection from: Descartes, Pascal, Bossuet, LaBruyere, LaFontaine, etc. Three credit hours.

French 54.
The Classic Theatre.

Three credit hours.

French 56.
Voltaire and his Time.

Three credit hours.

French 71, 72.
Composition and Conversation.

The purpose of this course is to enable the student to achieve fluency in expression. Six credit hours.

French 73.
Nineteenth Century Novel.

The most significant novelists of the 19th Century will be studied: Hugo, Stendhal, Balzac, Flaubert, Zola, etc. Three credit hours.

French 74.
Nineteenth Century Poetry.

A study of the major poetic movements of this century. Three Credit Hours.

French 77.
Post-Classical Drama.

An analysis of the theatre from the beginning of the eighteenth century. Three credit hours.

French 81.
The Theatre in the Twentieth Century.

Three credit hours.

French 82.
The Novel in the Twentieth Century.

Three credit hours.

French 83.
The Catholic Revival of the Twentieth Century.

Three credit hours.

French 85.
Marcel Proust and the Analytical Novel.

Three credit hours.

French 86.
Camus and his Generation.

Three credit hours.

French 91, 92.
Seminar.

Bibliography and Method. For senior students only. Three credit hours.
II. GERMAN

German 11, 12.
Elementary German.

A thorough study of inflections and of essential elementary syntax; drill in easy German composition and the acquisition of a working vocabulary. Three hours weekly, with one period of laboratory practice.

Six credit hours.

German 15B, 16B.
Lower-Intermediate German.

An intensive review of the fundamentals of German, with readings from standard authors, to supplement 2 years of average secondary school preparation. Three hours weekly, with one period of laboratory practice.

Six credit hours.

German 15A, 16A.
Upper-Intermediate German.

Thorough review of all essentials of grammar; drill in German composition; special study of the more difficult points of syntax; reading and translation of German texts with special attention to the grammatical constructions involved. Three hours weekly, with one period of laboratory practice. Prerequisite: German 12, or better than average score on the placement test.

Six credit hours.

German 17, 18.1
The Age of German Romanticism.

German 21B, 22B.
Advanced German I.

A survey of selected modern German texts, with special attention given to the development of a large reading vocabulary. The course is largely conducted in German. Three hours weekly. Prerequisite: Lower-Intermediate German, 16B. Six credit hours.

German 21A, 22A.
Advanced German I.

Reading and study of both prose and poetry of the various literary movements, with special emphasis on modern authors. Three hours weekly, and one period of laboratory practice. Prerequisite: Upper-Intermediate German, 16A, or outstanding performance on placement test.

Six credit hours.

German 25.
Advanced German Composition (and Conversation).

The aim of this course is the acquisition of a facility in both oral and written expression. Special emphasis is given to idioms and to genuinely German stylistics. Weekly papers of some length are required.

Three credit hours.

German 41, 42.
German Literary History.

This is a background course and presents a general connected survey of the development of German culture and literature from its beginnings to today. For its earlier periods, particularly, it is accompanied by selected illustrative readings in modern German translations. Prerequisite: German 25.

Six credit hours.

German 45.
German Romanticism.

The place of Romanticism in European literature. Romanticism as a literary attitude, a philosophical position and a school. Readings in Schlegel, Novalis, Brentano, Tieck, Hoffman, Eichendorff and others.

Three credit hours.

German 48.
German Classicism.

The age of German Classicism is centered around the circle of Klopstock, Wieland, Lessing, Herder, Goethe, Schiller and Hoderlin. Variant readings from these authors. Students are expected to give written reports on selected works from these writers.

Three credit hours.

German 53.
The German Lyric.

Historical development of the lyric from Middle High German to modern with analysis and evaluation of such writers as Gryphius, Klopstock, Goethe, Schiller, Novalis, Eichendorff, Heine, Moerike and Georg.

Three credit hours.

German 54.
Schiller, Life and Works.

A study of Schiller's life. His relationship to Goethe. His status as a classicist. Extensive reading and analysis of his main dramas and of selections from his prose works.

Three credit hours.

1Special Studies Program. Cf. p. 58.
German 56.
The German Drama.

A study of the German drama of the 18th and 19th Centuries.

*Three credit hours.*

German 57.
Goethe, Life and Works.

A study of Goethe as the dominating figure of German Classicism. His influence upon, and status in World Literature. Extensive readings from his works.

*Three credit hours.*

German 65, 66.
German Linguistics.

A thorough introduction to general linguistics. Beginning with phonology, the course presents a systematic and scientific study of German morphology with historical and comparative references.

*Six credit hours.*

German 73.
The German Novelle.

The Novelle as a genre. History, including foreign influences. Readings of selected works of such writers as Goethe, Kleist, Hoffman, Tieck, Keller, Meyer Hauptmann, Mann.

*Three credit hours.*

German 75, 76.
Modern German Literature.

A study of the various movements of German Literature and their relation to history from the Franco-Prussian War and World Wars I and II into our own day. A great amount of reading is required, together with papers in analysis of the variant trends.

*Six credit hours.*

III. ITALIAN

Italian 11, 12.
Elementary Italian.

This course aims to equip the student with a succinct and useful knowledge of the essentials of the Italian grammar, giving him the ability to read, write and speak idiomatic Italian, with daily drill in phonetics. Three hours weekly, with one period of language laboratory. *Six credit hours.*

Italian 15, 16.
Intermediate Italian.

A thorough review of Italian grammar is made through reading, composition, oral and aural practice. Three hours weekly, with one period of language laboratory. *Six credit hours.*

IV. RUSSIAN

Russian 11, 12.
Elementary Russian.

A thorough study of the essentials of Russian grammar. Three hours weekly, with one period of language laboratory. *Six credit hours.*

Russian 15, 16.
Intermediate Russian.

Rapid review of the fundamentals of Russian, with study of the more difficult points of syntax, and with graded readings. Three hours weekly, with one period of language laboratory. *Six credit hours.*

Russian 21.
Advanced Russian.

An introduction to more advanced texts of Russian prose as well as extensive oral practice on material covered in the readings. Advanced problems in syntax and grammar will be discussed and resolved. *Three credit hours.*

Russian 22.
Survey of Russian Literature up to the 19th Century.

A study of Russian literature from its origins in the 11th Century, through the chronicle period, up to the beginnings of modern Russian literature in the 19th Century. Readings from representative authors in Russian. *Three credit hours.*

Russian 31, 32.
Golden Age of Russian Literature.

*Six credit hours.*

Russian 31, 52.
Russian Civilization and Area Study.

*Six credit hours.*
V. SPANISH

Spanish 11, 12.
Elementary Spanish.
The aim of this course is to teach the student to speak, read and write simple idiomatic Spanish. Three hours weekly, with one period of laboratory practice. Six credit hours.

Spanish 15B, 16B.
Lower-Intermediate Spanish.
An intensive review of the elements of the Spanish language, with readings taken from standard authors, to supplement 2 years of average secondary school preparation. Three hours weekly, and one period of laboratory practice. Six credit hours.

Spanish 15A, 16A.
Upper-Intermediate Spanish.
A systematic review of the fundamentals of the language, with intensive and extensive reading of selected texts. Three hours weekly, with one period of laboratory practice. Prerequisite: Spanish 12, or better than average score on the placement test. Six credit hours.

Spanish 17, 18.¹
Spanish Literature of the Golden Age.

Spanish 21A, 22A.
Advanced Spanish I.
Advanced composition with a survey of selected literary masterpieces. Three hours weekly. Prerequisite: Spanish 16, or outstanding performance on placement test. Six credit hours.

Spanish 25, 26.
Advanced Spanish II.
Emphasis is given to composition, while acquainting the student with the masterpieces of the 17th, 18th, 19th centuries. Three hours weekly. Prerequisite: Spanish 22A. Six credit hours.

Spanish 41, 42.
Survey of Spanish Literature. Six credit hours.

Spanish 51, 52.
Cervantes and Drama of Golden Age. Six credit hours.

Spanish 55, 56.
19th Century Novel.
Study of representative works of outstanding novelists of this century, including Alarcón, Galdós, Pereda, and many essays dealing with the cultural life of the period are included in this course. Students are required to write critical essays on all the works read. Course given completely in Spanish. Six credit hours.
(Not offered in 1963-64).

Spanish 61, 62.
Survey of Spanish Drama. Six credit hours.

Spanish 63, 64.
20th Century Novel and Essay.
Study of some of the most representative works of writers such as Pérez de Ayala, Baroja, Unamuno, Cela, Zunzunegui, Lafontet, and Goytisolo. Critical essays are required of the students. Course given in Spanish. Six credit hours.

Spanish 71, 72.
Conversation and Composition. Six credit hours.

¹ Special Studies Program. Cf. p. 58.
Courses of Instruction

DEPARTMENT OF

Philosophy

Professors: Haran, Sarjeant, J. Shea
Associate Professors: Centi, Drohan, Harrington\(^1\), Lynch, Zlody
Assistant Professors: F. F. Callahan\(^1\), J. D. Crowley (Acting Chairman), Donnelly, J. F. Kiley, Llamzon, O'Halloran (Director, Psychological Studies), Pax, Rosenkranz
Instructors: Brennan, Dewing, Eisenmann, Greaney\(^1\), W. P. Kiley, Lindgren, Mantautas, W. Shea, Winn

Philosophy 21.

Logic.

Introduction to Philosophy: Study of the origins of Western Philosophy (Plato, Aristotle, Aquinas); survey of major philosophical problems; the problem of a Christian Philosophy.

Aristotelian Logic: A study of the basic instruments of human knowledge, the Concept, Proposition, Deductive and Inductive Argumentation from both a technical and philosophical point of view.

Modern Mathematics, Symbolic Logic: A study of the origins and basic techniques of mathematical logic, a comparison with Aristotelian logic.

The Logic of Scientific Induction: The problem of inductive generalization; solution by Mill's canons of induction, theory of probability; verification of hypotheses, other general criteria.

Philosophy 22.

Epistemology.

The Validity of Human Knowledge . . . As an historical problem, Skepticism and Cartesian Doubt. The Realists’ answer—Primitive Truth.

The Sources of Human Knowledge . . . Experience: Contact with extramental reality through sensation, Judgment and reasoning. The universal idea. The position of Relativism and Idealism on man's contact with an extramental world.

Objective Evidence as the criterion of truth. Testimony.

\(^1\) On leave (1963-64).

Theories of Knowledge. Rationalism Empiricism. The Kantian Critique.

Three credit hours.

Philosophy 41.

General Metaphysics.

A consideration of Being based on the objects which are presented to us in experience as undeniably real. From the facts of change, multiplicity and limitation we learn of the compositions within being involving substance and accident, matter and form, essence and existence. Further analysis of these as particular cases of the theory of potency and act. The transcendence and analogy of being necessitating the view of metaphysics as a concrete science. Origin of our knowledge of being as metaphysical through the negative judgment of separation. How this differs from any other type of organized, abstract knowledge. The transcendental properties of being. Efficient and final causality in being. God as the sole, ultimate, efficient and final cause of the real.

Three credit hours.

Philosophy 43.

Survey of Scholasticism.


Three credit hours.
Philosophy 44.  
Natural Theology and 
Cosmological Questions.

The nature and characteristics of Natural Theology. Demonstrability of God's existence. Validity of the posteriori demonstration emphasizing the fact that the actual reality of God is a necessary implication of the actual reality of anything which is real. The five ways of St. Thomas critically analyzed. Man's knowledge of God. The Divine perfections: necessity, infinity, asety, immutability, eternity and immensity. God's knowledge and love, creation and providence. God as the end of man. Philosophical attitudes to the existence of God. This to be expanded to the limits of practicality to include Ockam, Leibnitz, Kant in particular, Empiricists, Scientism, Existentialists.

Matter and Form (Theory and Hylomorphism), Quantity and Quality, Space and Time, Laws of Nature. Three credit hours.

Philosophy 45.  
Scholastic Method and Bibliography.

The course is an inquiry into the epistemological method proper to philosophy as presented by St. Thomas in his commentary on Boethius' De Trinitate and De Ente et Essentia. The ontological mode of knowledge in philosophy is highlighted by contrasting it with the constructual mode used in the mathematical and experimental sciences. Reading lists are offered; the student is introduced to the Opera Omnia of St. Thomas, the Thomistic commentators, lexicons, bibliographies, encyclopedias, and the major collections of patristic and medieval works. All this is discussed in seminars. Three credit hours.

Philosophy 53, 54.  
Rational Psychology.

The Philosophy of Human Nature. A study of human nature as it manifests itself in the vegetative, sensitive and intellectual powers. Life is a nature expressed in Sensation and Perception through species from external and internal sense powers complemented by dynamic appetites. Life's highest form is Intellectual and Volitional activities sponsored by man's substantial, simple, spiritual, created, immortal soul. Anthropological evolution. Four credit hours.

Philosophy 55.  
General Ethics.

Definitions, nature, object necessity of Ethics; the ultimate end of man; beatitude; the human act; merit and accountability; the passions; virtue and vice; morality of human acts; the norm of morality; Utilitarianism and Hedonism: Bentham, Mill and Spencer; the eternal law and the natural law; properties and sanction of the natural law; nature and origin of moral obligations; Kant's categorical imperative; Conscience. Four credit hours.

Philosophy 56.  
Special Ethics.

Man's duty to his Creator; Rationalism; Indifferentism.

Man's duty to himself; man's duty to himself; man's duty to preserve himself; suicide.

Man's duty to his neighbor; direct and indirect killing; killing done in self defense; lying, mental reservation.

Right of ownership: Communism and Socialism; theories of Henry George; Herbert Spencer on the right of property; modes of acquiring property; rights of disposing property by will; contracts; relations of capital and labor; trade unions; strikes.

Social Ethics: Society in general; nature and end of domestic society; unity and indissolubility of matrimony; divorce; parental authority; education of the child.

Civil Society: nature, end and origin; false theories on the origin of civil society; Hobbes and Rousseau; the Scholastic doctrine; form of civil government—legislative, judiciary, executive; taxation; death penalty; freedom of worship; freedom of the press; state education.

International Law: various meanings of Jus Gentium; foundation international law; mutual relations of nations; rights of commerce; rights of neutrals; nature and justice of war; arbitration. Four credit hours.

Philosophy 57, 58.  
History of Modern Philosophy.

The main trends of modern thought. The schools of rationalism and empiricism as found in the 17th and 18th centuries. An examination of the Kantian synthesis and the subsequent break-up of the synthesis into the schools of idealism and positivism. Brief introduction to new attempts to synthesize: the philosophy of life movements,
phenomenology and existentialism, the analytic movement, American naturalism.

The continuity of the philosophical quest is emphasized by frequent references to the questions as they appeared in the older philosophies and, in particular, in the thought of St. Thomas Aquinas.

Four credit hours.

Philosophy 59. Plato.

His life; influence of Socrates, Founding of the Academy and its spirit. An analytical study of selected dialogues.

Three credit hours.

Philosophy 60. Marxism.

The union of the Hegelian Dialectic with the Materialism of Feuerbach. The process of development as it is found in the economic interpretation of history, the labor theory of value, surplus-value, the dictatorship of the proletariat, the classless society.

Three credit hours.

Philosophy 62. History of Greek Philosophy.

The principal antecedents of Plato and Aristotle, Thales, Sophists, Socrates. From a perusal of the original text, or translations, the influence of the early Greeks on the major relationships of man to God, to himself and to other men is measured. The doctrine of Act and Potency is studied with reference to Heraclitus and Parmenides.

Three credit hours.

Philosophy 64. History of Medieval Philosophy.

A study of the more important philosophers of the Middle Ages including Boethius, Pseudo-Dionysius, St. Anselm, Abelard, Albert Magnus, Avicenna, Averroes, Maimonides. Also an analysis of the influence of Plato, Aristotle and Neo-Platonists on St. Thomas and a comparison of St. Thomas with other Scholastic schools rounds out the course.

Three credit hours.


A survey of the outstanding philosophical thinkers of the late 19th and 20th centuries, including Bergson, James, Dewey, Whitehead, Russell, Jaspers, Sartre, and Marcel.

Three credit hours.

Philosophy 67, 68. Scholastic Philosophy and Modern Science.

A critical examination of the structure of contemporary mathematics and modern science, with emphasis on its presuppositions, methodology, intelligibility and noetic character, along with some current philosophical orientations. Relevance to Thomistic metaphysics is analyzed.

Six credit hours.

Philosophy 69. Phenomenological Existentialism.

An examination of the origins and bases of the contemporary phenomenological movement. The growth of existentialism from phenomenology. The theistic and atheistic strands of the movement. Current influences of existentialism in the areas of psychology, sociology and religious thought.

Three credit hours.

Philosophy 77. Problems and Procedures in Personality Measurement.

The purpose of the course is two-fold: to acquaint the students with the principal instruments currently in use in the assessment of personality and to consider the problems which a psychologist faces in the measurement of personality factors. Among the topics to be considered are the following: the criteria for evaluating and selecting tests, an overview of measurement methods, the aspects of personality, and the methods of studying personality. Among the methods to be treated are the questionnaires and inventories and the projective techniques.

(Not Given 1963-64).

Three credit hours.

Philosophy 90. Philosophical Basis of the Education Problem.


Three credit hours.

Philosophy 91. Primitive Religious Thought.

An introduction to animistic, monotheistic, functionalist and psychoanalytic theories of religion. A sampling of primitive religious systems. Prerequisite: Natural Theology.

Three credit hours.
Philosophy 94.
Spinoza.

Man seeking God. One Substance, i.e., God. Will is a necessary cause, not free. Baruch's problem: true liberty and happiness. His link is not religious but rational. Modes are Thought and Extension of God. Pantheism. *Three credit hours.*

Philosophy 95.
Maurice Blondel (1861-1949).

Man's destiny gives meaning of life. He aspires towards a goal that is not merely a natural one. Considers man not in his metaphysical nature but in concrete reality. Metaphysical Analysis—reach content of Will in action where man incarnates himself in the concrete. Supernatural in all Wills. *Three credit hours.*

Psychology 41.
(Formerly Philosophy 71, 72.)
Contemporary General Psychology.

The course aims to acquaint qualified students with the more important and representative areas of current scientific psychology. Thus both those intending to major in psychology and those seeking an understanding of the significance of psychology in human experience will be introduced to the fundamental principles of individual psychology as operative in motivation, learning, perception, and thinking. The course also presents the application of these principles to applied areas such as emotion, social processes, assessment of abilities and personality, and biological substrates of behavior. *Three credit hours.*

Psychology 43. (Formerly Philosophy 73.)
Statistics.

An introduction to statistical methods in the analysis and interpretation of psychological data; measures of central tendency, variability, correlational techniques—both partial and multiple—and reliability of statistical measures. A brief survey of factor analysis and analysis of variance. *Three credit hours.*

Psychology 44. (Formerly Philosophy 79.)
Theory and Practice of Psychological Assessment.

The history of psychological testing; the rationale of test construction and administration. A thorough examination of the theory, development and application of psychological tests. Presentations and critical survey of general ability, special aptitude, achievement, interest and attitude tests. An introduction to projective techniques. *Six credit hours.*

Psychology 51, 52. (Formerly Philosophy 75, 76.)
Physiological Psychology.

Structure and function of the nervous system and endocrine glands with reference to man's behavior. Neural, physiological, and biochemical substrates of emotion, learning, and abnormal behavior; the neural basis for motor coordination and integration, somesthesia, sensation, and perception. Psychological effects of work, fatigue, drugs, alcohol, brain surgery, and other influences on neural processes. An introduction to psychosomatic affections, psychiatric drugs, psychotomimetic agents, and the reticular activating systems. Basic anatomy and function of man's senses. Emphasis is placed on understanding the determining influence which physiological processes frequently exert on human behavior and experience. *Six credit hours.*
Psychology 53.
Psychology of Learning.

A presentation and evaluation of the principles of classical and instrumental conditioning, transfer of training, and the development of human learning and remembering. Major theories, both early and contemporary, will be examined.

Three credit hours.

Psychology 54. (Formerly Philosophy 80.)
Psychopathology.

An examination and analysis of factors involved in the development and structure of the abnormal personality; faulty and exaggerated psychological processes and pathological reaction types as seen in neuroses, psychoses and antisocial behavior; personal, social and cultural influences on mental disturbances. An introduction to diagnostic and therapeutic techniques, including application of drugs and other organic adjuncts. A brief evaluation of mental hygiene and preventive psychiatry. Tours of mental institutions will be arranged.

Three credit hours.

Psychology 55. (Formerly Philosophy 74.)
History and Systems of Psychology.

This course aims to acquaint advanced students with the development of theoretical systems of psychology. It deals with the history and contemporary trends of theories of development, perception, learning, thinking, motivation, emotion and quantitative psychology. Emphasis is placed on understanding of contemporary theoretical systems.

Three credit hours.

Psychology 56.
Social Psychology.

The course aims to acquaint students with the role of social and cultural factors in the behavior of individuals. Included will be such topics as: attitude development and change, prejudice, language and communication, small group processes, the relationship of culture and personality, and interpersonal perception.

Three credit hours.

Psychology 57, 58. (Formerly Philosophy 91, 92.)
Seminar in Current Problems in Psychology.

Six credit hours.

Psychology 60.
Research Projects.

Students who are especially interested and who have sufficiently high grades may assist in faculty members' research projects. Depending on the nature of the investigation—which will already have been designed and formulated—they may assist in initial library research, assembling the bibliography, perform computations and analyses of data, or administration of the experiment. This work will be undertaken in addition to the normal course load.

Two credit hours.
Courses of Instruction

DEPARTMENT OF

Physics

Professors: Connolly, T. Smith
Associate Professors: Gunter, Kennedy (Acting Chairman), R. MacDonnell, Sarup
Visiting Lecturers: Kelley, Strong

The curriculum leading to the degree of Bachelor of Science in Physics is designed to provide a thorough foundation in the principal branches of physics as an immediate preparation for professional work in the field and for further study leading to advanced degrees in science and engineering.

PHYSICS

Physics 11.
Mechanics, Heat and Sound.

An introduction to Mechanics, Heat and Sound. Three lectures and one (three-hour) laboratory period. Four credit hours.

Physics 12.
Electricity and Light.

An introduction to Electricity and Light. Continuation of Physics 11. Three lectures and one (three-hour) laboratory period. Four credit hours.

Physics 21.
Geometrical and Physical Optics.


Physics 24.
Modern Physics.


Physics 41.
General Physics.

A survey course covering Mechanics, Heat, Sound. Elective for non-science majors. Two lectures and one (two-hour) laboratory period. Three credit hours.

Physics 42.
General Physics.

Light, Electricity and Modern Physics. Continuation of Physics 41. Two lectures and one (two-hour) laboratory period. Three credit hours.

Physics 43.
Introduction to Astronomy.

By means of lectures and illustration, coupled with some observation and laboratory work, the student is given a view of the universe in which we live. The course is developed by tracing the investigations which lead to the presently known picture.
of the world. Elective for non-science majors.

Two lectures and one laboratory period.  
(Not given 1963-1964.)

Three credit hours.

Physics 44.
Introduction to Geology.


Three credit hours.

Physics 47.
Theoretical Mechanics 1.


Physics 48.
Theoretical Mechanics II.


Three credit hours.

Physics 49.
Radiological Physics I.

Elements of atomic physics. Nuclear structure. Radioactivity, fission, fusion, interaction between radiation and matter. Ionizing radiations, measurement of radiation, radiological instruments. Dose and dose rate, biological effects. Elective for non-science majors. Two lectures and one (two-hour) laboratory period. Three credit hours.

Physics 50.
Radiological Physics II.


Physics 51.
Electricity and Magnetism I.


Physics 56.
Electricity and Magnetism II.


Physics 62.
Electronics.

A/C circuit analysis and filter theory. A study of the characteristics of semiconductor diodes, transistors, vacuum and gas filled electron tubes. The basic circuits in which these devices are used. Three lectures and one (three hour) laboratory period. Prerequisites Ph. 51. Four credit hours.

Physics 67.
Advanced Modern Physics I.

Introduction to quantum mechanics: development of Schroedinger theory and solutions to time independent equation for the free particle, step potentials, barrier potentials, finite and infinite square wells, simple harmonic oscillator problems; perturbation theory. Atomic physics: one electron atoms. Three lectures. Prerequisite Ph. 24, 47, 48. Three credit hours.

Physics 68.
Advanced Modern Physics II.

Continuation of Physics 67. Magnetic moments, spin and relativistic effects; identical particles; multielectron atoms, Zeeman effect, hyperfine structure, transition rates; X-rays (production, scattering, absorption, Dirac theory of antiparticles). Nuclear physics: nuclear models, radioactive decay,
nuclear reactions, nuclear forces, nuclear instrumentation, counting statistics. Three lectures and one (three-hour) nuclear physics laboratory period.
Prerequisite Ph. 67.

Four credit hours.

Physics 69.
Thermophysics I.

Introduction to thermodynamics, thermodynamic systems, state variables (for ideal and real gases), Laws of Thermodynamics and their consequences. Low temperature and liquefaction of gases. Maxwell distribution of velocity, equipartition of energy, specific heats and transport-coefficients.
Prerequisite Ph. 11, 12.

Three credit hours.

Physics 70.
Thermophysics II.

Prerequisite Ph. 47, 67, 69.

Three credit hours.

Physics 75.
Seminar.

The Physics Seminar, a circle of the faculty and the more advanced students majoring in physics, meets weekly.

Physics 76.
Undergraduate Research.

A program of supervised research above and beyond the level of regular course offerings. The work may be theoretical and/or experimental and is designed to bridge the gap between the undergraduate and postgraduate levels.

Three credit hours.

Physics 77.
Undergraduate Research.

Cf. Physics 76.

Three credit hours.
Courses of Instructions

DEPARTMENT OF

Sociology

Professors: Facey, Imse (Chairman)
Associate Professor: R. Burke
Assistant Professor: Scott
Instructor: Fallon

The department presents a scientific approach to the understanding of human society. After the introductory course in general sociology, the emphasis is upon methods of research and sociological theory, together with substantive studies and theoretical developments in specified areas.

The department maintains a laboratory-workshop which serves its students as a center for their research operations, and a seminar room which also contains reference works. Honors students participate in seminars, tutorial reading programs and individual research projects oriented toward independent study.

Sociology 11, 12.
General Sociology.
The introduction to sociological analysis of social groups, social processes, culture and social change. Six credit hours.

Sociology 17, 18.¹
The Structure of Soviet Society.

Sociology 21.
Social Statistics.
The basic statistical concepts needed for a better understanding of behavior. Collecting, classifying and interpreting data through the use of measures of central tendency, variability, correlation, standard scores and sampling are studied. Graphical presentation of material and formulae applicable to test material are given. Three Credit Hours.

Sociology 41.
General Sociology.
A single semester introductory course for sociology majors who have not taken Sociology 11 and 12. Three credit hours.

Sociology 42.
General Sociology.
Elementary sociological analysis offered to students who are enrolled in the Department of Economics. Three credit hours.

Sociology 55.
Social Psychology.
This course aims to acquaint students with the role of social and cultural factors in the behavior of individuals. Included will be such topics as: attitude development and change, prejudice, language and communication, small group processes, the relationship of culture and personality, and interpersonal perception. Three credit hours.

Sociology 56.
Sociology of Religion.

Sociology 62.
Contemporary Sociological Theory.
An elaboration of a frame of reference for the analysis of social systems in terms of contemporary theory. Three credit hours.

Sociology 64.
Social Organization.
Formal organizations and their informal dynamics. Bureaucracies in contemporary industrial, political and military systems. Three credit hours.
Sociology 65.
Class Conflict and Social Change.

The dichotomous and the integral models of society considered in relation to the explanation of social change in industrial society.  
*Three credit hours.*

Sociology 66.
The Family.

The family as a social system, functionally and historically, with special reference to American urban life. Family process, culture, and personality development. The family and related social systems.  
*Three credit hours.*

Sociology 70.
Personality, Society, and Culture.

An investigation and analysis of recent writings from psychology, anthropology and sociology focusing on an interdisciplinary understanding of personality and social systems; the structural-functional analysis of social systems and the determinants of personality formation.  
*Three credit hours.*

Sociology 71.
The Soviet Social System.

A sociological analysis of the political, economic and related social systems of an industrializing society; ideological and international significance of major developments.  
*Three credit hours.*

Sociology 72.
History of Social Theory.

A descriptive and critical study of the development of sociological theory from Comte to the present.  
*Three credit hours.*

Sociology 73.
Industrial Sociology.

Social organization of industry; functions of members of industrial organization, status, social structure; patterns of interaction, and relations of industry and society.  
*Three credit hours.*

Sociology 74.
Problems of a Changing Population.

Population distribution, composition, and growth in North America and Eurasia; trends in fertility and mortality; migration; population prospects and policies.  
*Three credit hours.*

Sociology 76.
Cultural Anthropology.

An introductory survey of the field. Comparative analysis of social organizations. Applied anthropology.  
*Three credit hours.*

Sociology 77.
Elementary Social Research.

Introduction to the philosophy of science; research design and the basic techniques of research.  
*Three credit hours.*

Sociology 78, 79.
Advanced Social Research.

Individual research.  
*Six credit hours.*

Sociology 91, 92.
Seminar and Tutored Reading.
Courses of Instruction

DEPARTMENT OF

Theology

Professors: W. Casey, W. J. V. E. Casey, Harkins, O'Connor
Associate Professors: R. Burke, Delaney (Chairman), J. R. Sullivan, Walsh
Assistant Professors: G. Barry, Donnelly, J. McGrady
Instructors: Brooks, J. Crowley, E. McCarthy, McGrath, Mininni, W. Shea
Visiting Professors: McGovern, Philbin

Conscious of the obligations to engender in the student a vibrant, theoretical awareness, and to spark a productively-effective realization of Christ's truth, our heritage, the Theology Department feels that it has a unique role in a college curriculum. The long-range but omnipresent goal is to make each student alive to the fact that Catholicism is not merely a Creed, but a culture; that the study of its Theology is not merely an intellectual discipline, but the charting of a way of life, a program; that the appended courses outline not merely semester hours, but italicize an attitude toward life as a whole. More specifically, the general purpose of a Catholic Theology Course is to present, in coordinated fashion, a Creed, things to believe; a Cult, things to use in worship, (as, for example, the Liturgy and the Sacraments); and, finally, a Code, things to do, a pattern of morality. The Department of Theology develops its program from two basic premises: first, that our Theology is Christo-centric; and, secondly, that our tradition in scholarship is ultimately Ignatian, stamped with the character minted by the four hundred year history of the Society of Jesus, founded by St. Ignatius of Loyola.

Taking as our norm the oft-repeated dictum of St. Ignatius about Christ in the Spiritual Exercises, “that we may know Him more intimately, love Him more ardently and follow Him more closely,” we endeavor to give a rounded view of Catholic Theology. Thus, we conceive knowledge of Christ to correspond roughly to Dogmatic Theology (Creed), love of Christ to have a not-too-strained relationship with Ascetic Theology (Cult) and the notion of serving to have a definite kinship with Moral Theology, and, by legitimate extension, to Canon Law (Code). All these branches of Theology are woven into whatever fragment of theological truth may be under scrutiny in a given semester, with the doctrine of the Mystical Body of Christ as the unifying element of the entire corpus of truth. We thus hope to provide an intelligent insight into the Christian mysteries, so that the ensuing light of faith will be genuinely and maturely intellectual, as befits the educated and articulate college graduate. This is an attempt to realize the purpose of the Theology Department, “That they may know Thee, the one, true God, and Jesus Christ Whom Thou hast sent.”

Theology 11. Introduction to Christo-centric Theology.

Our consideration divides into two parts: first, an orientation for the study of Catholic Theology; secondly, a study of the Person of Jesus Christ. The orientation is, in turn, bipartite: first, ascetic, consisting in a Study of the Mass, the essence of Chris-
Christian worship; secondly, **dogmatic**, which is a thorough exposition of the methodology of theological study. The second part of this course treats the Person of Jesus Christ by considering Old Testament prophecies and adumbrations about Him; and then makes a broad survey of the historical Christ as He appears in the pages of the New Testament. Due attention is paid to the political, social and religious background of the historical Christ. **Two credit hours.**

**Theology 12.**
**The Mission and the Church of Jesus Christ.**

From Christ’s revelation of Himself in the Gospels, the course establishes that He is a Divine Legate, authentic Teacher for the whole world, Son of God, God. With this as a basis, there is established a triple, historical fact: first, the fact that God did give a public revelation; secondly, the fact that the God-Man established an authoritative Church; finally, that this Church was and is the one, holy, Catholic, apostolic Roman Church. The course continues by examining the external organization of the Church of Christ: its mission, its function, its infallibility, its indefectibility, its necessity for salvation. Both its ordinary and extraordinary teaching and ruling powers come under consideration and, in the light of recent developments, special treatment is given to Ecumenical Councils, historically and factually. **Two credit hours.**

**Theology 17, 18.**
**Ecumenism.**

The seminar considers the various concepts of the term “Ecumenism,” makes a detailed study of Orthodox, Protestant and Catholic relationships, considers special ecumenical problems, gives special attention to developments of Vatican II and special treatment to the role of “dialogue.” **Four credit hours.**

**Theology 19, 20.**
**Fundamental Theology.**

After treating the twin concepts of Scripture and Tradition with special emphasis on their content and relationship to one another, this seminar develops the notion of the Kingdom of God in the Old Testament. **Four credit hours.**

1 Special Studies Program. Cf. p. 58.

**Theology 21.**
**Christ Living in His Members.**

From the external organization of the Church, the transition to the same Church in its **internal** aspects is felicitous. Thus, we examine the doctrine of the Mystical Body of Christ, the Church as an **organism** (versus hierarchical organization), a living, vital entity with a Body made up of Christ and its members and its soul the Holy Spirit: in a word, the Church living in us and in Christ. Having treated the fact of its revelation and explained the nature, as far as possible, of the mystery of the Mystical Body, the transition to sacramental Theology is logical, because it is the seven sacraments, instituted by Christ, which effect the grafting of the life of God, that organic life of a Body, onto the Catholic man. The course, then, with special emphasis on the relationship of the Sacraments to the Life of the Mystical Body, continues with Baptism, Confirmation, and The Eucharist; as a Solace (doctrine of the Real Presence), as a Sacrament (doctrine on Holy Communion) and as a Sacrifice (Dogmatic Theology of the Mass.) **Two credit hours.**

**Theology 22.**
**Christ Living in His Members (Cont.)**

This course continues with the Dogmatic, Ascetic and Moral Theology of the remaining Sacraments: Penance, Extreme Unction and Holy Orders. Since it is the sacrament of the union of husband and wife that is the divinely-revealed symbol of the unity of the Mystical Christ, that is, of the union of Christ, the Head with His members, special emphasis is given to the Sacrament of Matrimony. **Two credit hours.**

**Theology 41.**
**Christ: The Incarnation and Redemption.**

Since the Divine Pedagogue, through His authoritative revelations in the New Testament, followed a definite order in teaching various truths, we adopt that order. The sacramental nature of the Church, the Mystical Body, leads us logically to the Mystery of the Incarnation, itself a sort of sacrament and the Incarnation in turn leads to the great redemptive gesture of Cavalry, where Christ entered into possession of His Church, His Mystical Body. Because no consideration of Christ would be complete without due attention to the Mother of Christ, (both the physical Christ and the Mystical Christ, the Church), who
is, of course, the Mother of God, our treatise concludes with a treatment of Mariology. Two credit hours.

Theology 42.
Doctrine on Grace.

From Calvary, where Christ merited all the supernatural grace that is, according to the dispositions of Divine Providence, to be channeled to men through the hands of His Blessed Mother, a consideration of Grace, (the principle of both supernatural life and supernatural operation in the Mystical Body), follows in logical progression. The adequate treatment postulates that special attention be paid to the Fall of Man with the resultant loss of grace. So the course treats the background, setting, meaning and consequences of Original Sin, which is, in its essence, the privation of Sanctifying Grace. The Redemption of Christ having restored grace to mankind, the course proceeds by examining the nature, necessity, gratuity and effects of grace, both actual and habitual. Two credit hours.

Theology 72.
Development in Contemporary Christianity.

The Layman in the Church; Religion and American Culture; Nuclear War and the Christian Conscience; the Christian Response to Communism; Freedom Within the Church; Religious Tolerance and the Christian Churches; Christian Unity; Anti-Semitism and the Christian; the Papal Revolution of John XXIII and Paul VI; the Catholic Church in the Post-Vatican II Era. Three credit hours.

Theology 73.
Ecumenism.

After considering Papal documents on the subject, this course examines various concepts of Ecumenism. It then proceeds to a detailed examination of the separated brethren of East and West, treats of ecumenism and the non-Christian religions, examines special and current ecumenical problems, pays particular attention to developments germinating from Vatican II, and concludes with a detailed treatment of the role of “dialogue” on the American scene. Three credit hours.

Theology 75.
Non-Catholic Christian Denominations.

In order that the student may better understand the religious commitment of his neighbor in our pluralistic society and to develop a clearer understanding of his own faith and commitment, this course treats, in some detail, all the major Protestant denominations and many of the minor ones on the present American scene. The origins, doctrines and development of each denomination are studied with particular consideration given to a comparative study of each one’s basic doctrines with the fundamental doctrines of the Catholic Church. Three credit hours.

Theology 77.1.
Christian Unity.

A discussion of the Protestant Ecumenical Movement and its development into the World Council of Churches. A treatment of the main Christian denominations: their origins, causes of division, historical, philosophical and theological. Their problems in facing re-union with themselves and with the Catholic Church. Three credit hours.

Theology 77.2.
Christian Unity.

A more detailed penetration into the historical, philosophical and theological causes of the divisions of Christian denominations. A discussion of the rifts in the Protestant groups, their problems and difficulties in uniting. The position of the Catholic Church. Three credit hours.

Theology 79.
Christian Churches in America.

After completing a study of major American denominations, the principles for evaluation and clarification of questions raised in the Church-State controversy are presented. In keeping with the modern emphasis among all sects, the principles and practice of Lay Apostolate are explored with special emphasis on ecumenical relationships. Three credit hours.

Theology 81.1, 81.2.
Comparative Religions.

An introduction to animistic, monotheistic, functionalist and psychoanalytic theories of
religion. A sampling of non-Catholic religious systems. 

**Six credit hours.**

**Theology 82.**
**Origins of Social Catholicism.**


**Three credit hours.**
Courses of Instruction

GRADUATE DEPARTMENT OF

Chemistry

Professors: Baril, Fiekers, VanHook
Associate Professors: Martus, (Chairman), Tansey
Assistant Professors: McMaster, O'Hara, Ricci
Research Associate: Bishop

The College conducts courses in Chemistry for Graduate Students leading to the Master of Science degree. Registration for these courses is open only to students who hold Bachelor's degrees from approved colleges and technical schools. Candidates for admission should file applications with the Chairman of the Chemistry Department before the fifteenth of March each year. In support of application each candidate should forward a transcript of his undergraduate record and two letters of recommendation should be supplied by former chemistry professors of the applicant. A supplemental completed transcript, with record of degree received, should be sent after graduation in the case of successful applicants. Information as to fellowships available in the graduate department should be requested of the Chairman for Chemistry.

REQUIREMENTS FOR DEGREE

To become candidates for the Master of Science Degree students must fulfill the following conditions:

1. Attend and complete, with work of high quality, graduate courses amounting to not less than thirty semester credits of which at least ten must be obtained in laboratory courses.

2. Present an experimental thesis in their major field which shall include the results of original research and evidence of high scholarship.

3. Pass a one-hour oral, public examination conducted by the Chairman and Staff of the Department with at least one other member of the College Faculty to be appointed by the Dean.

Recommendation for the degree does not, however, follow automatically upon the completion of courses and examinations, but only on the affirmative judgment of the Department in each individual case.

ADMISSION TO GRADUATE WORK

Applicants for graduate work should present a minimum of eight undergraduate credits in each of the following subjects: the differential and integral calculus (eight credits total), physics, inorganic chemistry, organic chemistry, analytic chemistry, and physical chemistry. Laboratory work should be included in all of these courses except
the calculus. Other laboratory courses in chemistry are desirable. Accordingly applicants who do not present the following undergraduate courses may be required to take them in whole or in part, along with, or antecedent to, their regular graduate work. Cases will be judged individually from the record of undergraduate work.

Chemistry 58 Advanced Physical Chemistry (See page 73)
Chemistry 61 Advanced Organic Chemistry I (See page 73)

When these courses or their equivalents are offered, only one year of residence will be the normal requirement for the acquisition of the Master of Science degree.

Each candidate will be required to pass a reading examination in chemical German. Substitution of another modern language may be arranged on consultation with the Director of the Graduate Division.

GRADUATE COURSES

Chemistry 201.
Advanced Inorganic Chemistry.

The lectures in this course comprise a study of the structure of inorganic compounds and the interrelations of elements and compounds according to the periodic chart. Valence studies are stressed and the ideas of Werner, Pauling, Price and current workers in the field are emphasized. The laboratory part of the course starts off with inorganic preparations and progresses into instrumental, analytic and advanced methods, such as liquid ammonia syntheses and the like. Industrial analysis is touched upon. Required of all graduate students. Two lectures and two triple-hours of laboratory per week for one semester.

Chemistry 203.
Advanced Organic Chemistry.

The syllabus for this course will vary from year to year according to current trends in organic research and the special background that may be required to comprehend modern advances. Topics used in the past have included: advanced topics in stereochemistry, cyclization of organic compounds and organic heterocyclic chemistry, the chemistry of organic nitrogen compounds, the Diels-Alder Diene synthesis and the chemistry of carbohydrates, fats, oils and other natural products. Similarly the laboratory course, apart from the acquisition of organic chemical preparative techniques that are not generally realized in the undergraduate courses, is generally geared to current organic research in the department. Thus at times micro analysis for elements occurs. Required of all graduate students. Two lectures and two triple-hours of laboratory per week for one semester.

Chemistry 207.
Chemical Thermodynamics.

This course develops the principles of chemical thermodynamics and includes applications. The fundamentals of statistical mechanics are also taught. Laboratory work comprises experiments in advanced physical chemistry with emphasis on thermochemistry. Required of all graduate students. Three lectures and two double hours of laboratory per week for one semester.

Chemistry 208.
Reaction Rates.

A study of the kinetics of reactions in both homogeneous and heterogeneous systems, paralleled with experimental applications. Required of all graduate students. Three lectures and two double-hours of laboratory per week for one semester.

Chemistry 209.
History of Chemistry I.

The historical development of fundamental chemical concepts up to and including those of the nineteenth century. Assigned readings. Required of all graduate students. One lecture per week for one semester.

Chemistry 210.
History of Chemistry II.

A study of contemporary developments and contemporary chemists. Assigned readings. Required of all graduate students. One lecture per week for one semester.

Chemistry 212.
Department Seminar.

One hour per week. One credit for each semester. Total credit not to exceed two credit hours.
RESEARCH FOR MASTER’S DEGREE

Chemistry 213. Research for Master’s Degree.

Research of a fundamental nature is offered in organic and physical chemistry. Opportunity for the direction of undergraduate research in problems related to current graduate research is also afforded. Six hours per week for two semesters.

Six credit hours.

Chemistry 214. The Literature of Chemistry.

This is an informal course, with no record or credit, which is adapted to the needs of the individual student or group. The course is introduced with a brief series of lectures, a conducted tour of the Science Library, assigned reviews of handbooks such as Reid, Soule, Mellon, Patterson and the patent policy handbooks of various companies. Literature searches are then assigned preferably in fields outside of the student’s concentration. Eventually the student’s library work in connection with his own research is carefully supervised.

FELLOWSHIPS

In 1926, the College of the Holy Cross established six graduate fellowships in Chemistry. At present each fellowship carries free board, room and tuition or its pecuniary equivalent. Fellows are required to spend from four to twelve hours per week in undergraduate laboratory instruction. These fellowships are offered to graduates of colleges or technical schools, who are properly qualified to undertake graduate work in chemistry. Applications must be filed with the Chairman for Chemistry by the fifteenth of March each year. Applications received after March 15 may also be considered.
Summer Institutes

N.S.F. SUMMER INSTITUTES IN MATHEMATICS AND SCIENCE

Rev. Robert B. MacDonnell, S.J., M.A., M.S., Coordinator

June 24—August 2, 1963

The following programs for teachers of junior and senior high school mathematics and science were offered by the College of the Holy Cross with the support of the National Science Foundation.

Objectives of the Institutes:

To improve the subject-matter competence of junior and senior high school teachers;

To strengthen the capacity of these teachers for motivating students to consider careers of mathematics and science;

To provide an opportunity for the discussion of methods of introducing modern material into the present syllabi in the high schools.

MATHEMATICS INSTITUTE:

Dr. Vincent O. McBrien, Director

GROUP I:

Prerequisite: At least one year of college mathematics.

Math $ 11.$
Introduction to Algebraic Concepts:

The purpose of this course is to provide a background in those topics which are essential for the study of mathematics beyond secondary school and to show how these topics are related to the traditional content of secondary school mathematics. Topics to be covered include the basic algebra of sets, plane sets, and coordinate systems, functions and the algebra of functions, the algebraic structure of the number system, groups, rings, and fields.

Math $ 12.$
Introduction to Fundamental Concepts of Analysis:

The aim of the course is to introduce the notion of the integral of a continuous function over a closed interval. This is done by systematically using the concept of the limit of a sequence as the basis on which all other ideas are built.

The topics in the order in which they appear are: sequences of rationals, the real number system informally obtained as the completion of the rationals, real sequences and their limits, real functions and their properties, limits of real functions, continuous functions, differentiable functions, the integral of a continuous function over a closed interval, integration by antidifferentiation.

Math $ 13.$
Discussion Periods:

Each member of the Institute will be expected to take part in a discussion period which will link the course matter with the traditional secondary school mathematics. This will be carried out by dividing the par-
Participants into several sections devoted to the study of the various texts written by the School Mathematics Study Group (SMSG).

**GROUP II:**

Prerequisite: Background equivalent to content of Group I.

**Math S 16.**

*Introduction to Finite Probability and Statistics for Teachers:*

The aim of this course is to provide content background for the teaching of probability and statistical inference in the twelfth grade. Algebra of sets, sample spaces, the probability function, relation between probability and measure theory, Bernoulli distribution, the normal curve, matrices and Markov chains, convex sets and linear programming will be treated. Applications will be taken from both the natural and behavioral sciences.

**SCIENCE INSTITUTE:**

Rev. Robert B. MacDonnell, S.J., Director

(Associated with each course will be a three-hour laboratory period two afternoons a week.)

**BIOLOGY:**

**S 11.**

*Cellular Biology.*

The aim of this course it to provide recent knowledge of the organizational and operational aspects of living matter from the fields of biochemistry, cytology, and physiology. The themes and topics of the course will in large measure be based on the BLUE VERSION of the BSCS “High School Biology.”

**S 13.**

*Cellular Physiology.*

The aim of this course it to give a deeper understanding of the physiology and biochemistry of the cell than is presented in the introductory course in Cellular Biology.

**Math S 17.**

*Introductory Modern Algebra:*

The purpose of this course is to provide content background for the teaching of algebra, geometry and matrix algebra. Topics to be covered include groups, rings, fields, vector spaces, linear equations, linear transformations and other topics from contemporary algebra.

**Math S 13.**

Same as Group I.

**Staff of the Institute**

Daniel G. Dewey, M.A.

William E. Hartnett, Ph.D.

Rev. John J. MacDonnell, S.J., Ph.D.

Vincent O. McBrien, Ph.D.

Peter Perkins, M.A.

**CHEMISTRY:**

**S 15A.**

*Modern Concepts in Chemistry.*

The topics covered will include fundamental principles of atomic structure, the electronic configuration of atoms, geometry of molecules, and the periodic table.

**S 15B.**

*Modern Concepts in Chemistry.*

Lectures will be devoted to solution chemistry, theory of ionization, ionic and acid-based equilibria.

**S 55.**

*Advanced Chemical Principles.*

Lectures will cover the introductory notions of thermodynamics, and parallel the development of these principles as they appear in current high school chemistry curricula, e.g., the Chemical Bond Approach. Some elementary knowledge of calculus will be desirable for this course.
PHYSICS:  
S 11  
Fundamental Concepts in Physics.

The topics and manner of treatment will be designed to provide background material for the teaching of high school Physics according to the plan of the Physical Science Study Committee. It will consist of a review of the more difficult topics of Mechanics, Electricity, and Modern Physics.

Staff of the Institute
Biology:
Rev. John W. Flavin, S.J., Ph.D.
Robert S. Crowe, Ph.D.
DeWolf Merriam, M.S.

Chemistry:
Rev. Joseph A. Martus, S.J., Ph.D.
Miss Helen W. Crawley, M.A.
William F. O'Hara, Ph.D.

Physics:
Ram Sarup, Ph.D.
Everett F. Learnard, A.B.

1964 SUMMER INSTITUTES

With the support of the National Science Foundation, Summer Institutes in Mathematics, the Physical and Life Sciences will be offered June 29 to August 7, 1964.
Degrees Conferred

June 12, 1963

DOCTOR OF LETTERS
John William Lederle
Paul George Horgan
John Hamilton Hallowell

DOCTOR OF SCIENCE
James Walter Wilson

DOCTOR OF JURIDICAL SCIENCE
Edward Bennett Williams

DOCTOR OF COMMERCIAL SCIENCE
H. Ladd Plumley

DEGREES IN COURSE

MASTER OF SCIENCE
Edward Andrew Allgaier, Jr.
William Andruchow, Jr.
Vincent Joseph Cavalieri, Jr.
Gerald John Fleming
Frank Joseph Garneau

Conrad Campion Heede
Leonard Joseph LeBlanc
Richard Leo Mahoney
James Austin Prendergast
James Patrick Tette

Donald Joseph Turecek

BACHELOR OF ARTS HONORS SUMMA CUM LAUDE
Francis William Bernet

BACHELOR OF ARTS HONORS MAGNA CUM LAUDE

BACHELOR OF ARTS HONORS CUM LAUDE

William Thomas Carrington, Jr.
Joseph Burke Dennin, Jr.
Francisco Diaz
Daniel Peter Jamros

James Joseph Fennessey
Anthony Peter Libby
Daniel Maher Murtaugh
Ihor Ostap Ulitsky

BACHELOR OF ARTS HONORS

Steven Lacelle Bashwiner
John Thomas Birmingham
Walter Downing Connor

Kevin James Keogh
James Francis Rogers
Christian Keeler Zacher
BACHELOR OF SCIENCE HONORS MAGNA CUM LAUDE
Richard Francis Xavier Casten
Anthony David Fanning
William Richard Hauer
Francis Edward Morris

BACHELOR OF SCIENCE HONORS CUM LAUDE
Joseph John Kelley, Jr.

BACHELOR OF SCIENCE HONORS
Richard Daniel Brown

BACHELOR OF ARTS MAGNA CUM LAUDE
Thomas David Marzik

BACHELOR OF ARTS CUM LAUDE
John Richard Cervione
Richard Charles Connors
James George Philipp
Francis Joseph Scarpa

BACHELOR OF ARTS
James Roland Amrein
Pierre Benoit Archambault
Robert Louis Ardizzone
Frederick William Axley II
Charles John Beagan
Fernand Paul Beck III
David Fernand Bernardin
Edward Charles Bierma
Michael Robert Britt
Francis McKeon Buckley
Thomas Francis Burchill
Peter John Cahill
Gary Manning Calkins
Robert Mills Carolan
Peter John Carroll
Peter John Carton
John Salvatore Carusone
Nathaniel Francis Chandley
John Allen Chernowski
Williams Thomas Collins III
Thomas Edward Conroy, Jr.
Anthony Joseph Conti
Dominic Francis Corrigan
Peter Bingham Cox
Leo Aloisius Cullum
Hugh Francis Curley, Jr.
Christopher Joseph Daly
Joseph James Della Penna
Michael Alfred Del Vecchio
James Gary Diamond
Edward Patrick Doherty
James Patrick Dohoney
Hugh Kevin Donaghy
Terrence Michael Donahue
Ralph Arthur Donohue
Charles Michael Doonan
Shaun Nelligan Dowd
Michael John Doyle, Jr.
Michael Peter Dropick
William Michael Duffy
Philip Michael Dunne
Hector John Faccini, Jr.
Paul William Finnegan
Gerald Joseph Fogarty, Jr.
Robert Francis Foley
Daniel Joseph Forrestal III
Julius Francis Friese
Philip Francis Gallagher
Robert William Gallagher
Roland Lionel Gamache
BACHELOR OF SCIENCE MAGNA CUM LAUDE
Arthur Louis Beaudet

BACHELOR OF SCIENCE CUM LAUDE
Michael Glennon McGrath

BACHELOR OF SCIENCE

Peter Michael Acton
John Tennant Andrews, Jr.
Richard Thorne Angell
Robert Michael Arena
Domenico Donald Assalone
John Russell Baker
William Robert Balderson, Jr.
William John Banfield
Robert John Barile
Robert Thornton Barry
Daniel Joseph Beigel
John Lawrence Belford, Jr.
James Francis Bell
Francis Robert Bideringer
Arthur John Blake
Joseph Cornelius Bodenrader
Charles Joseph Boyle
John Ludwig Brandley
Charles Joseph Buchta
Michael John Buffa
Thomas Garry Burns
Michael John Byron
Joseph Francis Cain, Jr.
Richard Anthony Callahan
Anthony John Capo
Charles Sweet Capparelli, Jr.
Eugene Joseph Carmichael
John Andrew Carroll, Jr.
John William Catterall
Donald Conyngham Caulfield
James Jeremiah Cavan
Michael Joseph Cavanaugh
Robert Craig Champion, Jr.
William George Clark
John James Clifford
Robert Ferman Cline, Jr.
John Wilfred Coddaire III
William James Collins
Robert Hannon Colopy

Joseph Paul Commette, Jr.
Edward John Condon, Jr.
Patrick Joseph Connors
Eugene Louis Corbett, Jr.
James Joseph Corbett
Daniel Thomas Cosgrove
Edward Joseph Cove
John Richard Cowan, Jr.
Paul Francis Coyle
Charles Richard Crofton
Daniel John Cronin
George Thomas Cronin, Jr.
Robert Joseph Cronin, Jr.
Edward Paul Curcio
Henry Anthony Cutting, Jr.
Joseph John Delfino
William Albert Dempsey
John Battista DeRosa
Pasquale Charles DiLorenzo
Gerald Anthony Donahue
John Edward Donegan
John Joseph Donnelly
Gregory Richard D'Onofrio
Thomas James Doyle, Jr.
Dennis James Driscoll
Robert Emmett Driscoll, Jr.
Thomas Schuyler Durkee
Paul Henry Durnan
Harry Charles Egner
Thomas Bryant Elin
Laurence Joseph Fahey
Patrick Michael Faiella
Francis Gerard Fanning
Leland Charles Fay, Jr.
Henry Joseph Feeley, Jr.
Kevin Cosgrove Feury
Philip Jamieson Fina
Joseph Francis Finn, Jr.
Ralph Bruno Fiorito
Joseph Aloysious Flanagan
William Robert Flannagan
Thomas Vincent Foley, Jr.
Austin Francis Ford, Jr.
Thomas Francis Fratello
Robert Francis Xavier Fusaro
Kevin Thomas Geraci
Richard John Glasheen
Donald Joseph Godlewski
Dennis Creighton Golden
Richard David Gorman
Samuel Charles Gowen
James Michael Grabicki
Thomas Allen Grant
Gerard Patrick Griffin, Jr.
Stephen Hawley Griffin
Frank Alois Handler
Robert Michael Hargraves
Michael Eugene Harkins
Paul Francis Xavier Harron, Jr.
Charles Le Roy Haslup III
Dennis Charles Haugh
Henry Murray Hayward
John Blais Hedge
Thomas Paul Hennessey
John Patrick Hennessy, Jr.
Kenneth Francis Hickey
Warren Prentiss Howe
Edward Kirk Hughes
Daniel Joseph Hussey
Benjamin Michael Ianzito
Thomas Francis Ireton
Stephen Joseph Johnson, Jr.
Thomas Edward Kane
Kevin Michael Keefe
Russell Alfred Keene, Jr.
James Patrick Kelliher
William Patrick Kelly
Thomas Henry Kieren
Thomas Arthur King
Michael John Kinne
Paul Clement Kinney
Franklin August Klaine, Jr.
Charles William Klopsch IV
Anthony George Koerner
John Jacob Kulczycki
Peter Edward LaChapelle
James Alfred Lang
Paul Omer Leclerc
Andrew Charles Lilly
Thomas Peter Llewellyn
John Michael Long
Gregory Stephen Lukowski
Richard John Macchia
David George Mahaney
Donald Paul Maiberger
Ralph Joseph Mancini
Edwin Stephen Markham
Joseph Robert Martin
Philip Richard Martorelli
Nathan Francis Masterson, Jr.
Ronald Francis Mattana
John Alphonsum Matthews III
John Anthony McAdams
John Stanislaus McCann
George Kenneth McCarty
Daniel Joseph McCarthy
Patrick Lawrence McCarthy
Wayne Patrick McCormack
Gerald Vincent McDermott
Robert Edward McDonald
Dennis Francis McDonnell
Frederick Parsons McGehan
James Henry McGovern
William Joseph McGurk
Dennis Albert McKay
Daniel Joseph McKeon
David Harold McMahon
Joseph Paul McMahon
William James McMahon
Stewart James McManus
Stephen McQueeney
George John Miller
Kevin Mark Minihan
James Patrick Moore
Paul David Morano
Joseph Patrick Morrissey
Robert Scheck Morrison
Anthony Matthew Moschitta, Jr.
Gerard William Moynihan
John Edward Mullane
Stephen Martin Murphey
Cornelius James Murphy, Jr.
Daniel Francis Murray
David Gerard Nagle
Bruce Philip Nattinville
Thomas William Noering  
Charles Patrick O'Connor  
John Patrick O'Connor  
Peter Joseph O'Connor  
Robert William O'Donnell  
Andrew Francis Oehmann, Jr.  
Alexander John Olsen  
George Peter Olson  
Philip George O'Neill  
Lawrence Patrick O'Shaughnessy  
Thomas Michael O'Shea  
Thomas William Palace  
Ronald John Panicci  
David Earle Pauley  
John Henry Peterman  
Francis James Picone, Jr.  
Frank Stephen Piff  
John Arthur Primavera  
Stephen James Prinn  
William Alexander Prizio  
Lawrence Hamilton Prybylski III  
Joseph John Redington III  
William John Reid  
George Francis Reidy  
Tommaso Daniele Rendino  
Donald Francis Riedl  
Francis Elmo Rogers  
Charles Edward Rosen, Jr.  
Michael Edward Rowell  
James Anthony Patrick Ruma  
James John Salvatore  
William Joseph Scanlon  
Anthony Joseph Scarpellino, Jr.  
Nicholas Dominic Scavone  
George James Schuetz  
Richard Ahearn Scully  
Robert Lawrence Scully  
Anthony Frank Scunziano  
William Anthony Seward  
Vincent Anthony Shay  
Stephen William Shea, Jr.  
James Joseph Sheridan  
William Richard Sheridan  
Howard Paul Sherr  
Cornelius Calmes Smith, Jr.  
Peter Wakefield Smith  
George Clinton Sornberger  
John Charles Staley  
John Albert Stemwedel  
Robert Edward Terry  
George Charles Theologus  
Donald John Thomson  
Harry James Touhey  
Carl Edward Treuter  
Austin Stephen Troy  
Barry James Tyne  
Thomas Parker Wallace  
Richard Joseph Walsh  
Peter Russell Walson  
Edward Charles Weil III  
John Matthew Whalen  
Donald Billings Wheeler, Jr.  
George Franklin Young  

COMMISSIONED AS ENSIGNS IN THE UNITED STATES NAVY

Peter Michael Acton  
Robert Louis Ardizzone  
Frederick William Axley II  
John Russell Baker  
William Robert Balderson, Jr.  
Fernand Paul Beck III  
John Lawrence Belford, Jr.  
John Allen Chernowski  
James Joseph Corbett  
William Albert Dempsey  
Francis Gerard Fanning, Jr.  
Henry Joseph Feeley, Jr.  
Thomas Francis Fratello III  
Charles LeRoy Haslup III  
Kenneth Francis Hickey  
Thomas Edward Kane  
Russell Alfred Keene, Jr.  
Paul Clement Kinney  
Charles William Klopsch IV  
John Anthony Lowe  
William Paul Maloney  
John Anthony McAdams  
Dennis Francis McDonnell  
William Joseph McGurk  
Dennis Albert McDonnell  
Edgar James Michels  
James Patrick Moore  
Michael Edward Moynihan
COMMISSIONED AS SECOND LIEUTENANTS IN THE UNITED STATES MARINE CORPS

Charles Joseph Buchta
Robert Craig Champion, Jr.
Leo Aloysius Cullum
Henry Anthony Cutting, Jr.
Gerard Patrick Griffin, Jr.
Henry Murray Hayward
John Patrick Hennessy, Jr.
James Patrick Kelliher

COMMISSIONED AS SECOND LIEUTENANTS IN THE UNITED STATES AIR FORCE RESERVE

*Richard Daniel Brown
Thomas Garry Burns
Richard Anthony Callahan
William George Clark
Edward John Condon, Jr.
Eugene Louis Corbett, Jr.
*Joseph John Delfino
Kevin Cosgrove Feury
William Robert Flannagan

*Designated as Distinguished Air Force ROTC Graduates.

VALEDICTORY ADDRESS ........................................ Kevin James Keogh

DEGREES CONFERRED FEBRUARY 1 1963

BACHELOR OF ARTS
Philip A. Facey

BACHELOR OF SCIENCE
James W. McManus

DEGREES CONFERRED OCTOBER 7 1963

BACHELOR OF ARTS
Frederic L. Frawley
Bernard J. Schmidt
Awards

JUNE, 1963

THE BELLARMINE HISTORY MEDAL

The Bellarmine Gold Medal, the gift of Mr. and Mrs. Edward J. McGratty, Sr., in memory of Patrick H. and Elizabeth L. McGratty, for the best historical essay on Colonial America.

Not awarded in 1963.

THE BOURGEOIS AWARD

The Bourgeois French Prize, the income on $1,000, established in 1947 by Albert L. Bourgeois, Esq., '22, in memory of his late father, Pierre Bourgeois, and of his mother, Fabiola Bourgeois, to be awarded annually for the best essay on a subject relating to the French or their descendants in the United States.

Awarded to: Thomas F. Harrison, of the Class of 1963.

THE NELLIE M. BRANSFIELD PRIZES

The Nellie M. Bransfield Award, founded in 1946, by the will of the late Nellie M. Bransfield, income on $2,000, to be awarded annually as prizes for excellence in elocution among the undergraduates.

Awarded to: Michael E. Harkins, of the Class of 1963, and Robert E. Sawyer, Jr., of the Class of 1965.

THE FRANK D. COMERFORD PRIZE

The Frank D. Comerford Silver Medal, founded in 1942 by the management and employees of the Boston Edison Company, to be awarded annually at Commencement Exercises to a student of the graduating class for excellence in public speaking.

Awarded to: Daniel F. Kolb, of the Class of 1963.

THE CROMPTON SCIENTIFIC MEDAL

The Crompton Gold Medal, founded in August, 1875, by George Crompton, Esq., for the best Scientific Essay submitted during the school year.

Not awarded in 1963.
THE JOHN J. CROWLEY PRIZE

The John J. Crowley Purse (income on $1,000.00) awarded annually to provide purse or prize for best essay on any religious, literary, historical, economic or scientific subject.

Awarded to: William S. Richards, of the Class of 1964.

THE PATRICK F. CROWLEY MEMORIAL PRIZE

The Patrick F. Crowley Purse, the income on $1,000.00, founded in July, 1947 by Bridget T. Crowley, in memory of her brother, Patrick F. Crowley, to be awarded annually for proficiency in debating and oratory.

Awarded to: Michael E. Harkins, of the Class of 1963.

THE DeVALERA HISTORY PURSE

The DeValera Purse (income on $1,000.00), the gift of Daniel H. Coakley, for the best essay on a subject taken from Irish history.

Not awarded in 1963.

THE FALLON DEBATING PRIZE

The Fallon Debating Prize, founded in 1901 by Rev. John J. Fallon of the Class of 1880, (income on $1,000.00).

Awarded to: Kevin J. Keogh, of the Class of 1963.

THE FLAHERTY PRIZE IN HISTORY

The Flaherty Gold Medal, founded in May, 1903, by Patrick W. Flaherty, Esq., to be awarded annually for the best essay on a subject selected by the Faculty.

Not awarded in 1963.

THE FLATLEY PHILOSOPHY PRIZE

The Flatley Gold Medal, founded in 1890 by the late Reverend Michael F. Flatley of the Class of 1865, to be awarded annually to the student attaining the highest average in the philosophy courses of senior year.

Awarded to: Francis W. Bernet, of the Class of 1963.
THE EDNA DWYER GRZEBIEN PRIZE

The Edna Dwyer Grzebien Prize, established in 1960 by Doctor Thomas W. Grzebien in honor of his wife, former teacher of Modern Languages at Classical High School, Providence, R.I., income on $1,000.00, to be awarded annually to a student proficient in Modern Languages.

Awarded to: Daniel J. Amaral, of the Class of 1966.

THE REVEREND WILLIAM F. HARTIGAN MEDAL

The Reverend William F. Hartigan Medal, founded in May, 1932, by Josephine C. Hartigan in memory of her brother, the Reverend William F. Hartigan, to be awarded annually to a student of the graduating class submitting the best essay on a subject in Religion.

Awarded to: Frank E. Morris, of the Class of 1963.

THE KAVANAGH AWARD

The Kavanagh Medal, established in 1952 by the late Right Reverend Michael P. Kavanagh of the Class of 1893, to be awarded annually to the student writing the best original essay on some phase of Catholic Art or Christian Archaeology.

Awarded to: Gerald B. Hillenbrand, of the Class of 1964.

THE KILLEN PRIZE IN CHEMISTRY

The Edward V. Killeen, Jr. Chemistry Purse, for general excellence throughout the Bachelor of Arts premedical course in chemistry.

Awarded to: Francis W. Bernet, of the Class of 1963.

THE KRANICH PRIZE

The Kranich Gold Charm, the gift of the Kranich Brothers, Inc., of Worcester, Massachusetts, to be awarded annually to the student contributing the best essay to "The Purple."

Awarded to: Christian K. Zacher, of the Class of 1963.

THE JOHN C. LAWLOR MEMORIAL PRIZE

The John C. Lawlor Gold Medal, the gift of the Class of 1911, to perpetuate the memory of Dr. John C. Lawlor of the Class of 1911, to be awarded annually to a letterman of the graduating class adjudged the outstanding student and athlete during the college course.

Awarded to: Albert R. Snyder, of the Class of 1963.
THE WILLIAM E. LEAHY AWARD
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. This memorial prize consists of a medal and a cash award of $100.00.

Awarded to: Daniel F. Kolb, of the Class of 1963.

THE LEONARD PURSE
The Leonard Award, founded in 1951 by the will of the late Reverend John F. Leonard, to be awarded annually for proficiency in oratory, debating or like competition.

Awarded to: Daniel F. Kolb, of the Class of 1963.

THE MARKHAM MEMORIAL PRIZE
The Markham Memorial Prize consisting of a Gold Medal and a Purse of $100.00, established in 1947 by the Most Reverend Thomas F. Markham, D.D., of the Class of 1913, in memory of his parents, James and Honora Hickey Markham, to be awarded annually to a student of the graduating class designated by the Dean as having the highest rank of academic proficiency in the philosophy course of Natural Theology.

Awarded to: Patrick M. Falivena, of the Class of 1963.

THE GERTRUDE McBRIEN MATHEMATICS PRIZE
The Gertrude McBrien Mathematics Prize, established in 1960, income on $1,000.00, to be awarded annually to a senior for proficiency in Mathematics.

Awarded to: Anthony D. Fanning, of the Class of 1963.

THE McMAHON HISTORY PURSE
The McMahon Purses, three in all, founded in 1927 by the late Right Reverend Monsignor John W. McMahon of the Class of 1867, to be awarded annually for the best essays on the History of the Catholic Church in New England.

Not awarded in 1963.

THE NUGENT PHYSICS MEDAL
The Nugent Gold Medal, founded in June, 1894, by the Reverend Edward Evans Seagrave to perpetuate the memory of his ward, John T. Nugent, who died at the College in 1893, awarded annually for general excellence throughout the course in Physics.

Awarded to: Frank E. Morris, of the Class of 1963.
THE O'CONNOR DEBATING PRIZE

The Joseph J. O'Connell Purse, income on $1,000 the gift of the late Joseph J. O'Connell of the Class of 1909.


THE MRS. KATE C. POWER MEDAL

The Mrs. Kate C. Power Medal, founded in 1942 by the will of the late Mrs. Kate C. Power to be awarded to the highest ranking student in the College of the Holy Cross in the Bachelor of Arts (with Honors) Course in the Sophomore year.

Awarded to: Lawrence G. Duggan, of the Class of 1965.

THE PURPLE PRIZE

The Purple Purse, the gift of the College, to be awarded annually to the student contributing the best poem to "The Purple.”


THE REVEREND JOHN F. REDICAN PRIZE

The Reverend John F. Redican Medal, donated by a friend in memory of the Reverend John F. Redican, '78, awarded annually to the Junior (Honors Course) with highest rank in Philosophy.

Awarded to: Timothy J. Dacey and Edward M. Mullin, of the Class of 1964.

THE REILLY MEMORIAL PRIZE

The James H. Reilly Memorial Purse, the income on $600, founded by Joseph J. Reilly of the Class of 1904 and immediate relatives, to be awarded annually to the student contributing the best short story to "The Purple.”

Awarded to: Fotios Ganias, of the Class of 1965.

THE FREEMAN M. SALTUS PRIZE

In memory of Freeman M. Saltus, awarded for excellence in essays on labor or economics.

Awarded to: William S. Richards, of the Class of 1964.
THE STRAIN PHILOSOPHY PRIZE

The Strain Gold Medal founded in June, 1877, to be awarded annually for the best essay on a subject selected from the field of philosophy.

Awarded to: Thomas A. King, of the Class of 1963.

THE LIEUTENANT WILLIAM PETER SULLIVAN, JR. MEDAL

The Lieutenant William Peter Sullivan, Jr. Medal, the gift of Mrs. William P. Sullivan, Jr., in memory of her late husband, Lieutenant William Peter Sullivan, Jr., U.S. Naval Reserve, of the Class of 1939, to be awarded annually to the member of the varsity track team who, by vote of his fellow team members, is adjudged to have merited this award.

Awarded to: Thomas W. Noering, of the Class of 1963.

THE VARSITY CLUB NORTON PURSE OR MEDAL

For an athlete in the Bachelor of Arts Curriculum. (Income on $500.00)

Not awarded in 1963.

THE JOHN E. WICKHAM MEMORIAL PRIZE

The John E. Wickham Gold Medal, founded in 1939 by Mrs. Nicholas Wickham of Lee, Massachusetts, in memory of her son, The Reverend John E. Wickham of the Class of 1899, to be awarded annually to the highest ranking student of the graduating class.

Awarded to: Francis W. Bernet, of the Class of 1963.
College Organizations

THE AQUINAS CIRCLE

The Aquinas Circle is an organization of Seniors interested in further study and discussion of philosophical problems and their correlation with modern thought in science and literature. The Circle meets twice a month, and presents a symposium annually on the Feast of St. Thomas Aquinas.

THE BIOLOGY SOCIETY

The Biology Society, composed of students majoring in biology, provides its members with the opportunity to study more intensively and critically some of the problems of that science. The Biology Journal is published by this society.

THE B. J. F. DEBATING SOCIETY

Organized in 1846 in honor of the founder of Holy Cross College, the Most Reverend Benedict Joseph Fenwick, S.J., this society in the one hundred and seventeen years of its existence has a tradition of excellence in public speaking. It supports an extensive schedule of house, lecture, radio, and intercollegiate debates.

THE COLLEGE CHOIR

The College Choir was organized to assist at Chapel Services and to promote devotion by acquainting students with the treasury of Church music.

THE CONFRATERNITY OF CHRISTIAN DOCTRINE

The Confraternity of Christian Doctrine is a student teachers unit. The purpose of the Confraternity is “to bring Christ to youth and to bring youth to Christ.” Holy Cross students conduct religious doctrine classes for grammar school boys and girls and for high school students. Adult discussion classes are also conducted every week as well as classes for student nurses and other professional groups.

THE CROSS AND CRUCIBLE CHEMISTS’ CLUB

This club is devoted to the advancement of chemistry and the development of social and professional relations among its members. The club was founded in 1927 and reorganized in 1947. It is open to all undergraduate students of chemistry. The club is a Chapter of Student Affiliates of the American Chemistry Society and publishes The Cross and Crucible, a quarterly chemical magazine for undergraduates.
THE CROSS AND SCROLL SOCIETY

The Cross and Scroll Society, originally formed as the Hellenic Academy for the promotion of interest in classical studies, has through the years expanded its aims to include topics of Literature, Art and General Culture. Besides its group meetings the Society sponsors public lectures pertinent to Christian Culture and Education. The Cross represents Christianity, and the Scroll, the body of ancient classical literature.

THE DRAMA SOCIETY

The Holy Cross Dramatic Society aims at offering the student body a chance to participate in and to see the finest dramatic works in the history of world theatre. Each year members present performances of plays from the theatres of Ancient Greece, Medieval Europe, Elizabethan England and Twentieth Century America.

The Society also engages in a Freshman Apprentice Program.

ECONOMICS CLUB

Organized in 1960, the Economics Club hopes to instill in its members both the willingness to confront the complexities of modern economic problems and the ability to pose and weigh alternatives to the questions of economic policy. Meeting every other week, members of the club present papers on topics of interest to the group. On occasion, faculty members from Holy Cross and other institutions are invited to participate in the discussions.

THE HISTORY ACADEMY

The History Academy has for its object the increase of interest in the study of history. It holds bi-weekly meetings at which various historical subjects are discussed.

THE INTERNATIONAL RELATIONS CLUB

This club has, for its purpose a thorough understanding of the principles that motivate states in their conduct with one another. It seeks a deep knowledge of the causes that produce international tensions. Its practical objective is to be able to offer a sound policy or policies that can bring about international peace.

THE INTERRACIAL JUSTICE CLUB

The Interracial Justice Club was organized in 1951 to promote better understanding of contemporary racial problems.

INTRAMURAL ATHLETICS

Perhaps the most flourishing and popular extracurricular activity on the Hill is the Intramural athletics program. Competitive tournaments are played in outdoor and indoor sports.
THE JOHN COLET EDUCATION SOCIETY

The John Colet Education Society was established in 1959 to stimulate interest in secondary school and college teaching.

THE LABOR PROBLEMS ACADEMY

The Labor Problems Academy, open to students majoring in Economics, was organized in 1935 to encourage the study of Catholic principles applicable to the labor problems in the United States.

THE LEAGUE OF THE SACRED HEART

The League of the Sacred Heart was established at the college on the first of November, 1888. It has ever since been a most efficacious means of propagating among the students the practice of a most tender devotion to the Sacred Heart of Our Lord.

THE MATHEMATICS CLUB

The Mathematics Club, established in 1946, holds meetings twice monthly to discuss topics in an advanced undergraduate mathematics. The purpose of the club is to promote the study of pure and applied mathematics.

THE MISSION UNIT

The Holy Cross Unit of the Mission Crusade was established in 1921. Relief of the Missions is encouraged by donations of the students. Students contribute to foreign and home missions large sums of money, quantities of Catholic papers, and books.

THE MUSICAL CLUBS

Two separate organizations foster and develop musical talent among the students—the college glee club and the college orchestra and band.

OUTING CLUB

The Outing Club is one of the larger organizations on the campus. Its purpose is to develop a strong bond of friendship between its members and the members of other collegiate outing clubs by means of common athletic and social activities.

THE PHYSICS SOCIETY

The Physics Society, composed of students interested in physics, has for its purpose the development of deeper and wider interest in that subject. Meetings are held bi-weekly. Speakers from the faculty, student body and industry discuss aspects of pure physics and its applications.
POLITICAL CLUBS

One of the objects of a liberal education has been the formation of the “good citizen.” To effect this aim, political clubs representing the Democratic and Republican parties have been inaugurated. An enlightened participation in such clubs is calculated to make the student aware of the complexities and subtleties of our system of government by the people. The immediate aim of these clubs is to stimulate interest, develop capacity and encourage participation of “better minds for better politics.”

THE PURPLE KEY

It is the purpose of this organization to foster devotion, loyalty, and enthusiasm for Alma Mater. The Purple Key sponsors student activities, plans and conducts student manifestations of the spirit of Mount St. James and always endeavors to promote the interests of the students in the affairs of their college life.

RADIO STATION WCHC

The Campus Radio Station WCHC, which began a formal broadcasting schedule on December 6, 1948, is operated entirely on an extracurricular basis by student members. It provides a talent outlet and radio experience for students in its various departments: station management, programming, production, announcing, radio dramatics, sports, newswriting, music, commercial departments and other functions common to commercial radio stations.

ST. JOHN BERCHMANS SANCTUARY SOCIETY

The St. John Berchmans Sanctuary Society has for its object the fostering of a special devotion in the assisting at the altar in all religious ceremonies.

THE ST. THOMAS MORE SOCIETY

The St. Thomas More Society is open to all who are interested in a future career in the law. Through lectures and discussions by lawyers, professors and deans of law schools, students gain both a theoretical and practical knowledge of the profession of law.

THE SODALITY OF OUR LADY

The Sodality of Our Lady was organized on the eighth day of December, 1844, and aggregated to the Roman Prima Primaria on the tenth day of April, 1846, with the title of the Immaculate Conception, and under the patronage of St. Aloysius. The Sodality has for its object the realization of the fullness of the Christ-life through Mary, by means of the solemn consecration of its members, and their active dedication to the “way of life” of their Christian Baptism.
STUDENT CONGRESS

Students are encouraged to organize and conduct their own activities with as much independence as is consistent with good order and sound educational policy.

The Student Congress is composed of elected representatives and officers of the student body whose purpose is to act as the official representative of the student body; to receive and express student opinion; and to advance the best interests of the student body with the administration and faculty, and with other educational institutions and associations.
HOLY CROSS ATHLETIC ASSOCIATION

The object of the Athletic Association is to promote the athletic interests of the college, and to discuss and determine matters of the management pertaining to the welfare of collegiate and intercollegiate sports.

Eugene F. Flynn, B.A. ................. Director
Joseph W. McDonough, B.S. .......... Business Manager
Paul N. Johnson, B.A. ................. Director of Sports Information
Edward N. Anderson, M.D. .......... Coach of Football
Oscar Lofton, B.S. ................. Assistant Coach of Football
Ecio Luciano, Ph.B. ................. Assistant Coach of Football
Melvin G. Massucco, B.S. .......... Assistant Coach of Football
Harry W. Connolly, B.S. .......... Assistant Coach of Football
Frank A. Oftring, Jr., B.S. .......... Coach of Basketball
Robert T. Curran, B.S. ................. Assistant Coach of Basketball
Albert D. Riopel, B.A. .......... Varsity Baseball Coach
Bartholomew F. Sullivan ................. Coach of Track; Trainer
Thomas F. Duffy, B.A. ................. Assistant Coach of Track
Philip E. O’Connell, Ph.B. .......... Coach of Lacrosse
Nicholas B. Sharry, B.A. .......... Assistant Coach of Tennis
William C. Samko, M.S. .......... Assistant Trainer; Equipment Manager
Walter M. Mulvihill, M.D. .......... Physician
Francis H. Carr, M.D. .......... Physician
Honor Societies

ALPHA SIGMA NU
(Holy Cross Chapter)

Alpha Sigma Nu is a National Honor Society with chapters in various Jesuit Colleges and Universities throughout the United States. It is a society organized to honor students who have distinguished themselves in scholarship, service and loyalty to their College; to promote the interests of their College; to foster all praiseworthy student activity; to unite those alumni who most fully understand and appreciate those ideals in themselves and others.

The following members were elected to the Holy Cross Chapter on February 16, 1963.

James F. Holloran ’64
Robert E. Shields ’64

DELTA EPSILON SIGMA
(Alpha Iota Chapter)

Delta Epsilon Sigma is the National Scholastic Honor Society for Catholic colleges and universities. It was founded to recognize academic accomplishments, to foster scholarly activities, and to provide an intellectual meeting ground for its members. The Delta Epsilon Sigma Bulletin, a scholarly quarterly, is the official organ of the Society.

The chapter at Holy Cross (Alpha Iota) is largely a faculty chapter, although some students are elected to membership each year. Officers for 1963-64 are: Dr. Edward F. Callahan, President; John D. O’Connell, Secretary-Treasurer.

The following students were elected to the Holy Cross Chapter of the Delta Epsilon Sigma Honor Society in 1963:

Arthur L. Beaudet
William T. Carrington
Richard F. X. Casten
John R. Cervione
Richard C. Connors
Joseph B. Dennin

Francisco Diaz
James J. Fennessey
Anthony P. Libby
Thomas D. Marzik
Michael G. McGrath
Frank E. Morris

Dennis H. O’Brien
John J. O’Brien, Jr.
William S. Richards
College Publications

THE ALUMNUS

The Alumnus, published quarterly by the Holy Cross College Alumni Association and edited by the Office of Public Relations, has as its purpose the preservation of the bond of unity among the college's graduates and the strengthening of the nexus between the alumni and the college.

THE BIOLOGY JOURNAL

The Biology Journal is published annually by the members of the Biology Society. It offers pre-medical, pre-dental and Biology students an opportunity to have superior papers published.

THE CROSS AND CRUCIBLE

The Cross and Crucible is normally published four times a year by the Department of Chemistry. It provides a medium of scientific expression for chemistry students; it records work of a progressive nature done in the department; it supplements the textbooks with timely articles of general interest to the student of chemistry; and it records the abstracts of departmental seminars and theses.

THE CRUSADER

The Crusader, the weekly newspaper of the college, has been published since 1924. Its purpose is twofold: to train interested students in the art of journalism; and to secure a firmer bond among undergraduates and alumni through reporting and commenting upon the important events on and beyond the Hill.

THE HOLY CROSS PURPLE

The Holy Cross Purple is a quarterly magazine published by the students of the college. Its aim is to cultivate a high literary taste among the students by exercising them in both critical and creative compositions.

THE PURPLE PATCHER

The Purple Patcher, published annually by the Senior Class, is a chronicle of the activities of the class during its four years' stay at Holy Cross.
# JESUIT EDUCATIONAL ASSOCIATION

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<td>Fordham University, New York City, Le Moyne College, Syracuse</td>
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<td>John Carroll University, Cleveland, Xavier University, Cincinnati</td>
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<td>Pennsylvania</td>
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Ford Foundation
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U.S. Department of State
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Dr. Rudolph L. Zlody
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Bequests

Gifts to the college may take the form of funds for the establishment of scholarships or professorships; or the foundation of medals and other prizes; of additions to the material equipment; of contributions to the general fund, or may be undesignated. Those desiring to make a bequest to the College of the Holy Cross in their wills may be helped by the following suggested form

Legal Form of Bequest

I give (devise) and bequeath to the Trustees of the College of the Holy Cross, a corporation under the laws of the Commonwealth of Massachusetts, and located in the City of Worcester, Massachusetts, and their successors forever, the sum of

Dollars

(or otherwise describe the gift) for its general corporate purpose (or name a particular corporate purpose).

COMMUNICATIONS DIRECTORY

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

Academic Records ..................................................... The Registrar
Alumni Placement ................................................... Director of Alumni Placement
Admissions and Catalogues ................................. Director of Admissions
Alumni Affairs ........................................................ Alumni Executive Secretary
Athletics ................................................................. Director of Athletics
Development Program ........................................ Director of Development
Educational Program ................................................ The Dean
Financial Affairs ..................................................... The Treasurer
General College Policy ........................................... The Very Reverend President
Housing Accommodations ................................. The Dean of Men
Library Information ............................................. The Librarian
Personnel .............................................................. Director of Personnel
Public Relations ................................................... Director of Public Relations
Special Studies, Honors Programs .................. Director of Special Studies

The College telephone number is 791-6211, connecting all offices.

Telephone Area Code 617