Wichita State University
Catalog 1971-72
WICHITA STATE UNIVERSITY

1971-72 CATALOG

WICHITA STATE UNIVERSITY—Eighth Session
UNIVERSITY OF WICHITA—Forty-sixth Session
FAIRMOUNT COLLEGE—Seventy-fifth Session

JULY, 1971
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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calendar for 1971-1972</td>
<td>6</td>
</tr>
<tr>
<td>Board of Regents</td>
<td>7</td>
</tr>
<tr>
<td>Administrative Officers</td>
<td>7</td>
</tr>
<tr>
<td>University Faculty</td>
<td>8</td>
</tr>
<tr>
<td>Wichita State University</td>
<td>41</td>
</tr>
<tr>
<td>Description</td>
<td>41</td>
</tr>
<tr>
<td>Admission Requirements</td>
<td>42</td>
</tr>
<tr>
<td>Admission to Graduate School</td>
<td>46</td>
</tr>
<tr>
<td>Registration</td>
<td>47</td>
</tr>
<tr>
<td>Residence Defined</td>
<td>47</td>
</tr>
<tr>
<td>Fees</td>
<td>47</td>
</tr>
<tr>
<td>Regulations Governing Scholarship</td>
<td>50</td>
</tr>
<tr>
<td>Requirements for Graduation</td>
<td>57</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>60</td>
</tr>
<tr>
<td>Organizations</td>
<td>66</td>
</tr>
<tr>
<td>Assistantships and Student Employment</td>
<td>70</td>
</tr>
<tr>
<td>Financial Aids and Awards</td>
<td>71</td>
</tr>
<tr>
<td>Foundations for Religious Education</td>
<td>96</td>
</tr>
<tr>
<td>University College</td>
<td>97</td>
</tr>
<tr>
<td>Requirements</td>
<td>97</td>
</tr>
<tr>
<td>Special Programs of Study</td>
<td>101</td>
</tr>
<tr>
<td>Courses</td>
<td>105</td>
</tr>
<tr>
<td>Fairmount College of Liberal Arts and Sciences</td>
<td>108</td>
</tr>
<tr>
<td>Requirements</td>
<td>108</td>
</tr>
<tr>
<td>Transfer of Credit Within the University</td>
<td>109</td>
</tr>
<tr>
<td>Special Programs of Study</td>
<td>111</td>
</tr>
<tr>
<td>Departments, Majors, Minors, Courses</td>
<td>117</td>
</tr>
<tr>
<td>Administration of Justice</td>
<td>117</td>
</tr>
<tr>
<td>American Studies</td>
<td>119</td>
</tr>
<tr>
<td>Anthropology</td>
<td>120</td>
</tr>
<tr>
<td>Biology</td>
<td>123</td>
</tr>
<tr>
<td>Chemistry</td>
<td>127</td>
</tr>
<tr>
<td>Economics</td>
<td>130</td>
</tr>
<tr>
<td>English Language and Literature</td>
<td>130</td>
</tr>
<tr>
<td>French</td>
<td>170</td>
</tr>
<tr>
<td>Geology and Geography</td>
<td>136</td>
</tr>
<tr>
<td>German</td>
<td>140</td>
</tr>
<tr>
<td>History</td>
<td>142</td>
</tr>
<tr>
<td>Subject</td>
<td>Page</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Italian</td>
<td>172</td>
</tr>
<tr>
<td>Journalism</td>
<td>147</td>
</tr>
<tr>
<td>Latin and Greek</td>
<td>173</td>
</tr>
<tr>
<td>Linguistics</td>
<td>149</td>
</tr>
<tr>
<td>Mathematics</td>
<td>150</td>
</tr>
<tr>
<td>Medical Technology</td>
<td>323</td>
</tr>
<tr>
<td>Philosophy</td>
<td>155</td>
</tr>
<tr>
<td>Physics</td>
<td>158</td>
</tr>
<tr>
<td>Political Science</td>
<td>160</td>
</tr>
<tr>
<td>Psychology</td>
<td>165</td>
</tr>
<tr>
<td>Religion</td>
<td>168</td>
</tr>
<tr>
<td>Romance Languages</td>
<td>170</td>
</tr>
<tr>
<td>Sociology</td>
<td>177</td>
</tr>
<tr>
<td>Social Work</td>
<td>177</td>
</tr>
<tr>
<td>Spanish</td>
<td>180</td>
</tr>
<tr>
<td>Speech</td>
<td>180</td>
</tr>
</tbody>
</table>

**College of Business Administration**

- Objectives and Programs                  | 185  |
- Regulations                               | 187  |
- Curricular Programs                       | 185  |
- Certificate of Applied Science             | 190  |

**Departments, Majors, Minors, Courses**

- Accounting                                 | 191  |
- Administration                             | 194  |
- Business Education                          | 199  |
- Economics                                   | 201  |

**College of Education**

- Accreditation and Certification            | 207  |
- Requirements                              | 208  |
- Teaching Fields                            | 212  |
- Departmental Majors and Minors             | 215  |

**Departments, Majors, Minors, Courses**

- Aerospace Studies                         | 215  |
- Art Education                              | 218  |
- Educational Administration and Supervision | 219  |
- Educational Psychology                     | 221  |
- Elementary Education                       | 223  |
- Industrial Education                       | 226  |
- Library Science                            | 229  |
- Logopedics                                 | 229  |
- Military Science                           | 235  |
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music Education</td>
<td>237</td>
</tr>
<tr>
<td>Physical Education, Health, and Recreation</td>
<td>241</td>
</tr>
<tr>
<td>Secondary Education</td>
<td>245</td>
</tr>
<tr>
<td>Foundations of Education</td>
<td>248</td>
</tr>
<tr>
<td>Student Personnel and Guidance</td>
<td>249</td>
</tr>
<tr>
<td><strong>College of Engineering</strong></td>
<td></td>
</tr>
<tr>
<td>Requirements</td>
<td>252</td>
</tr>
<tr>
<td>Curricula</td>
<td>254</td>
</tr>
<tr>
<td>Departments, Courses</td>
<td></td>
</tr>
<tr>
<td>Aeronautical Engineering</td>
<td>262</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>266</td>
</tr>
<tr>
<td>Industrial Engineering</td>
<td>268</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>271</td>
</tr>
<tr>
<td><strong>College of Fine Arts</strong></td>
<td></td>
</tr>
<tr>
<td>Department of Art</td>
<td>275</td>
</tr>
<tr>
<td>Requirements</td>
<td>276</td>
</tr>
<tr>
<td>Courses</td>
<td>286</td>
</tr>
<tr>
<td>School of Music</td>
<td>292</td>
</tr>
<tr>
<td>Requirements</td>
<td>293</td>
</tr>
<tr>
<td>Applied Music Regulations</td>
<td>295</td>
</tr>
<tr>
<td>Major, Minor, Courses</td>
<td>297, 301</td>
</tr>
<tr>
<td><strong>College of Health Related Professions</strong></td>
<td></td>
</tr>
<tr>
<td>Counseling</td>
<td>317</td>
</tr>
<tr>
<td>Requirements</td>
<td>318</td>
</tr>
<tr>
<td>Dental Hygiene</td>
<td>319</td>
</tr>
<tr>
<td>Diploma Nursing</td>
<td>321</td>
</tr>
<tr>
<td>Inhalation Therapy</td>
<td>322</td>
</tr>
<tr>
<td>Medical Technology</td>
<td>323</td>
</tr>
<tr>
<td>Cytotechnology</td>
<td>325</td>
</tr>
<tr>
<td>Nursing—Baccalaureate Program</td>
<td>326</td>
</tr>
<tr>
<td><strong>Summer School</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Index</strong></td>
<td>333</td>
</tr>
</tbody>
</table>
CALENDAR FOR 1971-1972

1971

August 25-28, Wednesday-Saturday .................. Fall semester registration
August 30, Monday ............... Classes begin
September 6, Monday ........... Labor Day, holiday
October 9, Saturday ............ Final date for removing incompletes
October 22, Friday ............. Mid-term reports
November 5, Friday ............ Final date for non-penalty grades
November 8, Monday .......... Advising for preregistration for second semester
November 11, Thursday ........ Preregistration for spring semester
November 24, Wednesday ...... Preregistration closes
November 25, 26, 27, Thursday-Saturday ...... Thanksgiving recess
December 10, Friday ........... Classes close
December 11-17, Saturday through Friday .......... First semester final examinations

1972

January 12-15, Wednesday-Saturday .......... Spring semester registration
January 17, Monday ........... Classes begin
February 26, Saturday ......... Final date for removing incompletes
March 10, Friday .............. Mid-term reports
March 24, Friday .............. Final date for non-penalty grades
March 25, Saturday .......... Spring recess begins at close of classes
April 4, Tuesday .............. Classes resume
April 4, Tuesday .............. Advising for preregistration for fall semester
April 10, Monday .............. Preregistration for fall semester
April 20, Thursday ............ Preregistration closes
May 4, Thursday .............. Classes close
May 5-11, Friday through Thursday .......... Second semester final examinations
May 14, Sunday .............. Commencement
June 2 and 3, Friday and Saturday .......... Summer session registration
June 5, Monday .............. Summer session classes begin
July 4, Tuesday .............. Holiday
July 28, Friday .............. Summer session closes

WICHITA STATE UNIVERSITY
ADMINISTRATIVE OFFICERS OF THE UNIVERSITY

Clark D. Ahlberg—President of the University
Walter J. Duerksen—Special Assistant to the President
John B. Breazeale—Academic Vice President and Dean of Faculties
Martin H. Bush—Assistant Vice President for Academic Resource Development
H. R. Reidenbaugh—Executive Vice President of the Board of Trustees and Executive Secretary to the Endowment Association
Roger D. Lowe—Assistant to the President for Finance and Business Manager
Ambrose Saricks—Dean of the Graduate School
Francis Jabara—Dean of the College of Business Administration
Leonard M. Chaffee—Dean of the College of Education
Charles V. Jakowatz—Dean of the School of Engineering
Charles L. Spohn—Dean of the College of Fine Arts
D. Cramer Reed—Dean of the College of Health Related Professions
Paul J. Magelli—Dean of the Fairmount College of Liberal Arts and Sciences
Walter S. Friesen—Dean of University College
Gordon Terwilliger—Director of Summer Session
James J. Rhatigan—Dean of Students
Laura M. Cross—Acting Dean of Admissions and Records
Jasper G. Schad—Director of Libraries
Helen Crockett—Director of Continuing Education
Max A. Schaub—Director of Information and Public Events
George M. Platt—Director of Planning
Frederick Sudermann—Director of Research and Sponsored Programs
Armin Brandhorst—Director of Physical Plant
Cecil Coleman—Director of Athletics
Ethel Jane King—Executive Director of the Alumni Association

BOARD OF REGENTS OF THE STATE OF KANSAS

James J. Basham, M. D., Chairman .................. Fort Scott
Henry A. Bubb ..................................... Topeka
Carl L. Courter .................................... Wichita
William F. Danenbarger ............................ Concordia
T. J. Griffith ...................................... Manhattan
Robert W. Helman ................................. Goodland
Elmer C. Jackson, Jr. ............................. Kansas City
Jess Stewart ....................................... Wamego
Paul R. Wunsch ................................. Kingman
Max Bickford, Executive Officer .................. Topeka

WICHITA STATE UNIVERSITY
UNIVERSITY FACULTY 1970-1971

(Date or dates following title refer to time of initial and successive appointments to the faculty with rank of assistant instructor or higher.)

Ackerman, Paul D., Assistant Professor of Psychology (1968). B. A., University of Kansas, 1964; M. A., ibid., 1966; Ph. D. ibid., 1968.


Ahlberg, Clark D., President and University Professor (1968). B. A., University of Wichita, 1939; M. A., Syracuse University, 1942; Ph. D., ibid., 1951; LL. D., ibid., 1969.

Allegrucci, Robert L., Assistant Professor of Sociology (1967). B. S., Kansas State College of Pittsburg, 1959; M. A., ibid, 1960; Ph. D., University of Missouri, 1969.

Allen, Anneke S., Assistant Professor of Chemistry (1964). Candidate Rysuniversiteit Groningen Netherlands, 1952; Ph. D., Tulane University, 1955.

Alley, Robert D., Associate Professor and Chairman of Department of Secondary Education (1967). B. S., Iowa State University, 1957; M. E., Montana State University, 1960; Ed. D., Arizona State University, 1967.


Artiaga, Lucio, Professor of Mathematics (1968). B. A., University of Zaragoza, Spain, 1942; M. S., Dalhousie University, 1959; Ph. D., University of Saskatchewan, 1964.


Bachus, Nancy, Instructor in Economics (1967). B. S., University of California, Los Angeles, 1965; M. S., Wichita State University, 1967.

Bair, Sue F., Assistant Professor of Women's Physical Education (1966). B. A., University of Wichita, 1961; M. A., Wichita State University, 1967.

Bajaj, Prem N., Assistant Professor of Mathematics (1968). B. A., Punjab University, 1951; M. A., ibid., 1954; M. S., Case Western Reserve University, 1967; Ph. D., ibid., 1968.


Bartel, Peter S., Assistant Professor of Physics (1965). A. B., Bethel College, 1943; M. A., State University of Iowa, 1953.

Bateman, Morita M., Associate Professor of Administration (1966). B. S. M. E., University of South Carolina, 1946; M. S., University of North Carolina, 1950; Ph. D., Oklahoma State University, 1967.


Benningfield, Lloyd M., Professor and Chairman of Department of Electrical Engineering (1967). B. S. E. E., Oklahoma State University, 1951; M. S. E. E., University of Missouri, 1957; Ph. D., Purdue University, 1965.

Berg, J. R., Professor of Geology (1946). B. A., Augustana College, 1938; M. S., State University of Iowa, 1940; Ph. D., ibid., 1942.


Bernhart, Walter D., Professor of Aeronautical Engineering (1954, 1964). B. S. C. E., Kansas State University, 1950; M. S., University of Wichita, 1959; Ph. D., Oklahoma State University, 1964.

Besheara, Robert J., Assistant Professor of Mechanical Engineering (1968). B. S. E. E., Oklahoma State University, 1958; M. S. E. E., ibid., 1961.


Billings, Dorothy, Assistant Professor of Anthropology (1968). B. A., University of Wisconsin, 1955.

Bish, John T., Assistant Professor of Biology (1963). B. S., University of Wichita, 1962; M. S., Wichita State University, 1965.

Blake, Leslie M., Professor and Chairman of Department of Speech (1940). B. S., Kansas State College, 1937; M. S., ibid., 1939.

Blake, Rufus W., Jr., Assistant Instructor in Sociology and Administrative Assistant to the Dean of Students (1968). A. B., Wichita State University, 1966.

Blythe, Jack G., Professor of Geology (1949). B. A., University of Wichita, 1947; M. S., Northwestern University, 1950; Ph. D., University of Oklahoma, 1957.


Bontrager, Ralph L., Associate Professor of Educational Administration (1966). B. S., University of Kansas, 1951; M. S., ibid., 1952; Ed. D., ibid., 1965.

Born, John D., Jr., Associate Professor of History (1965). B. A., University of Texas, 1952; M. A., University of Houston, 1958; Ph. D., University of New Mexico, 1963.


Brandhorst, Armin L., Assistant Professor of Engineering and Director of Physical Plant (1964). B. S. M. E., Kansas State University, 1959; M. S. M. E., Oklahoma State University, 1964.

Breazeale, John, Professor of Physics, Academic Vice President, and Dean of Faculties (1959). B. S., Millsaps College, 1947; M. S., University of Alabama, 1951; Ph. D., University of Virginia, 1955.

Brewer, Donald D., Assistant Professor of Administration (1966, 1970). B. S. in C. E., Kansas State University, 1964; M. S., Wichita State University, 1966.


Brinkman, Sidney E., Assistant Professor of Accounting (1958, 1965). B. A., University of Wichita, 1956; M. S., Wichita State University, 1966; CPA Certificate, Kansas.


Buess, Charles M., Professor of Chemistry (1961). B. A., Ohio State University, 1942; M. S., Western Reserve University, 1946; Ph. D., University of Southern California, 1949.


Burnett, Darrell Jack, Instructor in Administration, and Administrative Assistant to the Assistant to the President and Business Manager (1967). B.S. B.A., University of Wichita, 1957; M.S., Wichita State University, 1967.


Camin, Kathleen O., Associate Professor of Economics (1965). A.B., Smith College, 1957; Ph.D., University of Missouri, 1969.

Campbell, James H., Associate Professor of Administration (1964). B.A., Miami University, 1956; Ph.D., Michigan State University, 1966.


Carson, Doris M., Assistant Professor, Library (1957). B.A., Kansas Wesleyan University, 1933; M.A., University of Kansas, 1941; M.S., University of Illinois, 1954.

Cathers, Robert E., Assistant Professor of Chemistry (1965). B.S., University of Wichita, 1961; M.S., ibid., 1963; Ph.D., Texas Technological College, 1966.

Cavarozzi, Joyce Pennington, Assistant Professor of Speech and Drama (1965). B.S. in Ed., Ohio University, 1953; M.A., The Ohio State University, 1963.

Caesar, James, Professor of Violin and Chairman of Stringed Instruments Department (1949). B.M., Cleveland Institute of Music, 1940; B.S., Western Reserve University, 1947; M.A., ibid., 1949.


Chopra, Dharam Vir, Assistant Professor of Mathematics (1967). B.A., Punjab University, India, 1950; M.A., ibid., 1953; M.S., University of Michigan, 1961; A.M., ibid., 1963; Ph.D., University of Nebraska, 1968.

Chrisman, Paul G., Assistant Professor of Speech, Counselor, and Director of Financial Aids (1955, 1957). B.S., Kansas State Teachers College of Pittsburg, 1936; M.S., ibid., 1941.

Christenson, Donald D., Professor of Administration, Associate Dean of College of Business Administration and Director of Graduate Programs (1958). B.S., University of Wichita, 1955; M.S., University of Illinois, 1958; Ph.D., ibid., 1962.
Christian, Robert V., Jr., Professor and Chairman of Department of Chemistry (1946). B. S., University of Wichita, 1940; Ph. D., Iowa State College, 1946.


Coint, Herbert H., Assistant Professor of Aeronautical Engineering (1967). B. S. M. E., University of Wichita, 1957; M. S. M. E., ibid., 1963.


Collins, George W., Associate Professor of History (1968). B. S., Northwestern University, 1948; M. A., ibid., 1950; Ph. D., University of Colorado, 1965.


Cook, Everett L., Associate Professor of Aeronautical Engineering (1953, 1969). B. S. A. E., University of Wichita, 1954; M. S. A. E., 1958; Ph. D., Oklahoma State University, 1967.


Copeland, Jerry, Captain, U. S. Air Force, Assistant Professor of Aerospace Studies (1968). B. S., Oklahoma State University, 1962; B. S., University of Washington, 1963; Academic Instructor and Allied Officer School, Air University, 1968.

Corbin, Harry F., University Professor (1946). A. B., University of Wichita, 1940; B. D., University of Chicago, 1943; LL. B., University of Kansas, 1949.

Costley, Dan L., Associate Professor of Administration (1965). B. A., University of Oklahoma, 1957; M. A., ibid., 1958; Ph. D., Michigan State University, 1964.

Covles, Josephine M., Associate Professor, Library, and Head of Cataloging Department (1947). B. S., Ottawa University, 1928; B. S., in L. S., University of Illinois, 1936; M. S., ibid., 1949.


Craig, Allan M., Professor and Chairman of Department of German (1953). A.B., University of Illinois, 1942; M.A., ibid., 1948; Ph.D., ibid., 1952.

Crockett, Helen, Assistant Professor and Director of Continuing Education (1961). A.B., University of Wichita, 1951; M.A., ibid., 1955.


Cutler, Bruce, Professor of English (1960). B.A., State University of Iowa, 1951; M.S., Kansas State University, 1957.


Denton, Densil Ray, Jr., Assistant Instructor in Psychology and Administrative Assistant to the Director of Research and Sponsored Programs (1968). B.A., University of Wichita, 1963.


Distler, Donald A., Assistant Professor of Biology (1963). B. A., University of Louisville, 1952; M. S., ibid., 1957; Ph. D., University of Kansas, 1967.


Douglas, Donald M., Assistant Professor of History (1965). A. B., Kansas State University, 1961; M. A., ibid., 1963; Ph. D., University of Kansas, 1968.


Duell, Dennis C., Assistant Professor of Economics (1967). B. S., Kansas State University, 1961; M. S., ibid., 1963; Ph. D., University of Illinois, 1969.

Duell, Orpha K., Assistant Professor of Educational Psychology (1967). B. S., Kansas State University, 1963; M. S., University of Illinois, 1965; Ph. D., ibid., 1967.

Duerksen, George N., Assistant Professor of Industrial Education (1967). B. S., Kansas State College of Pittsburg, 1929; M. S., ibid., 1938.

Duerksen, Walter, University Professor and Special Assistant to the President (1932). B. P. S. M., University of Wichita, 1931; M. M., Northwestern University, 1938.

Duggan, Bessie L., Assistant Professor of Speech, Assistant to the Dean and Counselor in University College (1964). B. S., Kansas State Teachers College, Emporia, 1954; M. S., ibid., 1957; Specialist, Southern Illinois University, 1961.


Dunning, Wayne W., Assistant Professor of Chemistry (1961). B. S., Iowa State College, 1952; M. S., Iowa State University, 1959; Ph. D., ibid., 1964.


Elcrat, Alan R., Associate Professor of Mathematics (1967). B. S., University of New Mexico, 1963; M. A., Indiana University, 1965; Ph. D., ibid., 1967.


Ellis, Howard E., Professor of Music Education and Assistant Dean of the School of Music (1955). A. B., Albion College, 1942; M. M., University of Michigan, 1947; Ph. D., ibid., 1957.


Erickson, James, Associate Professor of English (1964). B. A., University of Minnesota, 1955; M. A., ibid., 1957; Ph. D., ibid., 1961.

Eti, Ersin, Assistant Professor of Aeronautical Engineering (1969). B. S., Pennsylvania State University, 1965; M. S., Mississippi State University, 1967; Ph. D., ibid., 1970.


Eversman, Walter, Associate Professor of Aeronautical Engineering and Assistant Dean of the Graduate School (1964). B. S. A. E., Purdue University, 1959; M. S., Engineering Mechanics, Stanford University, 1961; Ph. D., ibid., 1964.


Fahrbach, Carl G., Associate Professor of Education and Dean of Admissions and Records (1964). B. S., Kansas State Teachers College, Emporia, 1948; M. S., ibid., 1951; Ed. D., University of Kansas, 1958. (Deceased, October, 1970.)


Felton, Michael L., Instructor and Supervisor of Graphic Production in the Audiovisual Center (1968). B. S., Oklahoma State University, 1967; M. S., ibid., 1968.

Fife, Natasha Matson, Assistant Professor of Women’s Physical Education (1959). B. S., Texas Women’s University, 1958; M. S., Wichita State University, 1967.


Foster, Donald L., Assistant Professor of Physics (1966). B. A., Reed College, 1957; Ph. D., University of Kansas, 1969.

Foster, Mary Sue, Assistant Professor of Art Education (1966). B. A. E., University of Kansas, 1961; M. S., ibid., 1963.

Founds, Jean, Assistant Instructor in Journalism and Supervising Auditor for the Publications Board (1970).

Fremont, Theodore S., Assistant Professor of Educational Psychology (1970). B. A., Nebraska Wesleyan University, 1965; M. S., Fort Hays Kansas State College, 1966; Ed. D., Oklahoma State University, 1970.


Frnka, Robert L., Assistant Professor of Economics (1965). B. S., Southern Methodist University, 1957; Ph. D., ibid., 1967.

Froning, Dorothy Gardner, Professor of Spanish (1947). A. B., Park College, 1936; M. A., University of Alabama, 1947; Ph. D., University of California at Los Angeles, 1961.

Fugate, Josephine B., Professor of Mathematics (1955). A. B., University of Kansas, 1924; M. A., ibid., 1929.


Gane, Elizabeth Mae, Assistant Professor and Counselor in Student Services (1960). A. B., Randolph-Macon Women's College, 1937; M. A., Syracuse University, 1959.


Gerlach, E. Hugh, Jr., Adjunct Assistant Professor of Biology (1969). B. S., University of Kentucky, 1953; Ph. D., ibid., 1967.

Gerling, Amy G., Professor of Sociology (1947). A. B., University of Wisconsin, 1931; A. M., ibid., 1933; Ph. D., Cornell University, 1939.

Gibson, George H., Assistant Professor of Opera Theatre and Voice (1967). B. M., University of Miami, 1956; M. M., University of Texas, 1959; Ph. D., University of California, 1971. (Leave of absence, 1970-1971.)


Gohn, Lyle, Assistant Professor and Associate Dean of Students (1967). B. S., Purdue University, 1962; M. S., ibid., 1964; Ph. D., ibid., 1967.


Goodpasture, Carter, Adjunct Associate Professor of Health Education (1970). B. S., Princeton University, 1932; M. D., University of Chicago, 1936.

Gosman, Albert L., Professor and Chairman of Department of Mechanical Engineering (1967). B. S. M. E., University of Michigan, 1950; M. S. M. E., University of Colorado, 1955; Ph. D., State University of Iowa, 1965.


Graham, Archie Richard, Associate Professor of Mechanical Engineering (1965). B. S., Kansas State University, 1957; M. S. M. E., ibid., 1960; Ph. D., University of Iowa, 1966.

Graham, Gerald H., Associate Professor and Chairman of Department of Administration (1967). B. S., Northwestern State College, 1959; M. S. B. A., ibid., 1960; Ph. D., Louisiana State University, 1968.

Graham, J. Keith, Professor and Chairman of Department of Logopedics (1966). B. S., Wayne State University, 1948; M. A., ibid., 1951; Ph. D., Northwestern University, 1964.

Gray, James, Associate Professor of History (1963). B. A., University of California, Los Angeles, 1954; Ph. D., ibid., 1969.


Gregg, Alvin, Assistant Professor of English (1968). B. A., Texas Technological College, 1956; M. A., ibid., 1957; Ph. D., University of Texas, 1969.

Grewal, Mahesh S., Associate Professor of Mechanical Engineering (1969). B. Sc., University of Allahabad, India, 1953; B. S., University of California, Berkeley, 1957; M. S., ibid., 1959; Ph. D., ibid., 1962.


Gundersen, James N., Professor and Chairman of Department of Geology (1970). B. S., University of Wisconsin, 1949; M. A., University of California at Los Angeles, 1955; Ph. D., University of Minnesota, 1958.


Hammond, Geraldine, Professor of English (1932). A. B., University of Wichita, 1931; M. A., University of Kansas, 1932; Ph. D., University of Colorado, 1944.

Hansan, John, Associate Professor of Men's Physical Education (1964). B. S., University of Kansas, 1962; M. S., ibid., 1963; Ed. D., University of Oregon, 1969.

Hanson, Gordon C., Professor of Educational Psychology (1938). B. A., Augsburg College, 1928; Ph. D., University of North Dakota, 1937.

Hanson, Loring O., Professor of Aeronautical Engineering and Assistant to the Dean of School of Engineering (1955). B. S. C. E., University of Kansas, 1928; M. S. C. E., University of Wisconsin, 1932.

Harder, Marvin A., Professor of Political Science (1947). A. B., University of Wichita, 1947; A. M., Columbia University, 1949; Ph. D., ibid., 1959.

Hardy, James Lynn, Professor and Chairman of Department of Music Education (1965). B. S. M. E., Southwest Missouri State College, 1948; M. M. E., University of Kansas, 1956; Ed. D., ibid., 1969.


Hartman, John J., Professor and Chairman of Department of Sociology (1968). B. S., Southwest Missouri State College, 1961; M. S., University of Missouri, 1963; Ph. D., ibid., 1966.


Hecht, Sabrina M., Assistant Professor of Mathematics (1950). A. B., Kansas State Teachers College of Pittsburg, 1939; M. S., University of Michigan, 1945.


Herman, David T., Professor and Chairman of Department of Psychology (1949). A. B., Indiana University, 1940; M. A., ibid., 1942; Ph. D., ibid., 1947. (Leave of absence, second semester, 1970-1971.)


Hong, Gerald B., Associate Professor of English (1967). A. B., Loyola University (New Orleans), 1951; M. A., Tulane University, 1955; Ph. D., ibid., 1965.

Holman, Carol Schowalter, Assistant Professor of Education and Director of Audiovisual Services (1942). B. M., University of Wichita, 1935; M. M. E., ibid., 1950.

Holmer, Robert M., Professor and Chairman of Department of Physical Education, Health and Recreation (1955). B. S., University of Kansas, 1941; M. S., ibid., 1948; Ph. D., State University of Iowa, 1954.

Holmes, Lowell D., Professor of Anthropology (1959). B. S., Northwestern University, 1950; Ph. D., ibid., 1957.

Homburger, Richard H., Professor of Accounting and Coordinator of Graduate Studies in Accounting (1956). J. D., University of Zurich, 1937; M. S., Columbia University, 1946; CPA Certificate, West Virginia.


WICHITA STATE UNIVERSITY
Hudson, Randall O., Associate Professor of History (1964). B. S., University of Georgia, 1957; M. A., University of North Carolina, 1962; Ph. D., ibid., 1965.


Humphrey, Bobbye J., Assistant Professor of Social Work (1968). A. B., Friends University, 1948; M. S. W., University of Kansas, 1964.


Jabara, F. D., Professor of Accounting and Dean of College of Business Administration (1949). B. S., Oklahoma State University, 1948; M. B. A., Northwestern University, 1949; CPA Certificate, Kansas.

Jackson, Bill N., Assistant Professor of Graphic Design and Publications Designer in Office of Information and Public Events (1970). Kansas City Art Institute, 1938.


Jakowatz, Charles V., Professor of Electrical Engineering and Dean of School of Engineering (1965). B. S. E. E., Kansas State College, 1944; M. S. E. E., ibid., 1947; Ph. D., University of Illinois, 1953.

Jamison, Ines, Assistant Professor of Voice (1970). B. M., University of Kansas, 1926.

Jantze, Margaret L., Associate Professor and Chairman of Department of Business Education (1965). B. S., Union College, 1947; M. Ed., University of Nebraska, 1959; Ed. D., ibid., 1965.

Johns, Buddy Ava, Jr., Associate Professor of Mathematics (1964). B. A., Friends University, 1947; M. A., University of Kansas, 1960; Ph. D., ibid., 1964.


Johnson, Everett L., Assistant Professor of Electrical Engineering (1971). B. S. E. E., University of Kansas, 1962; M. S. E. E., University of New Mexico, 1964; Ph. D., University of Kansas, 1969.

Johnson, John W., Jr., Associate Professor of Chemistry (1955). A. B., University of Wichita, 1952; M. S., ibid., 1953; Ph. D., University of Illinois, 1956.


Jones, W. James, Assistant Professor of Clarinet (1969). B. M. and B. S. E., Ohio State University, 1960; M. A., ibid., 1962; Ph. D., University of Iowa, 1970.

Jong, Maw-Tsuey, Assistant Professor of Electrical Engineering (1967). B. S. E. E., National Taiwan University, 1960; M. S. E. E., South Dakota School of Mines and Technology, 1965; Ph. D., University of Missouri, 1967.
Jordan, Donald E., Assistant Professor and Counselor and Director of Career Planning and Placement Center (1965). A.B., University of Wichita, 1959; M.Ed., ibid., 1962.

Jovanovic, Milan K., Professor of Mechanical Engineering (1968). Diploma, Ing. (M.E.), University of Belgrade, 1938; Diploma, Physics, ibid., 1945; M.S., Northwestern University, 1954; Ph.D., ibid., 1957.

Joyner, H. Sajon, Assistant Professor of Mechanical Engineering (1969). B.S. in Physics, University of Texas, Austin, 1962; M.A. in Physics, ibid., 1964; M.S., University of Missouri, Rolla, 1967; Ph.D., ibid., 1970.


Katzenmeyer, Albert C., Associate Professor of Physical Education and Director of Athletics (1968). A.B., Alma College, 1942; A.M., University of Michigan, 1950. (Deceased, October, 1970.)


Kessinger, Byrl, Assistant Professor and Counselor and Assistant Director of Career Planning and Placement Center (1965). B.S. and M.S., Kansas State College of Pittsburg, 1956.


Kneil, Thomas R., Assistant Professor of Logopedics (1967). A.B., Bowdoin College, 1955; M.S., Syracuse University, 1960.


Lakin, Wilbur, Professor of Physics (1967). A.B., Union College, 1943; Ph.D., Carnegie Institute of Technology, 1954.


Leslie, John H., Jr., Assistant Professor and Chairman of Department of Industrial Engineering (1962); B.S.I.E., University of Wichita, 1961; M.S. M.E., ibid., 1964.

Lewis, Eldon C., Professor of Accounting and Associate Dean of College of Business Administration (1967). B.B.A., Washburn University, 1959; M.B.A., University of Kansas, 1961; Ph.D., University of Missouri, 1967; CPA Certificate, Kansas.

22 WICHITA STATE UNIVERSITY


Lindsley, Sara Rodewald, Instructor in German (1968). B.S., Kansas State University, 1963; M.A., University of Kansas, 1968.


Loper, Gerald D., Jr., Associate Professor and Chairman of Department of Physics (1964). B.A., University of Wichita, 1959; M.S., Oklahoma State University, 1962; Ph.D., ibid., 1964.

Lowe, Roger D., Assistant Professor of Accounting, Assistant to President for Finance, and Business Manager (1964). B.S. B.A., Kansas State Teachers College of Pittsburg, 1960; CFA Certificate, Kansas.


Lukas, Gaze E., Visiting Professor of Accounting (1970). B.S., University of Illinois, 1930; M.S., ibid., 1933; J.D., ibid., 1956.


McBride, John, Assistant Professor of Anthropology (1965). A.B., University of Kansas, 1953; LL.B., ibid., 1955.

McCall, Mary Gayle, Assistant Professor of Sociology (1969). B.A., Washburn University, 1965; M.A., Wichita State University, 1967.

McCarten, John B., Assistant Professor of Chemistry (1964). B.S., Creighton University, 1958; M.S., ibid., 1960; Ph.D., State University of Iowa, 1964.


McFarland, David E., Assistant Professor of Aeronautical Engineering (1967). B.S., University of Wichita, 1961; M.S., ibid., 1964; Ph.D., University of Kansas, 1967.

McIntyre, Donald W., Associate Professor of Psychology (1968). A.B., University of California at Santa Barbara, 1955; M.A., University of Connecticut, 1959; Ph.D., ibid., 1965.


Magelli, Paul J., University Professor and Dean of Fairmount College of Liberal Arts and Sciences (1969). A. B., University of Illinois, 1959; M. S., ibid., 1960; Ph. D., ibid., 1965.


Majors, Troy, Associate Professor of Philosophy (1964). B. A., University of Arkansas, 1958; M. A., ibid., 1959; Ph. D., Northwestern University, 1967.


Malone, Henry H., Assistant Professor of English, and Associate Dean of College of Liberal Arts and Sciences (1948). A. B., University of Wichita, 1932; M. A., ibid., 1950.


Marks, Bernard J., Professor of Economics (1969). B. S. C., Drake University, 1941; M. S., Iowa State College, 1949; Ph. D., University of Minnesota, 1960.

Marsh, T. Reese, Professor of English (1943). B. A., Johns Hopkins University, 1924; Ph. D., State University of Iowa, 1933.


Mickel, Howard A., Assistant Professor of Religion (1965). B. A., Nebraska University, 1949; M. A., Northwestern University, 1951; B. D., Gettysburg Theological Seminary, 1953; Ph. D., Claremont Graduate School, 1969.


Miller, William E., Associate Professor of Logopedics (1949). B. S., University of Wichita, 1940; M. A., ibid., 1947; Ph. D., Northwestern University, 1950. (Leave of absence, second semester, 1970-1971.)


Mills, Tonk, Adjunct Associate Professor of Dental Hygiene (1968). D. D. S., University of Missouri at Kansas City, 1955.


Mittelstaedt, James S., Assistant Professor of Biology (1970). B. S., University of Arkansas, 1965; M. S., ibid., 1968; Ph. D., Purdue University, 1970.


Moorhouse, Melvin Paul, Associate Professor of Speech (1957). A. B., Westminster College (Pennsylvania), 1935; M. A., Ohio State University, 1956.

Mullikin, Margaret D., Assistant Professor of Sociology (1967). B. A., University of Wichita, 1954; M. A., ibid., 1958.

Murphey, Dwight D., Assistant Professor of Administration (1967). B. S. L., University of Denver, 1957; LL. B., ibid., 1959.

Murphy, James M., Distinguished Professor of Bank Management in Department of Administration (1968). B. S., Indiana University, 1943; M. B. A., ibid., 1948; D. B. A., ibid., 1959.

Myers, James E., Assistant Professor of Geology (1968). B.S., Iowa State University, 1942; M.S., University of Wichita, 1958; M.S., Wichita State University, 1968.


Needles, Audrey, Assistant Professor of Speech and Drama (1965). A.B., University of Denver, 1947; M.A., ibid., 1948.


Newman, Arthur N., Assistant Professor of Voice (1959). St. Louis Opera Company; International Opera Company; NBC Opera Television and New York City Center Opera.

Newton, Lyle D., Adjunct Assistant Professor of Police Science (1969). B.A., University of Wichita, 1961; M.S., Wichita State University, 1965.

Nickel, James W., Assistant Professor of Philosophy (1968). A.B., Tabor College, 1964; M.A., University of Kansas, 1966; Ph.D., ibid., 1968.


Nielsen, Carl C., Associate Professor of Administration and Coordinator of Graduate Studies in Administration (1968). B.S., Dana College, 1956; M.A., University of Nebraska, 1963; Ph.D., ibid., 1966.

Noah, Calvin, Assistant Professor of Geology (1956). A. B., Fort Hays Kansas State College, 1952; M. S., University of Wichita, 1956.

Noel, O. Carroll, Professor of Elementary Education (1950). B. S., Kansas State Teachers College, Emporia, 1927; M. A., University of Wichita, 1948.


Norris, Roy, Assistant Professor of Electrical Engineering (1961). B. S. E. E., University of Wichita, 1959; M. S., ibid., 1962.


O'Loughlin, John B., Assistant Professor of Electrical Engineering and Director of the Computer Center (1967). B. S. E. E., Massachusetts Institute of Technology, 1954; M. S. E. E., ibid., 1956.


Paddock, Beatrice, Assistant Professor, Library (1962). A. B., Friends University, 1926; A. B. L. S., University of Michigan, 1930.


Park, F. Wesley, Adjunct Professor of Dental Hygiene (1968). A. B., University of Wichita, 1934; D. D. S., University of Missouri at Kansas City, 1937.

Park, Jon, Adjunct Associate Professor and Acting Chairman of Department of Dental Hygiene (1968). D. D. S., University of Missouri at Kansas City, 1964.


Paske, Gerald H., Associate Professor of Philosophy (1967). B. S., University of Wisconsin, 1958; M. S., ibid., 1962; Ph. D., ibid., 1964.


Pfenestiel, Maurice, Associate Professor of Economics (1966). B.A., Fort Hays Kansas State College, 1960; M.S., Oklahoma State University, 1966; Ph.D., ibid., 1967.


Platt, George M., Associate Professor of Political Science and Director of the Office of Planning (1969). B.A., South Dakota State University, 1953; M.A., Syracuse University, 1955; Ph.D., ibid., 1962.

Plett, Sara F., Associate Professor of Nursing (1969). A.B., Tabor College, 1947; B.S., Nursing Education, University of Minnesota, 1949; M.S., University of California, Berkeley, 1955.

Pluckhan, Margaret L., Associate Professor of Nursing (1970). B.S. in Nursing, University of Wisconsin, 1950; M.P.S., University of Colorado, 1956; Ph.D., University of Denver, 1970.


Poland, Leo A., Associate Professor of Accounting (1958). B.S., University of Kansas, 1947; M.B.A., Harvard University, 1948; D.B.A., University of Indiana, 1962.


Powell, Jackson O., Professor of Psychology (1950). B.S., Southeastern State College, Oklahoma, 1941; M.S., Syracuse University, 1947; Ph.D., ibid., 1950.

Pratt, Stephen H., Professor of Psychology (1970). B.A., University of California at Los Angeles, 1940; M.S., Purdue University, 1950; Ph.D., ibid., 1952.

Pronko, N. H., Professor of Psychology (1947). A.B., George Washington University, 1941; A.M., Indiana University, 1941; Ph.D., ibid., 1944.


Rappaport, Allen, Assistant Professor of Administration (1966). B. S., University of South Carolina, 1961; M. B. A., ibid., 1962; Ph. D., University of Texas, 1968.


Reed, D. Cramer, Dean of the College of Health Related Professions, Associate Dean of University of Kansas Medical Center, and Professor of Health Education (1970). A. B., University of Wichita, 1937; M. D., Washington University, 1941.


Reed, Paul E., Associate Professor of Piano and Chairman of Department of Keyboard Instruments (1966). B. M., Drake University, 1956; M. M., ibid., 1957.

Reif, Martin A., Professor of History and Associate Dean of College of Liberal Arts and Sciences (1959). A. B., University of California, Los Angeles, 1954; Ph. D., ibid., 1960.


Rhatigan, James J., Associate Professor and Dean of Students (1965). B. A., Coe College, 1957; M. A., Syracuse University, 1959; Ph. D., The State University of Iowa, 1965.


Richardson, William H., Associate Professor of Mathematics (1962). A. B., Chico State College, 1959; M. S., Iowa State University, 1961.


Risser, Arthur C., Associate Professor of Industrial Engineering (1951). A. B., Grinnell College, 1929.

Ritchie, Gisela, Associate Professor of German (1965). M. A., Free University of Berlin, 1952; Ph. D., University of Michigan, 1965.


Rogers, Ben F., Assistant Professor of Philosophy (1966). B. A., University of Tennessee, 1958; M. A. T., Vanderbilt University, 1961; M. A., University of Indiana, 1966; Ph. D., ibid., 1970.


Sabus, Francis John, Assistant Professor of Men’s Physical Education (1956). B. A., Iowa State Teachers College, 1951; M. A. State University of Iowa, 1957.


Sarachek, Alvin, Professor and Chairman of Department of Biology (1958). B. A., University of Missouri at Kansas City, 1948; M. A., ibid., 1950; Ph. D., Kansas State University, 1958.

Saricks, Ambrose, Professor of History, Dean of the Graduate School, and Associate Dean of Faculties (1970). B. A., Bucknell University, 1937; M. A., ibid., 1941; Ph. D., University of Chicago, 1948.

Savaiano, Eugene, Professor and Chairman of Department of Romance Languages (1946). B. S., Kansas State Teachers College, Emporia, 1936; M. S., ibid., 1937; Ph. D., University of Chicago, 1948.


Schable, Max A., Assistant Professor of Journalism and Director of Information and Public Events (1970). B. A., University of Colorado, 1957.

Schlesier, Karl, Professor of Anthropology (1962). Ph. D., University of Bonn, 1956.


Scriven, Nancy L., Assistant Professor of Music Education (1967). B. M. E., University of Wichita, 1952; M. M. E., Wichita State University, 1966.


Seng, Jerry T., Assistant Professor of Biology (1970). B. S., Purdue University, 1957; M. A., Indiana University, 1966; Ph. D., ibid., 1970.

Sevart, John B., Assistant Professor of Mechanical Engineering (1960). B. S. M. E., University of Wichita, 1960; M. S., ibid., 1962.


Sherman, Dorothy M., Professor and Chairman of Department of Student Personnel and Guidance (1964). B. A., University of Oregon, 1932; M. A., ibid., 1934; Ph. D., Ohio State University, 1945.


Slingerland, F. Yvonne, Assistant Professor of Women’s Physical Education (1967). B. S., Fort Hays Kansas State College, 1954; M. S., ibid., 1964.


Smith, Bert L., Associate Professor of Aeronautical Engineering (1966). B. S., University of Missouri at Rolla, 1953; M. S., ibid., 1960; Ph. D., Kansas State University, 1966.


Snodgrass, Fritz M., Assistant Professor of Men’s Physical Education (1956). B. S., Kansas State College of Pittsburg, 1926; M. S., ibid., 1942.


Snyder, Melvin H., Jr., Professor of Aeronautical Engineering (1947). B. S. M. E., Carnegie Institute of Technology, 1947; M. S. A. E., University of Wichita, 1950; Ph. D., Oklahoma State University, 1967. (Leave of absence, 1970-1971.)


Soper, Fred J., Associate Professor of Accounting and Director of Center for Management Development (1960, 1963). B. S., University of Kansas, 1955; M. B. A., University of Wichita, 1962; CPA Certificate, Kansas.


Spangler, Eugene C., Associate Professor of Speech and Drama and Director of Theatre Services (1939). B. M., University of Wichita, 1939; M. F. A., State University of Iowa, 1950.

Spohn, Charles L., Professor of Music and Dean of the College of Fine Arts (1970). B. M., Butler University, 1950; M. A., The Ohio State University, 1953; Ph. D., ibid., 1959.


Strecker, Joseph L., Associate Professor of Physics (1968). B. S., Rockhurst College, 1955; Ph. D., Johns Hopkins University, 1961.


Sudermann, Frederick, Assistant Professor of Political Science, Assistant to the Academic Vice President, and Director of Research and Sponsored Programs (1964). B. A., University of Wichita, 1958; M. A., ibid., 1960.


32 WICHITA STATE UNIVERSITY
Sweet, George H., Associate Professor of Biology (1966). B. S., University of Wichita, 1960; M. A., University of Kansas, 1962; Ph. D., ibid., 1965.

Sweney, Arthur B., Professor of Administration (1968). B. S., University of Illinois, 1947; M. S. W., ibid., 1949; Ph. D., University of Houston, 1958.

Taggart, Gladys Martha, Professor of Physical Education for Women (1928). B. S., State University of Iowa, 1923; M. A., Teachers College, Columbia University, 1930; Ph. D., New York University, 1959.


Talaty, Erach R., Professor of Chemistry (1969). B. S., Nagpur University, Nagpur, India, 1948; Ph. D., ibid., 1954; Ph. D., Ohio State University, 1957.

Tasch, Paul, Professor of Geology (1955). B. S., College of the City of New York, 1948; M. S., Pennsylvania State University, 1950; Ph. D., State University of Iowa, 1952.


Taylor, Richard J., Adjunct Associate Professor and Acting Chairman of Department of Medical Technology (1970). B. A., University of Colorado, 1944; M. D., Creighton University, 1949.

Taylor, Ross McLaury, Professor and Chairman of Department of American Studies (1939). A. B., University of Oklahoma, 1930; M. A., ibid., 1933; Ph. D., State University of Iowa, 1938.

Teall, Mary Jane Woodard, Assistant Professor of Speech and Drama (1946). B. S., Northwestern University, 1933; M. A., ibid., 1937.


Teufel, Curtis D., Professor of Administration (1957). B. A., University of Kansas, 1953; Juris Doctorate, ibid., 1955.

Terrell, William T., Associate Professor of Economics (1967). B. S., Oklahoma State University, 1958; M. S., ibid., 1961; Ph. D., Vanderbilt University, 1970.

Terwilliger, Gordon B., Professor of Music, Associate Dean of the Graduate School, and Director of the Summer Session and Workshop Program (1946). B. M. E., Northwestern University, 1942; M. A., Columbia University, 1946; Ed. D., ibid., 1952.

Teufel, Hugo, Jr., Associate Professor of Mathematics (1963). B. S., University of Kansas, 1955; M. S., University of New Mexico, 1960; Ph. D., ibid., 1968. (Leave of Absence, second semester, 1970-71.)


Thomas, Phillip D., Associate Professor of History (1965). B. A., Baylor University, 1960; M. A., University of New Mexico, 1964; Ph. D., ibid., 1965. (Leave of Absence, second semester, 1970-71.)

Thompson, Norman D., Assistant Instructor and Director of Operations, Digital Computing Center (1967).


Tilford, Michael, Assistant Professor of Secondary Education (1967). B. S., Langston University, 1957; M. A., Johns Hopkins University, 1958; Ed. D., Oklahoma State University, 1970.

Tinterow, M. M., Adjunct Associate Professor and Acting Chairman of Department of Inhalation Therapy (1970). B. A., Rice University, 1937; M. D., University of Texas, 1941.


Town, Robert, Assistant Professor of Organ (1965). B. M., Eastman School of Music, 1960; M. M., Syracuse University, 1962.

Traylor, Elwood B., Professor and Chairman of Department of Educational Psychology (1967). A. B., Greenville College, 1948; M. A., Washington University, 1951; Ed. D., ibid., 1966.


Unruh, Henry, Jr., Professor of Physics (1961). A. B., University of Wichita, 1950; M. S., Kansas State University, 1952; Ph. D., Case Institute of Technology, 1960.

Vahdat, Pari, Associate Professor of Psychology (1967). A. B., Indiana University, 1953; A. M., ibid., 1957; Ph. D., ibid., 1964.

Vanasco, Rocco, Assistant Professor of French and Italian (1968). Laurea, University of Catania, 1959; M. A., University of Wisconsin, 1965.


Waddell, Mina Jean, Assistant Professor, Library and Head of Reference Department (1965). B. A., University of Wichita, 1938; M. S., Kansas State Teachers College, Emporia, 1965.

Wall, Hugo, Professor of Political Science (1929). A. B., Leland Stanford University, 1926; Ph. D., ibid., 1929.

Wall, Lillian, Associate Professor of Spanish (1963). B. A., Kansas Wesleyan, 1932; M. S., Kansas State Teachers College, Emporia, 1953; Ph. D., University of Wisconsin, 1969.

Wallingford, Frances A., Assistant Professor of Piano (1956). B. M., Southwestern College, 1931; A. B., ibid., 1933; M. M., University of Wichita, 1956; Certificates, American Conservatory in Fontainebleau, France, 1928 and 1963.


Watertor, Jean L., Assistant Professor of Biology (1968). B. A., University of Iowa, 1944; M. S., University of Wisconsin, 1948; Ph. D., Iowa State University, 1965.


Watson, Louis W., Assistant Professor of Physics (1965). B. S., University of Oklahoma, 1956; M. S., ibid., 1963.

Watson, Tully F., Professor of Physics (1947). B. A., University of Oklahoma, 1928; M. S., ibid., 1930; Ph. D., University of Illinois, 1935.


Webb, Samuel C., Associate Professor of Economics (1966). B. S., University of Missouri, 1957; M. S., ibid., 1959; Ph. D., University of Kansas, 1968.


Welsbacher, Richard C., Professor of Speech and Drama (1958). A. B., Denison University, 1948; M. A., University of Denver, 1950, Ph. D., The Ohio State University, 1965.


West, Elles C., Associate Professor of Men's Physical Education (1965). Physical Therapy, Karolinska University, Stockholm, Sweden, 1950; M. A., Stanford University, 1956; Ph. D., University of Oregon, 1965.

Wherritt, Robert C., Associate Professor of Mathematics (1962). B. S., Tulane University, 1955; M. S., ibid., 1961; Ph. D., New Mexico State University, 1971.


Wiebe, Raymond F., Assistant Professor, Assistant to the Dean, and Counselor in University College (1965). A. B., Tabor College, 1953; M. S., Kansas State University, 1965.


Wilkes, Mary Nell, Assistant Professor of Business Education (1956). B. S., Texas Women’s University, 1939; M. B. E., University of Colorado, 1961.


Woodard, Francis O., Professor and Chairman of Department of Economics, and Coordinator of Graduate Studies in Economics (1965). B. S., University of Nebraska, 1941; M. A., ibid., 1958; Ph. D., ibid., 1962.

Wu, Dah Cheng, Assistant Professor of Geology (1968). B. S., National Taiwan University, 1962; M. S., University of Oklahoma, 1966; Ph. D., ibid., 1969.


Wynn, Claude T., Assistant Professor of Administration (1965). B. B. A., University of Wichita, 1962; M. S. B. A., ibid., 1933.


Youngman, Arthur L., Assistant Professor of Biology (1965). B. A., Montana State University, 1959; M. S., Western Reserve University, 1961; Ph. D., University of Texas, 1965.

Zandler, Melvin E., Assistant Professor of Chemistry (1966). B. A., Friends University, 1960; M. S., University of Wichita, 1963; Ph. D., Arizona State University, 1965.


Zumwalt, Glen W., Distinguished Professor of Aeronautical Engineering (1968). B. S., University of Texas, 1948; B. S. M. E., ibid., 1949; M. S. M. E., ibid., 1953; Ph. D., University of Illinois, 1959.

RETIRED FACULTY

Albright, Penrose S., Professor Emeritus of Physics (1943). B. S., Renssalaer Polytechnic Institute, 1922; M. S., University of Wisconsin, 1929; Ph. D., ibid., 1936.

Aldrich, Benjamin M., Professor Emeritus of Mechanical Engineering (1956). B. S. M. E., University of Nebraska, 1927; M. S., South Dakota College, 1934; Registered Professional Engineer.

Angulo, J. E., Retired Assistant Professor of Spanish (1961). B. S., Instituto Santiago de Cuba, 1921; A. B., Friends University, 1925; M. A., University of Kansas, 1931.


Branch, Hazel Elisabeth, Professor Emeritus of Zoology (1922). B. A., University of Kansas, 1908; A. M., ibid., 1912; Ph. D., Cornell University, 1921.

Downing, Jacquetta, Professor Emeritus of French (1917). A. B., Fairmount College, 1921; B. M., ibid., 1921; A. M., University of Kansas, 1922; L'Institut de Phonetique (Sorbonne), 1929.

Fletcher, Worth A., Professor Emeritus of Chemistry (1927). A. B., University of Indiana, 1925; M. A., ibid., 1926; Ph. D., ibid., 1927.

Gossett, Lucille, Assistant Professor Emeritus of English (1937). B. A., Baker University, 1922; M. A., University of Wichita, 1940.


Haymaker, Mary, Associate Professor Emeritus of English (1925). A. B., Fairmount College, 1925; M. A., University of Colorado, 1927.
Hekhuis, Lambertus, Dean Emeritus of College of Liberal Arts and Sciences (1926). A. B., Hope College, 1913; M. A., ibid., 1916; B. D., University of Chicago, 1925; Ph. D., ibid., 1925.

Hinton, Evelyn A., Associate Professor Emeritus of Educational Psychology (1929). Graduate, Columbia Normal School of Physical Education at Chicago, 1924; B. A., University of Wichita, 1929; M. S., University of Washington, 1938.


Ricketts, Faye Margaret, Associate Professor Emeritus of Business Education (1931). A. B., Business Administration, University of Wichita, 1927; M. B. A., University of Texas, 1932.


Rydjord, John, Dean Emeritus of Graduate School (1926). A. B., University of Wisconsin, 1922; M. A., Northwestern University, 1923; Ph. D., University of California, Berkeley, 1925.


Wilner, George D., Professor Emeritus of Speech and Dramatic Art (1923). A. B., University of Michigan, 1917; A. M., ibid., 1919.

Wrestler, Ferna E., Associate Professor Emeritus of Mathematics (1947). B. S., Kansas State Teachers College of Pittsburg, 1924; A. B., University of Kansas, 1925; M. A., ibid., 1926.


APPLIED MUSIC INSTRUCTORS—1970-1971

Bickford, Mary
Bryant, Steven
Daniels, Shirley
Eubanks, Don
Fear, Judith
Jones, Stephen
Kasper, Kathryn
Melhouse, Dennis
Pease, Beatrice
Reed, Sharon

Scott, Rob G.
Southard, Jacqueline
Spoons, James
Steele, Terry
Strunk, Kathleen
Thomas, Frank
Unrau, Mildred
Wood, Joyce
Yenne, Janet

LECTURERS—1970-1971

Addison, Larry L.—Mathematics
Almquist, David D.—Dental Hygiene
Barbosa, Ruth M.—Spanish
Bauman, Alice—Physical Education

Beene, Peggy—Medical Technology
Benedict, Esther E.—Mathematics
Bevis, Clyde E.—Police Science
Biles, Karen—Medical Technology
Blackwood, Wallace B.—Mathematics
Blakely, Max F.—Administration
Blakemore, Glenn A.—Speech
Boothe, Byron—Journalism
Borthwick, Donald R.—Accounting
Brefeldt, John C.—Economics
Britton, Regina—Art
Brooks, Nancy A.—Sociology
Brumaghim, Joan T.—Psychology
Burch, Patricia—Sociology
Burger, Sister Ann Catherine—Medical Technology
Burns, Paul D.—Romance Languages
Cannon, Robert—Medical Technology
Cardenas, Michael P.—Mathematics
Carr, Dennis—Medical Technology
Carrier, Cecil C.—Geology
Carr, Dr. James B.—Medical Technology
Chaffin, Wilma—Headstart
Challender, Craig—English
Craig, M. Dennice—Anthropology
Crews, Robert T.—Medical Technology
Cris, Carthur—Speech and Religion
Duckworth, Kenneth—Police Science
Duggan, Louis E.—Industrial Engineering
Eckert, Dr. William G.—Medical Technology
Focht, A. Jack—Police Science
Frahm, Robert—Medical Technology
Franklin, Eugene—Speech
Fritz, Dr. George—Medical Technology
Gerlach, E. Hugh, Jr.—Medical Technology
Giovanis, Ethel—Medical Technology
Gire, Terry H.—Political Science
Glenn, William M.—Speech
Goering, Dr. Robert C.—Medical Technology
Granger, Carey Donald—Secondary Education
Guilley, L. Lorenlle—Educational Psychology
Hamilton, Beryl A.—Political Science
Hamilton, Stella—Mathematics
Haney, Philip E.—Accounting
Hannon, Floyd B., Jr.—Police Science
Hayes, Lance—Speech
Hayes, Patricia—Speech
Henrichs, Audrey—Dental Hygiene
Herstein, Samuel—Industrial Engineering
Highsmith, Mary O.—Educational Psychology
Hiratzka, Dr. Tom—Medical Technology and Inhalation Therapy
Hogan, Linda—Medical Technology
Holmes, Jeannette R.—Secondary Education
Humann, Paul—Speech
Hunter, Ruby—Medical Technology
Jackson, Frances—Music
Jenkinson, Barbara—Elementary Education
Johnson, Kathryn—Medical Technology
Johnson, Robert L.—Religion
Jones, Betty—Medical Technology
Jones, Clint—Inhalation Therapy
Jones, John C.—Medical Technology
Jones, Jordan—Police Science
Judd, William S.—Secondary Education
Kastor, Sue D.—Art
Kelly, Dr. Robert H.—Medical Technology
Kice, Nancy Jane—Medical Technology
Klassen, Darlene—Dental Hygiene
Knorr, Margaret—Physical Education
Koontz, Mary Jane—Elementary Education
LaFever, Janice—English
Lank, Claudette—Medical Technology
Lent, Hortensia G.—Spanish
Lewis, Vashti—English and Headstart
Lies, Janiece—Medical Technology
Linsner, James D.—Mathematics
Lobemeyer, Jeanne—English
Madec, Daniel—French
Madison, Dr. Ward N., Jr.—Medical Technology
Marsh, Dr. Harry H.—Medical Technology
Martin, Thomas—Mathematics
Martinez, Frank—Spanish
Marymount, Dr. Jesse—Medical Technology
McConachie, Bettie—Physical Education
McNally, Crystal—Library Science
McQueen, Jimmie C.—Mathematics
McReynolds, Dr. C. R.—Medical Technology
Melcher, Edward L.—Administration
Mier, Mildred—Physical Education
Miller, Margaret J.—University College
Moen, Roger O.—Administration
Molloy, Vera—Elementary Education
Moore, Jean Oliver—Speech
Morgan, Betty L.—University College
Morra, Michael—Psychology and Headstart
Nance, Louise—Medical Technology
Nathan, C. Henry—Speech Education
Nickel, Phyllis A.—Business Education
Noone, James J.—Speech
Oswald, Charles R.—Police Science
Owens, Helen M.—Secondary Education
Oxley, Dr. Dwight—Medical Technology
Page, Judy D.—Speech
Palmer, Lora—Dental Hygiene
Pearson, Charles G.—Journalism
Pease, Beatrice Sanford—Music
Peebles, Carol—Medical Technology
Pfeffer, Viola P.—Library Science
Phares, Alan, Jr.—Logopedics
Pierpoint, Pat—Business Education
Pinkerton, James L.—Administration
Pletcher, Sammie—Dental Hygiene
Poley, Frances—Mathematics
Prather, John—Speech
Pringle, Buford F.—Secondary Education
Ramstack, S. C.—Speech
Reals, Dr. William J.—Medical Technology
Reece, Willard T.—Religion
Reed, Anthony C.—Journalism
Regehr, Jerry—Inhalation Therapy
Rhoads, Ellen C.—Anthropology
Richardson, Robert W.—Industrial Education
Riddel, James V., Jr.—Speech
Roe, J. Myrhe—English and Speech
Roller, Francis—Mathematics
Ross, Ralph M.—History
Royal, S. J.—Speech
Ruth, Lonnie R.—Mathematics
Sanborn, Keith—Speech
Schmitt, Irene L.—Administration
Silliman, Dr. Y. E.—Medical Technology
Simpson, Roy M.—Industrial Education
Smith, Elizabeth Ruth—Biology
Spann, Dr. Richard—Inhalation Therapy
Stephan, Robert T.—Speech
Stucky, Virginia—Nutrition
Swanson, Janis—Medical Technology
Taylor, Dr. Ruth S.—Medical Technology
Tharp, Rosemary—Inhalation Therapy
Troutman, Loretta J.—Mathematics
Villalpando, Innes J.—Spanish
Vollmer, George—English
Voth, Ken—Medical Technology
Wagner, Barbara—Medical Technology
Wheeler, Leslie J.—Police Science
Whisman, Shirley—Medical Technology
White, Claude G.—Medical Technology
Wolverton, John D.—Mathematics
WICHITA STATE UNIVERSITY

DESCRIPTION OF THE UNIVERSITY

Wichita State University, an urban university located in Kansas' largest metropolitan area, provides educational opportunity for students of varying ages, races and nationalities.

More than 12,300 students are enrolled in both daytime and evening courses offered by the various colleges and schools of the University. Better than 5,000 of the student body are men and women over age 40, and the University has the largest minority race enrollment of any college or university in a 14-state region.

Students at Wichita State University can choose from more than 100 areas of academic concentration within the University's eight schools and colleges. These academic units are University College, Fairmount College of Liberal Arts and Sciences, College of Business Administration, College of Education, College of Engineering, College of Health Related Professions, College of Fine Arts and the Graduate School.

In addition, the University offers an eight-week Summer Session with an enrollment larger than any other college or university in Kansas.

The academic programs at Wichita State University culminate in bachelor's, master's, specialist's and, in some cases, doctoral degrees. The University is cooperating with the University of Kansas in offering doctorates in aeronautical engineering and chemistry and offers its own doctoral degree in logopedics.

The four basic objectives of Wichita State University are: to provide general education; to provide advanced and special education; to provide continuing educational opportunities for adults, and to provide graduate studies and stimulate research.

The objectives are met through the full employment of the University's varied resources. General education is provided through the core curriculum of the University and is fostered by enrolling all entering freshman students in a "general" college known as University College. Advanced and special education are provided through the various major studies in liberal arts and sciences and in the degree programs of the professional colleges or schools.

The Division of Continuing Education provides ongoing educational opportunities for adults through special seminars, workshops, classes and related University programs and activities.

Graduate studies and research, the fourth objective, are accomplished through a variety of graduate programs authorized by the
State Board of Regents and through the ongoing programs of University research and sponsored research. Implicit in all objectives of the University is student welfare and continuing public service.

HISTORY

Wichita State University began as Fairmount College, founded by the Congregational Church, in 1895. In 1926, Wichita citizens voted to make Fairmount College the Municipal University of Wichita. On July 1, 1964, the University was officially added to the state system of higher education, as an associate of the University of Kansas, through an act of the 1963 session of the state legislature.

Although no longer an associate of the University of Kansas, Wichita State University is proud of its cooperative doctoral programs offered in conjunction with the University of Kansas.

Wichita State has grown from 12 students to more than 12,300 students and from 5 instructors to more than 700 faculty members since its beginning. Since 1964, the University has nearly doubled its enrollment and has more than doubled its budget.

Governance of the University has evolved with its changes in legal status as an institution. Originally led by the Congregational Church, the University was under the direction of a Board of Trustees from 1926 to 1964 as the Municipal University of Wichita. In its present status, Wichita State University is one of six state institutions of higher education governed by the Kansas State Board of Regents.

ACCREDITATION AND ASSOCIATIONS

Programs at Wichita State University are accredited by the following professional organizations: North Central Association of Colleges and Secondary Schools, the National Council for the Accreditation of Teacher Education, the National Association of Schools of Music, the Engineers’ Council for Professional Development (Aeronautical, Electrical and Mechanical), the American Chemical Society Committee for the Professional Training of Chemists and the American Association of Colleges and Schools of Business.

Women graduates of the University with bachelor’s degrees or higher are eligible for membership in the American Association of University Women.

ADMISSION REQUIREMENTS

All students entering Wichita State University for the first time must file an application for admission with the Office of Admissions,
Wichita State University. Transcripts of high school and college work must be submitted before a student may enroll.

Transcripts received in the office of the Dean of Admissions will not be returned to the applicant. If the student enrolls, the transcripts are retained by the University for its official files. If a student does not enroll, the transcripts are destroyed. The admission of a student is independent of race, nationality, or creed.

New students may begin their college study during the Summer Session, the Fall Semester, or the Spring Semester. The application and supporting transcripts must be received well in advance of the term in which the applicant wishes to begin study. An application for admission should be mailed by June 1 for the fall semester and by December 1 for the spring semester. Both application and transcripts of previous work must be received on or before August 1 for fall registration and January 1 for spring registration. Applications by Kansas residents received after these dates will be processed as vacancies in University programs permit. High school seniors are encouraged to make application early during the senior year of high school. Prospective students are invited to visit the campus for the purpose of discussing their educational plans with University staff members, and the student should begin his visit by reporting first to the Admissions Office, Jardine Hall.

Freshmen

Any graduate of an accredited Kansas high school who has not previously attended a college will be admitted on application to Wichita State University. A graduate of an out-of-state accredited high school or preparatory school will be eligible for admission if the applicant ranks in the upper one-half of his high school graduating class. Exceptions may be made under special circumstances when valid reasons prevail. Priority of admission among out-of-state students will be given to sons and daughters of alumni of this University.

An applicant without a secondary school diploma who wishes to be considered for admission to freshman standing should present his case to the Office of Admissions. Students who have not completed high school may be admitted upon the presentation of fifteen acceptable units of proper quality, statement from the high school principal, and approval of admissions committee. The University Committee on Admissions will examine the evidence for admission and make its determination upon the individual merits of the case.

Admission of special students is restricted to persons over 21 years of age who are not candidates for degrees. Upon completion of sixty semester hours with a 2.00 average, a special student may petition for admission to regular standing. Any other special peti-
tioner should present his case through the Office of Admissions for
the Committee on Admissions.

All entering freshmen are enrolled in University College and are
required to complete the American College Testing Program Bat-
tery and a Health Certificate as a part of their enrollment in
University College. The dean of University College will send all
freshmen complete information about orientation and enrollment.
High school seniors should arrange to complete the American
College Testing Program Battery through the offices of their high
school principal or counselor.

Transfers

Students who have been enrolled in other colleges or universities
will be eligible for admission to undergraduate study if they have
honorable dismissal from the last recognized college or university
attended and meet the required scholastic standards of Wichita
State University.

Transfer students with 24 or more hours of acceptable college
credit are not required to complete the freshmen examinations.

Transfer students with 24 or more acceptable hours, and not on
probation, are eligible to apply for admission to a baccalaureate
degree college if they meet specific requirements.

ADMISSION TO ADVANCED STANDING

The regulations governing admission to advanced standing in
the colleges of Wichita State University are administered by a
committee on advanced standing which evaluates the credentials
of each candidate.

These credentials must include original official transcripts of
preparatory school records and college records, and a certificate
stating that the student is eligible to return to the college or uni-
versity last attended. Students transferring from a junior college
must complete at least two years of additional college work to
qualify for graduation in a four-year curriculum. In no case will
work done in a junior college be credited as work of the junior or
senior years in the University.

A student transferring from an accredited institution shall receive
the credit in the courses submitted, without presentation of a written
examination, provided it supplements the work in the curriculum in
which he is enrolled.

The distribution of courses which are to fulfill either a major or
minor presented by a transfer student must be approved by the
head of the department concerned. In the event the courses trans-
ferred complete the pattern required at Wichita State University,
the requirement of additional work is at the discretion of the de-
partment head. Should the pattern involve two or more departments, approval of each must be secured.

**CREDIT BY EXAMINATION**

Advanced standing credit may be obtained by examination. A student desiring advanced standing credit by examination should file a petition with the Committee on Admission, Advanced Standing, and Exceptional Programs. If the request for an examination is approved by the committee, the student will pay the Business Office a $5.00 fee. Upon presentation of the receipt from the Business Office, the assigned instructor will give the examination. Credit will be granted only if a grade of C or better is attained and approval is given by the Committee. D and F grades will be recorded on the student's transcript.

**ADVANCED PLACEMENT CREDIT**

The designation “Advanced Placement”—programs, or credit, refers specifically to the courses offered in many high schools, constructed and coordinated under the supervision of the College Entrance Examination Board; examinations furnished by the C. E. E. B. are taken by the student and later sent to the Educational Testing Service for grading, and subsequently sent by E. T. S. to the college or university of the student's choice. Tests are assigned grades from a low of (1) to a high of (5); at most universities such numerical designations have no necessary relationship to letter grades, although most universities automatically grant credit for a grade of 4 or 5, and in some cases for a 3.

At Wichita State University, Advanced Placement Credit may be granted in the areas of Biology, Chemistry, English, French, German, History, Latin, Mathematics, Physics, and Spanish. The corresponding university department, however, reserves the right to determine the eligibility of the student for Advanced Placement credit. Such credit may be regarded as comparable to other transfer credit, in that no fee is charged, nor is the student re-examined over such credit or content.

Entering freshmen who present scores on the CEEB test will be credited as follows: for a score of 5, automatic credit in both English 111 and 211; for a score of 4, automatic credit in English 111. Students planning to major in English may be permitted to enroll in English 225 in lieu of 211 upon recommendation of the English Department.

Advanced Placement credit may be established on the strength of successful scores earned on the College Board's College-Level Examination Program (CLEP). Students who pass the CLEP examinations with 65th percentile scores or better will be given
three hours of credit in the respective core curriculum area for which the test is presented.

ADMISSION TO GRADUATE SCHOOL

Wichita State University offers graduate work in the following departments: Accounting, Administration, Aeronautical Engineering, Anthropology, Art, Biology, Chemistry, Economics, Electrical Engineering, English, Geology, History, Logopedics, Mathematics, Mechanical Engineering, Music, Philosophy, Physical Education, Physics, Political Science, Psychology, Sociology, Spanish, and Teacher Education.

For admission to full graduate standing an applicant must have a minimum 2.5 grade average in all work undertaken during the junior and senior years, and a four-year minimum average of 2.5 in his major and minor work.

Application for admission to graduate standing must be filed with the Graduate School three weeks in advance of the registration day, and must be accompanied by two complete and official transcripts of all college work.

Students have no official status in the Graduate School until their applications and transcripts are on file and the transcripts have been evaluated by the Graduate Office.

An application to candidacy should be filed in the Graduate Office upon completion of 15 graduate hours which will be applied toward a degree. This application must be filed at least one semester prior to the semester in which the student expects to complete his program.

Specific requirements vary from department to department and are listed in the Graduate Bulletin. This bulletin should be consulted for information about the requirements in a particular program.

Graduate Credit for Seniors

Seniors at Wichita State University who have an overall grade point index of 3.0 or about in the major field and in upper division courses and who are within 10 hours of completing the Bachelor's degree may take work for graduate credit. However, this work must be beyond the requirements for their undergraduate degrees for which they must then be enrolled; and, the students must have been admitted to the Graduate School. Application for graduate credit must be made to the Graduate School and approved by the Graduate Office, the student's undergraduate Dean, and his major advisor, before the course(s) may be taken for graduate credit. For further information inquire at the graduate office or request a graduate bulletin from the Dean of the Graduate School.
REGISTRATION

Specific information regarding registration is set forth in the Schedule of Classes published each semester and summer session. Registration will not be permitted after the second week of classes. Falsification of information or withholding of information pertinent to records of the University is grounds for dismissal from the University.

RESIDENCE DEFINED

The residence of students entering Wichita State University is determined by an act of the legislature (Sec. 76-2701 G. S. 1949) which reads as follows:

“Persons entering the state educational institutions who, if adults, have not been, or if minors, whose parents have not been, residents of the state of Kansas for six months prior to matriculation in the state educational institutions, are non-residents for the purpose of the payment of matriculation and incidental fees: Provided further, That no person shall be deemed to have gained residence in this state for the aforesaid purpose while or during the elapse of time attending such institutions as a student, nor while a student of any seminary of learning, unless in the case of a minor who has neither lived with nor been supported by his parents or either of them for three years or more prior to enrollment and during said years has been a resident in good faith of the state of Kansas.”

The responsibility of registering under proper residence is placed on the student. If there is any possible question of residence under the rules of the college, it is the duty of the student when registering and paying fees to raise the question with the Office of Admissions and Records. If the student disagrees with the residency determination, he shall within 30 days from the date of opening of such semester or term give notice in writing to the Office of Admissions and Records of appeal to the Committee of said decision. If notice of said appeal is not given in writing within 30 days, the determination of the Office of Admissions and Records shall be binding upon said student.

Reporting change of address: Each student is required to report his correct address at the time of registration each semester. This must be the student’s actual place of residence and will be the one to which all University correspondence will be sent. If any change in residence is made during the semester, the new address must be reported within three days to the Enrollment Office.

FEES

The current fees, listed below, are subject to change by action of the Board of Regents and/or the Legislature.
Tuition

Resident (Graduate and Undergraduate) ................... $12.00 per cr. hour
Nonresident (Graduate and Undergraduate) ............... $31.65 per cr. hour

Campus Privilege Fee

The Campus Privilege Fee is required of every student enrolled for work on or off the Wichita State University campus at the rate of $2.65 per credit or clock hour during the regular semesters and $2.40 during the summer session, in accordance with University policy. The fee will be distributed to pay revenue bonds for Parking, Student Union, Stadium addition and Library, and for Student Health Services, Athletic Admissions, forensic, student government association, University Forum, student publications, concerts, drama, opera productions, etc.

Library Revenue Bond Fee

A Library Revenue Bond Fee of $2.50 per student per semester and summer session, is charged to support the Library Revenue Bond issue.

Audit Courses

The charge per semester hour for courses audited is the same as for courses taken for credit. The charge for noncredit courses, unless otherwise specified, is the same as for credit courses.

Departmental Fees

1. Music—During the academic school year, undergraduates enrolled in six or more hours will be charged no fees for the following ensembles: Music 111-512A, 111-512B, 111-512F, and 111-512M. No fees will be charged graduate students enrolled in the above courses. Summer Session: No fees for these ensembles will be charged to undergraduate or graduate students enrolled for two or more credit hours in courses other than the above.

2. Mechanical Engineering—No fee will be charged for the ME 300 course, monthly lecture course.

3. Aerospace Studies Fee—$9.50 per year.

4. Military Science Fee—$9.50 per year.

5. Music—Practice Room Rental Fee: No additional charge for graduate or undergraduate students enrolled in a program with major emphasis in music or for music minors in the College of Education or Fairmount College of Liberal Arts and Sciences. The schedule below applies to all other persons:

<table>
<thead>
<tr>
<th>Resident and Nonresident</th>
<th>Regular Semester</th>
<th>Summer Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organ (University)</td>
<td>$10.00</td>
<td>$5.00</td>
</tr>
<tr>
<td>All Other</td>
<td>5.00</td>
<td>3.00</td>
</tr>
</tbody>
</table>

48 WICHITA STATE UNIVERSITY
Instrument Rental: Instrument Rental fee of $4.50 per semester or summer session is charged each student requesting the use of a musical instrument owned by Wichita State University.

Private Lessons: No additional charge for undergraduate students enrolled in nine or more hours in a program with major emphasis in music, wherein applied music is required in the program, or for music minors in the College of Education or Fairmount College of Liberal Arts and Sciences. No additional charge for graduate students pursuing a degree program in music, regardless of credit hour load. The schedule below applies to all other persons.

<table>
<thead>
<tr>
<th></th>
<th>Regular Semester</th>
<th>Summer Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost for 1 credit hour</td>
<td>$23.00</td>
<td>$11.50</td>
</tr>
<tr>
<td>Cost for 2 credit hours</td>
<td>42.00</td>
<td>21.00</td>
</tr>
</tbody>
</table>

Miscellaneous Fees

Late Registration Fees:
- 1 through 3 hours ........................................... $5.00
- 4 through 6 hours ......................................... 10.00
- 7 or more hours ............................................. 15.00

This fee is charged for registration after the beginning of classes.

Credit by Examination—advanced standing ....................... $5.00

Dropping of Course, after enrollment completion ............... $5.00

Identification Card Fee—permanent card ......................... 1.00

Orientation, all new freshmen .................................. 5.00

Transcript per copy charge after first copy ..................... 1.00

Unpaid Fees

Records of students who leave the University with uncleared obligations may be impounded in the Records Office, and no transcript of record will be issued unless the account is cleared. A student will not be permitted to enroll unless all fees are paid.

Teacher Placement Fee ........................................ $2.00

Testing Fee .................................................. 5.00

Deposits

In certain courses deposits are required to cover the cost of supplies and equipment furnished by the University for the convenience of the student, to provide for the replacement of University equipment checked out to the individual student and lost or broken while in his possession. That portion of the deposit, if any, which remains after the actual cost of those services has been deducted will be returned to the student at the completion of the semester. The following courses require deposits as indicated.

Chemistry: All laboratory courses ................................ each $10.00

Geology: 225 ........................................... each 5.00

Assessment and Collection

The Office of Admissions and Records is responsible for assessment of student fees; the Controller is responsible for their collec-
tion. A committee consisting of the Assistant to the President for Finance and Business Manager, the Director of Summer School and Workshops, and a faculty member from the College of Business Administration constitutes a Board of Appeals for students who believe their fees have been incorrectly assessed. The decision of this committee is final.

Period of Payment

All semester fees (including private music lesson fees, practice room rental fees, the laboratory fees) are due and payable in full not later than thirteen calendar days after the day of beginning of classes of the semester. The enrollment of any student whose fees are not paid in full on the fourteenth calendar day after day of beginning of classes will be canceled by the Office of Admissions and Records. (Fees of students sponsored by recognized foundations or loan funds are presumed to be paid on presentation to the Controller of written recognition of responsibility for such fees.)

Refund Policy

The following refund policy shall apply to the tuition, campus privilege, private lessons and practice room rental fees, except $15 of non-returnable fees (students carrying seven hours or less, non-returnable fee is $5), upon application, for a student who withdraws:

1. Within thirteen days after the first day of classes ............... 100%
2. After the thirteenth day after the first day of classes and during the first one-third of the semester or summer session .................. 50%
3. After the first one-third of the semester or summer session ........ None

REGULATIONS GOVERNING SCHOLARSHIP

GRADING NOTATION

Grades are A, B, C, D, I, F, WF, Wd, Au, Cr. and NCR.
A—Indicates distinguished achievement.
B—Indicates superior achievement.
C—Indicates average achievement.
D—Indicates below average.
F—Indicates failure; the work must be repeated in class in order to receive credit.
WF—Indicates withdrawal from a course in which the student was doing failing work. Counts as F.
Wd—Indicates withdrawal from a course in which the student was doing passing work.
Au—Indicates audit.
Cr—Indicates credit.
NCR—No credit received.
The grade incomplete (I) is used when a student may have further time, at the discretion of the instructor, to complete the required work. This work must be completed by the end of the sixth week of classes of the semester in which the student re-enrolls. If the work is not completed in this period, the incomplete grade becomes an F. If a student re-enrolls in a course in which he has received an incomplete grade, the incomplete will become either an F or a Wd at the discretion of the instructor or Dean.

No student may enroll in any course more than three times. Each time a student's academic record shows any grade, including Wd or WF, for a given course, this constitutes an enrollment in that course. Exceptions may be made by concurrence, in writing, of the heads of the student's major department and the department offering the course. No course in which a grade of "C" or better has been earned may be repeated for credit.

An auditor may register in a class but will receive no credit. He may do all of the required work, a portion thereof, or no work at all. For the record, attendance and failure to do the required work will be reported to the respective deans. Fees for audit are identical with those set for the credit course. Auditing a course later to be pursued for credit is not approved.

The change from audit to credit in the course, or the reverse, is effected through the regular change of course cards with the attendant signatures required. No student may make the change from credit to audit unless he is earning a passing grade at the time of the change. After the tenth week of the semester, the student may not change from credit to audit.

The grade CR is given for successful completion in courses for which no letter grade is given.

CREDIT—NO CREDIT COURSES

A student may take credit-no credit courses up to a maximum of 24 hours. Courses taken for credit-no credit must be outside the student's major, except as allowed by individual departments. A student may choose whether to take a course as a credit-no credit by the end of the drop period by indicating his choice through his Dean's office. Otherwise the course will be treated as a regular graded course. Once a student has decided to take the course as graded or as credit-no credit, he may not change his enrollment from "graded" to "credit-no credit," or vice versa. A grade below a C will be recorded as NCR (no credit received) on the student's transcript. Repeat courses taken initially for a letter grade may not subsequently be taken for CR-NCR, but a course initially taken for CR-NCR may be repeated for CR-NCR if the student has received an NCR grade. Credit-no credit courses shall not count on a student's G.P.A. However, upon fulfilling the requirements for
graduation, the student’s overall G.P.A. shall be applied to his credit-no credit hours. A student may take no more than two courses of credit-no credit per semester. Credit-no credit courses will apply only to undergraduate students.

All courses numbered below 100 and all Personal Development courses are automatically CR-NCR. These CR-NCR courses are not counted in the 24 hours of CR-NCR maximum permitted.

CREDIT POINTS AND CREDIT POINT INDEX

For each hour of work which the student takes, credit points are given according to the grade attained as follows: A, 4 points; B, 3 points; C, 2 points; D, 1 point; I, Wd, and Au, F and WF, no points. The “credit point index” for any term is calculated by dividing the number of credit points earned by the number of credit hours attempted and for which a grade (including F and WF) was received. The “cumulative credit point index” is calculated by dividing the Total number of credit points earned in college by the Total number of credit hours attempted and for which a grade (including F and WF) has been received. Exception: When a course is repeated for credit, the last enrollment and grade will be used in computing the cumulative grade point index.

PROBATION AND DISMISSAL STANDARDS

Regulations governing probation and dismissal standards are established by the various colleges of the University and are to be found in the introductory statement for each college.

CLASSIFICATION OF STUDENTS

Students are to be classified according to the following table:

FRESHMEN: Under 24 semester hours and 48 credit points.

SOPHOMORES: 24 semester hours and 48 credit points.

JUNIORS: 50 semester hours and 120 credit points.

SENIORS: 90 semester hours and 200 credit points.

ELIGIBILITY FOR COURSES

Courses numbered 99 or below are not acceptable for credit in a baccalaureate college.

Courses numbered 100 to 199 are primarily for freshmen, but students from other classes may be admitted for lower division credit.

Courses numbered 200 to 299 are primarily for sophomores, but juniors and seniors may be admitted for lower division credit. Freshmen may be admitted if they are qualified and are not expressly excluded.

Courses numbered 300 to 399 are primarily for juniors. Seniors will be admitted. Freshmen and sophomores are excluded except as noted.
Courses numbered 400 to 499 are primarily for seniors. Juniors may be admitted if they meet the prerequisites and are not specifically excluded. Freshmen and sophomores are excluded except as noted.

Courses numbered 500 to 699 are for graduate students only, and no student may be admitted to these courses unless he has been admitted to the Graduate School. See page 46 for special conditions under which seniors may be admitted to graduate courses.

Students with completed prerequisites in industrial education, language, engineering, logopedics, mathematics, natural sciences, aerospace studies, and military science courses may be admitted to upper division courses in sequence for upper division credit. With these exceptions lower division courses must be taken exclusively until the student has completed 50 hours and 120 credit points, when he may elect upper division courses.

University College students are not eligible for enrollment in upper division courses unless admitted through the exception noted above, or by virtue of a 3.25, or higher, grade average.

KEY TO COURSE SYMBOLS

When two course numbers are joined by a hyphen (-), the first semester is prerequisite to the second; when the numbers have an ampersand (&) between them, the two semesters may be taken in either order. Unless specifically noted otherwise, the first course listed is offered in the fall semester, the second in the spring.

The number of hours of credit for each course is indicated in parentheses following the course title. The number of class meetings per week is normally the same as the number of credit hours. Two hours of laboratory work are usually required for one hour credit. In courses involving other than lecture periods, the following symbols are used: R, lecture; L, laboratory; C, conference; D, demonstration.

LIMITATIONS ON STUDENT LOAD

Except in the School of Engineering, the maximum semester schedule for freshmen is 16 hours, for sophomores 17 hours, and for upperclassmen 18 hours, to each of which may be added one hour of military or aerospace studies or physical education. Half the hours of a course audited count toward the maximum. To register in upper division courses, except by special permission, a student must have completed 50 semester hours and attained 120 credit points.

A student whose average for the last 30 hours of work or whose overall average for more than 30 semester hours is 2.600 or above may apply to his Dean for permission to take one hour in excess of the maximum load in any session; if the average is 3.000 he may
apply for permission to carry two hours in excess. A student with a cumulative credit point index of 3.25 or above may carry more than two excess hours during a semester or summer term without petition. Students in the School of Engineering must apply for permission to take hours in excess of those prescribed in the engineering curricula. In order to be eligible to apply for excess hours at least a portion of the students’ prior work must have been taken in Wichita State University.

EXEMPTIONS FOR SUPERIOR ACHIEVEMENT

A student who has completed a minimum of twelve hours at Wichita State University and has a cumulative credit point index of at least 3.25 and a credit point index of at least 3.00 the previous semester may be granted the following privileges:

(1) Exemptions from regulations governing the maximum number of hours a student can take during a semester or summer term.
(2) Exemption from college regulations, if any, governing the maximum number of hours a student can take during a semester in one department.
(3) Permission to enroll in 300 and 400 courses prior to having established 50 semester hours and 120 credit points.
(4) Permission to have course prerequisites waived with the consent of the instructor of the course and the head of the department in which the course is taken.

UNIVERSITY HONORS PROGRAM

The University Honors Program consists of designated sections, specially designed courses and related activities established to help outstanding students find challenging and enriched learning situations. It is one of several avenues leading toward a fuller intellectual life for those who might benefit from smaller classes, seminar situations and independent study.

General policies for the Program are established by the Honors Committee and are administered by an Honors Coordinator who is administratively accountable to the Vice-president for Academic Affairs.

A student may enter the Program at any stage in his career that he and the Honors Coordinator believe he may profit from such work. Prospective students or students already enrolled in the University would contact the Coordinator for information on taking part in the Program. Any student who has completed 30 semester hours at Wichita State University with a grade point average of 3.25 may enroll in any Honors course or section for which he is otherwise eligible.

Students are expected to perform at a “B” level, equivalent to a 3.0 grade point average; but no student will be dropped from the
Program until his performance falls below expectation for at least two consecutive semesters, and then only after an opportunity for consultation and appeals from any such decision.

INDEPENDENT STUDY LEADING TO A DEGREE WITH DEPARTMENTAL HONORS

Outstanding students may enroll in their junior and senior years in Independent Study, which may lead to a degree with departmental honors if the work is satisfactorily completed. Any student who has junior standing and a cumulative grade point index of at least 3.00 is eligible to undertake a project in his major area of study. A student desiring to undertake Independent Study should consult with the Honors Coordinator and obtain approval of the instructor under whom the work will be performed, his departmental chairman and the dean of his college. The application must be filed with the Honors Coordinator and be approved by the Honors Committee not later than the registration time for the student’s last semester in the University, or the semester for which he desires credit for the work, whichever comes earlier.

An Independent Study project should consist of original research or of creative work of an outstanding order. In order to graduate with departmental honors the student should complete his project and write up the results according to specifications established by the Honors Coordinator. He must then stand examination on his project and such aspects of his major field of study as appear relevant. The Honors Coordinator, in consultation with the student’s instructor, will appoint a three member faculty committee to conduct the examination and determine the student’s eligibility for graduation with Departmental Honors. Should the student not secure such a degree either because of failure to complete his project or failure in the examination, he will receive academic credit toward the regular degree for the credit hours completed, with the grade determined by the instructor under whom the work was performed. In no case may any student receive more than six hours of credit for such Independent Study.

STUDENT RESPONSIBILITY

(1) The student shall consult his adviser on all matters pertaining to his academic career, including any change in his program.

(2) The student shall observe all regulations of his college, and shall select courses according to the requirements of his college.

(3) The student shall attend all meetings of each class for which he is enrolled. The instructor will announce at the beginning of the semester whether he considers attendance in computing final grades.

(4) The student shall fulfill all requirements for graduation.

(5) The student shall be personally responsible for the fulfillment
of all University requirements and the observation of all University
regulations.
(6) **Summons by Advisers and other officers:** Students are ex-
pected to answer promptly, written notices of Advisers, Faculty,
Deans, Student Health and other University Officers.

**WITHDRAWAL**

**Voluntary Withdrawal**

Voluntary withdrawal on the part of the student from a course
or courses in which he is enrolled must follow official procedure:

**PROCEDURE:**

(1) Consult adviser, obtain Drop slip(s) at this time, and have
adviser sign in appropriate place.
(2) Take Drop slip(s) to instructor(s) for grade and signature.
(3) Take Drop slip(s) and Certificate of Registration to Dean’s
Office for final signature.
(4) Take completed Drop slip(s) and Certificate of Registration
to the Enrollment Office.
(5) Refund, if any, will be made according to the schedule
published in the Schedule of Classes.
(6) Complete withdrawal from the University must be made
in writing to the Dean’s Office.

**Grade**

(1) A Drop slip marked “Wd” indicates that withdrawal from
the course has occurred, but no grade has been earned.
(2) A Drop slip marked “WF” indicates that withdrawal from
the course has occurred, that a grade of “WF” will appear on the
student’s permanent record, and that this grade will count as an
“F” when the student’s grade point average is calculated.
(3) During the first ten weeks of the semester (or the correspond-
ing period of a summer session), a student may withdraw by official
procedure from a course with either “Wd” or “WF” depending on
his status in the course at the time of withdrawal, as judged by his
instructor.
(4) After the tenth week of the semester (or the corresponding
period of a summer session), a student who withdraws from a
course shall receive the grade of “WF” unless he makes complete
withdrawal from the University, in which case his grades shall be
determined by his instructors according to his status in the courses
at the time of withdrawal.

**Administrative Withdrawal**

Administrative Withdrawal may be initiated by the student’s
Dean’s Office in the following instances:
Class attendance so irregular that in the instructor's opinion full benefit cannot be derived from the course;
Consecutive absence for two weeks or more;
Failure to withdraw from one or more classes by the official procedure given above;
Failure to make complete withdrawal from the University by the official procedure given above;
Failure to be accepted by a baccalaureate college before the completion of 72 credit hours;
Behavior prejudicial to the University.

PROCEDURE
(1) The student will be notified by the Dean's Office before final action is taken, and will be given a chance to explain his position.
(2) In the case of official notices from the Dean's Office which are ignored, or returned because the address given by the student at the time of enrollment is incorrect, Administrative Withdrawal will take place.

GRADE
A grade of "WF" will be officially recorded on the student's permanent record for a course or courses from which he is officially withdrawn; this grade will count as an "F" when the student's grade point average is calculated.

RULES REGARDING EXAMINATIONS
No re-examination shall be given. The grade received on a regular quiz or examination shall be final.
Special examinations, when requested, will be given only with the dean's consent.
A student who misses an assigned examination should arrange with his instructor to take a make-up examination. The dean of the college will serve as arbitrator only when he deems it necessary.

UNIVERSITY REQUIREMENTS FOR GRADUATION
A total of at least 124 hours of credit, acceptable toward the degree for which the student is working, is required. This means hours of credit earned and does not include courses with grades of F, Wd, WF, Au, NCR, or I.
In addition, a student must have a credit point index of 2.000 or over at the time of graduation. This rule applies to students whose first day of admission to any institution of collegiate rank was on or after September, 1958.
For the purpose of graduation, a grade point average of 2.000 or better must be earned on all work taken at this University which could be applied to the degree sought.
A credit point index of 2.000 or better must be achieved in the student's major.

No student shall be allowed credit toward graduation for D grade work in excess of one-quarter of total hours.

A minimum of 40 hours must be taken in courses numbered 300 and 400 after a total of at least 50 hours and 120 credit points has been attained.

At least 30 hours must be taken at Wichita State University and 24 of the last 30 hours or 50 of the last 60 hours must be taken in residence.

Not more than six hours of the last thirty or ten hours of the total number of hours required for graduation may be nonresident work, such as extension or correspondence courses, provided the dean of college consents.

PRESCRIBED FIELDS OF STUDY (CORE CURRICULUM)

(I) Mathematics and Natural Sciences: 9 hours. Courses must be taken in at least 2 of the four subdivisions; a minimum of four hours must be a laboratory science.

(a) Mathematics: Any mathematics course taken for degree credit.


(c) Biology: 100 (4), 111 (4), 112 (4). Biological Science: 102 (5).

(d) Engineering: 127 (3), 225 (3), 300 (3).

(II) Communications: 8 hours. 6 hours must be in English composition or grammar * and 2 in Speech 111.

(a) English: 111 * (3); and one of the following courses: 211 (3), 225 † (3), 311 (3), 312 (3), 313 (3), 314 (3).

(b) Speech: 111 (2), additional courses: 212 (2), 228 (3).

(III) Humanities: 12-15 hours. ‡ Courses must be taken in at least 3 of the six subdivisions.

(a) Art: All Art History courses except 407g and 463.

Music: 113 (2), 114 (2), 161 (2), 315 (2), 316 (2), 331 (3), 332 (3), 493 (2); ensembles and applied music where background justifies. Speech: 143 (3).

(b) History: 101 (4), 102 (4), 103 (4), 109 (4), 131 (4), 132 (4), and all other History courses except 300 and 498.

* Students exceptionally qualified in English as selected by the English Department may be exempted from the composition requirement or may be invited to enroll in English 211 rather than 111. These students, upon completion of English 211 or upon recommendation of the Department, will have satisfied their English Communications requirements: Otherwise they must complete the requirements with one of the additional English courses listed above under "Communications."

† For English Majors and Minors.

‡ Selection from III and IV must total 24 hours with a minimum of 12 in group III and a minimum of 9 in group IV.
(c) Literature (English or foreign): English 103 (3), 104 (3), 201 (3), 223 (3), 224 (3), 240 (3), 252 (3), 280 (3), 309 (3), 343 (3), plus all literature courses as alternates; French, German, or Spanish literature courses.

(d) Philosophy and Religion: Philosophy, all courses; Religion, all courses.

(e) American Studies: All courses except 498 and 499.

(f) Humanities: 102 (4).

(IV) Social Sciences: 9-12 hours. Courses must be taken in at least 3 of the five subdivisions.

(a) Anthropology: All courses.

(b) Economics: BA 211 (3), BA 212 (3), Eco. 211 (3), Eco. 212 (3), Eco. 221 (3), Eco. 222 (3), any upper division course.

(c) Political Science: All 100 and 200-level courses, except 150 and 200.

(d) Psychology: 111 (3), all other psychology courses.

(e) Sociology: 111 (3). All other sociology courses may be counted after the student has completed Sociology 111.

(V) Electives: 4 hours. Four hours of electives in courses offered by any department except the student’s major department. (Exception: Music majors may take marching band, and physical education majors may take physical education in the 101-108 series under this section.) These electives may include courses in aerospace studies, military science, physical education, and marching band.

ADDITIONAL REQUIREMENTS

The credits of transfer students will be evaluated on the basis of the nature of the course at the institution from which the transfer is made.

The student must meet the specific graduation requirements of the college from which he expects to graduate.

The specific requirements for major and minor fields of study must be met.

A student whose college program has not been interrupted by more than two consecutive calendar years may graduate under the requirements in effect at the University on the date he first entered any College or University or the requirements of any subsequent catalog; provided however, that in no case will a student be allowed to graduate under the requirements of a catalog in effect earlier than two years preceding his matriculation at this University. If his college program has been interrupted by more than two consecutive years a student will be subject to the catalog requirements in effect when he re-enters, or if he elects, the requirements of a later catalog.

*Selection from III and IV must total 24 hours with a minimum of 12 in group III and a minimum of 9 in group IV.

WICHITA STATE UNIVERSITY 59
RECOGNITION FOR OUTSTANDING ACADEMIC PERFORMANCE

Graduation With Excellence

Degrees are conferred with distinction upon students who have shown exceptional scholarship. Students attaining a scholarship index of 3.90 receive the *summa cum laude*, those with an index of 3.55 receive the *magna cum laude*, and those with an index of 3.25 receive the *cum laude* award. Those performing Independent Study and meeting the appropriate requirements (see p. 55) will graduate with Departmental Honors.

Deans’ Honor Rolls

The Dean’s Honor Roll shall be composed of those students enrolled in twelve or more hours of work which may include up to six hours of credit no-credit work and who achieve a grade point index of 3.25 or higher on such work. No student receiving no credit on a credit no-credit enrollment may be included on the Dean’s Honor Roll in that semester.

Attendance for Second Degree

To be eligible for a second bachelor’s degree a student must complete 30 hours in residence in the school from which a second degree is sought in addition to the work required for the first bachelor’s degree.

STUDENT PERSONNEL SERVICES

Student services of universities today concern themselves with the noncurricular aspects of a student’s development. At Wichita State University, such services are the responsibility of the Division of Student Services. All requests for information not provided in this catalog should be addressed to the Dean of Students.

Human Relations

Wichita State University, in pursuit of its educational goals, welcomes students of all races, nations, and creeds. It is guided by the principle that equal opportunity and access to facilities, programs, and services shall be available to all. The University accepts, as a primary responsibility, the implementation of this principle in its own affairs and in its relations with the broader community of which it is a part.

ORIENTATION

Advance Registration Period

Special orientation programs are presented through small group interaction and discussions, led by trained student leaders, for new
fall semester students to become acquainted with the University, college life, University faculty, and other new students. Personal goals, objectives and expectations are discussed during these summer programs.

Shocker Week

Prior to the first day of classes, numerous educational and social activities are presented to better acquaint new students with the campus. Library and campus tours are arranged; an activities open house is presented, involving many organizations which new students may find interesting; a prominent off-campus speaker is featured; special programs for residence hall students are planned; educational and entertaining films are shown; and the annual Shocker Week Dance provides an early opportunity to meet fellow students.

COUNSELING

Professional Counseling is available on a voluntary basis for students seeking such services. Areas specifically served include:

1. Emotional and adjustment difficulties.
2. Vocational and professional planning.
3. Marital counseling.
4. Educational counseling as related to 1, 2, and 3 above.

TESTING CENTER

Each student working toward a degree must take the American College Test. Information regarding this test and interpretation of scores is available upon request. Special tests measuring interests, abilities, and personality are available in connection with the services of the Counseling Center. Information regarding national testing programs (Graduate Record Examination, etc.) is also available at the Center.

ADVISEMENT

Each student is assigned to a faculty member whose responsibility it is to advise him in academic matters. In the event that either the student or the faculty member feels that the student is in need of more professional services, a referral to the Counseling Center may be made.

INTERNATIONAL STUDENTS

The University welcomes students from abroad. There are, however, no scholarships or grants available to the newly-entering undergraduate international student, so it is imperative that he have sufficient funds to cover his expenses while in this country.

International students who qualify for admission to Graduate
School may apply to their Department Head or the Dean of their college for information on graduate fellowships and assistantships. A few small scholarships are available, upon application, to international students after the successful completion of one year's study at this University.

Admission Requirements

1. Graduation from an accredited high school or college.
3. Notarized statement of financial responsibility in an amount of $3,250 or more to cover expenses for 12 months.
4. Enrollment in at least 12 hours at the undergraduate level and in at least 9 hours if qualified at the graduate level.

For further information, write to the International Program Director.

CAREER PLANNING AND PLACEMENT CENTER

The Career Planning and Placement Center, located in Morrison Hall, provides career planning and employment placement services to assist undergraduate students, graduating seniors, graduate students, and alumni.

Placement services cover all types of employment (with the exception of teaching positions) including part-time school jobs and summer employment as well as permanent career positions for graduates and alumni.

The Career Planning and Placement Center receives direct employment listings daily from employers in the Wichita area, Kansas, and the nation. Also, many company and government agency recruiters from all over the United States visit the Career Planning and Placement Center each year.

Considerable emphasis is also placed on career guidance and counseling with the main objective toward assisting the student to: study himself, explore occupational areas, choose an occupational area, make a decision either to embark on graduate study or to select an entry position, plan a job campaign, prepare for job interviews, and choose an entry position.

Occupational and career information, employer directories, information on employment trends and opportunities, recruiting literature, and annual salary survey reports are all available in the Career Planning and Placement Center. A special Graduate School Opportunities section has been added to assist students in planning for advanced study.

TEACHER PLACEMENT BUREAU

Assistance is given to students and alumni desiring teaching positions. The service is available only to students who have completed
15 semester hours at Wichita State University and who have an over-all C average. The registration fee of $2.00 is to be paid to the University cashier. Application forms may be obtained from the Teacher Placement Bureau.

VETERANS’ AFFAIRS AND SELECTIVE SERVICE

There are certain problems of special concern to veterans and to those students who must maintain continuing relations with local draft boards. Students who have problems or questions pertaining to veterans' benefits or selective service should contact the Director of Admissions and Records.

READING IMPROVEMENT LABORATORY

The University provides special aid to students who wish to improve skills in reading and study habits. A course aimed primarily at reading improvement is available. In connection with this service a battery of tests is administered, and through individual conferences an attempt is made to identify particular weaknesses and to suggest ways to overcome them. A further description of the reading course can be found in the listings of the University College.

HOUSING

The Wichita State University housing policy for 1971-72 classifies the various housing units for students as follows:

1. University-approved housing. (a) University-owned residence halls—Grace Wilkie, Brennan No. 1, No. 2, and No. 3—required for freshmen to extent of capacity.
   (b) Privately-owned residence hall—Fairmount Towers.
   (c) Fraternities.

2. University-registered housing. Apartments, single rooms, houses, etc., which are nondiscriminatory on the basis of race, creed, or color.

   The policy further states: 1. All single freshmen under 21 years of age enrolled in 9 or more credit hours who are not living with relative or guardian are required to live in University-approved housing, with priority given to University-owned housing.
   3. All other students can select their own accommodations; however, University-approved housing is highly recommended. Listings of registered housing facilities are available in the Housing Office.
   4. Special exceptions to these regulations will be reviewed by the Housing Office.

   Admission to the University does not mean automatic room reservation, but each student admitted will receive a card from the Admissions Office to be filled in and returned to the Housing Office. Upon receipt of this card, proper information will be sent by the

WICHITA STATE UNIVERSITY 63
Housing Office. However, for prior or additional information at any time, please write to the Director of Housing, Morrison Hall, Wichita State University, Wichita, Kansas.

Contract costs—University-owned Residence Halls. Room and board—$925.00 per year or $462.50 per semester. Installment payments may be arranged.

All housing contracts, whether for university-owned or privately-owned housing, are made on a 9-month basis, unless specific arrangements are made to the contrary.

The University reserves the right to make policy adjustments where the situation demands and to change the residence of any student or to deny or cancel residence accommodations of any student in cases where such action is deemed desirable.

STUDENT GOVERNMENT

Wichita State University believes that one of its primary tasks is educating for the responsibilities of citizenship in our democratic society. With this in mind, it places an ever increasing emphasis on the role that the Student Government Association plays on the campus.

The S. G. A., under its present constitution, is divided into three organs of student government. The Cabinet, Senate, and Student-Faculty Court carry out the executive, legislative, and judicial functions respectively.

In addition to sponsoring such student activities as Freshman Orientation, Hippodrome, Parents Day, and May Day, the Senate, which is completely student elected, charters and registers all other student organizations subordinate to it. It recommends to the President of the University the names of students to be appointed to University committees and advises the University Administration on the student views about policy.

THE COURT OF STUDENT ACADEMIC APPEALS

The University faculty has established a procedure to adjudicate disputes arising out of the classroom. The jurisdiction of the Court includes appeals from students who feel they have been treated unfairly either as to the course grade they receive, or in countering charges of plagiarism, cheating, etc., that an instructor may levy. The Court is regarded as an agency to resolve differences that cannot be settled within the framework of the student-faculty classroom relationship.

Any student may use the appeal procedure. Forms are available in the Dean of Students' Office. The general procedure will be explained to students when they pick up the form.

The Court is an important safeguard for students.
STUDENT HEALTH AND HOSPITALIZATION

Wichita State University maintains a Student Health Service staffed by community physicians. The staff are members of the American College Health Association, an organization which attempts to standardize practices regarding activities in American colleges and universities.

All new and transfer students, or students registering anew after an interruption of their program, working toward a degree and enrolled for nine (9) or more credit hours, are required to submit to the Student Health Service a “Medical History and Physical Examination Form” signed by a licensed physician (M.D.). The appropriate form will be mailed to all new applicants for admission to the University, or may be obtained from the Student Health Service.

The nurse may be seen at the Student Health Service Office for first aid, illness, or counseling regarding personal health problems. Services of the staff physicians are available by appointment during the scheduled clinic hours as posted in the Student Health Service Office. Polio, tetanus, and flu immunizations are offered to those desiring them. Summaries of medical health records are prepared for students upon request. A terminal physical examination is optional for senior students.

The Wichita State University student body has chosen to participate in the Blue Cross-Blue Shield group plan for accident and sickness coverage. Opportunities to participate in the program are offered at the beginning of each regular semester. Information is available at the Student Health Service Office.

THE CAMPUS ACTIVITIES CENTER

The Campus Activities Center is designed to provide recreational areas, lounging and reading rooms and opportunities for student groups to meet and carry on their programs. Dining facilities are available to the students, faculty, and their friends. The bookstore stock texts and supplies which meet the students' day-to-day campus needs. The program of activities is planned by the Program Board, a representative body of students, faculty, and alumni.

The Campus Activities Center is the community center of the university, for all the members of the University family—students, faculty, administration, alumni and guests. It is not just a building; it is also an organization and a program.

As a part of the educational program of the university, it serves as a center for training students in social responsibility and for leadership in our democracy.

In all its processes it encourages self-directed activity, giving maximum opportunity for self-realization and for growth in individual social competency and group effectiveness. Its goal is the
development of persons as well as intellects. The Center serves as a unifying force in the life of the university, cultivating enduring regard for and loyalty to the university.

**RELIGIOUS ACTIVITIES**

The University welcomes the participation of a number of campus religious groups offering a variety of activities to students. Their programs are developed through campus organizations and/or centers and directors. These programs include informal discussion groups, counseling, worship, service projects, and attendance at off-campus conferences. The value of these resources is recognized within the University community. The WSU registration packet includes an optional religious preference card which is made available to campus religious advisers.

**ORGANIZATIONS**

Student organizations may be granted the privilege of (1) the use of names in which the name of the University is embodied or suggested, and (2) the use of the University rooms or grounds for meetings and of bulletin boards for announcements, only if they have filed their registration forms furnishing the Student Government Association with lists of officers and other executive members, statements of purposes, and copies of constitution and by-laws.

**FRATERNAL ORGANIZATIONS**

Seven national sororities are recognized by Panhellenic Council at the University: Alpha Chi Omega, Alpha Kappa Alpha, Alpha Phi, Delta Delta Delta, Delta Gamma, Gamma Phi Beta, and Sigma Gamma Rho. Delta Sigma Theta has been recognized by the Student Government Association and is in the process of seeking recognition by the Panhellenic Council. Eight national fraternities are recognized by the Interfraternity Council: Alpha Phi Alpha, Beta Theta Pi, Delta Upsilon, Kappa Sigma, Phi Delta Theta, Sigma Alpha Epsilon, Sigma Chi Sigma, and Sigma Phi Epsilon. In addition, two national fraternities have been recognized by the Student Government Association: Kappa Alpha Psi and Omega Psi Phi.

**Fraternity and Sorority Awards**

Each year there is awarded to the fraternity having the highest scholastic average a silver loving cup and to the sorority having the highest average an engraved plaque. The fraternity and sorority so honored are in possession of the awards for one year at the end of which time new awards are made and the trophies go to the new winners.
Independent Students Association

An Independent Students Association exists on the campus to promote friendship among the student body, as well as to further the educational and social interests of its members.

HONORARY ORGANIZATIONS

Alpha Kappa Delta—Sociology
Beta Gamma Sigma—Business Administration
Delta Sigma Rho-Tau Kappa Alpha—Forensics
Eta Kappa Nu—Electrical Engineering
Honors Society—Honor Students
Kappa Delta Pi—Education
Kappa Kappa Psi—Bandsmen
Kappa Mu Psi—Radio-TV
Kappa Pi—Art
Lambda Alpha—Anthropology
Lambda Iota Tau—Literature
Men’s Honor Five—Service, scholarship, leadership (men)
Mortar Board—Service, scholarship, leadership (women)
Mu Phi Epsilon—Music (women)
National Collegiate Players (Pi Epsilon Delta)
Omicron Delta Kappa—Senior (men)
Phi Alpha Theta—History
Phi Delta Kappa—Education
Phi Eta Sigma—Freshmen (men)
Phi Kappa Phi—University-wide
Phi Mu Alpha Sinfonia—Music
Phi Sigma Tau—Philosophy
Pi Delta Phi—French
Pi Sigma Alpha—Political Science
Pi Tau Sigma—Mechanical Engineering
Psi Chi—Psychology
Sigma Alpha Eta—Speech and Hearing
Sigma Delta Chi—Journalism
Sigma Delta Pi—Spanish
Sigma Gamma Epsilon—Geology
Sigma Gamma Tau—Aeronautical Engineering
Sigma Pi Sigma—Physics
Spurs—Sophomore Women
Tau Beta Pi—Engineering
Tau Beta Sigma—Band (women)
Zeta Phi Eta—Speech Arts

OTHER ORGANIZATIONS AND ACTIVITIES

Accounting Club
Alphabettes
Alpha Kappa Psi (Business and Commerce)
Alpha Phi Omega (Service)
American Institute of Aeronautics and Astronautics
American Society of Mechanical Engineers
American Society of Tool and Manufacturing Engineers
Ananda Marga Yoga Society
Anchorettes
Angel Flight
Anthropology Club
Arab Club
Army Blues
Arnold Air Society (AFROTC Cadets)
Art Council
Art Education
Associated Women Students (A. W. S.)
Association for Environmental Improvement
Baha‘i
Baptist Student Union
Biology Club
Black Student Union
Brennan Hall III
Brennan Residence Hall Association
Campus Activities Center Program Board
Campus Crusade for Christ
Campus Girl Scouts
Canterbury Club
Chemistry Club
Chess Club
Christian Science Organization
Circolo Italiano
Committee for Student Rights
Debate Society
Dialectica (Philosophy)
Engineering Council
Epsilon Chi
Film Society
Flying Club
Geology Club
Harvard Club
Health Related Professions Organization
Industrial Arts Club
Institute of Electronics and Electrical Engineers
Inter-Fraternity Council
International Club
Inter-Residence Council
Inter-Varsity Christian Fellowship
Jewish Student Organization
Kansas Mobilization Committee to End the War in Viet Nam
le Cercle Francais
Liberal Arts Council
Little Sisters of Minerva of SAE
Lutheran Chapel and Student Center
Men's Physical Education Major's Club
Mexican-American Students Association
Newman Club
Orchesis (Modern Dance)
Parnassus
Pershing Rifles
Pep Council
Political Science Club
Pre-Law Club
Psychology Club
Rodeo Club
Scabbard and Blade
Shoutin' Shockers
Sky Diving Club
Society of Automotive Engineers
Spanish Club
Student Advertising Club
Student Affiliate Chapter of American Chemical Society
Student American Federation of Teachers
Student Book Exchange
Student Branch of the Association for Childhood Education
Student Government Association
Student Music Educators National Conference
Student Education Association
Student Physics Society
Student Religious Liberals (Unitarian Universalist)
Student Volunteer Tutorial
Sunflower
S-Wheat Shockers
Theta Sigma
Varsity Rifle Team
Veterans on Campus
Wichita Association for Peace in the Middle East
Wichita Islamic Foundation
Women's Liberation
Women's Panhellenic Council
Women's Physical Education Major's Club
Women's Recreational Association (W. R. A.)
Young Americans for Freedom
Young Democrats
ASSISTANTSHIPS AND STUDENT EMPLOYMENT

Graduate Assistantships

Graduate assistantship grants are made in several departments upon recommendation of the department concerned and the Dean of the Graduate School. These assistantships carry a stipend of up to $2400. Application should be made to the Dean of the Graduate School.

Undergraduate Employment

Students may earn a portion of their educational expenses through part-time employment during the school year either through the Regular Student Employment Program or the College Work-Study Program.

Application for Regular Employment may be made to the particular department or to the Placement Office for aid in finding employment. Application for Work-Study Employment is made in the Financial Aids Office.

Eligibility for regular or work-study employment:
(1) Accepted for enrollment or enrolled as a full-time student (12 undergraduate hours or 9 graduate hours).
(2) Need—Students with a demonstrated financial need receive priority in placement. (If justified in terms of need, Work-Study participants may be considered for additional financial aid in the form of scholarships, opportunity grants, and loans.)

Selection of students to be employed will be made by the Office of Student Financial Aid, Room 101, Morrison Hall.

Employment authorizations are subject to the approval of the Financial Aids Office and the Committee on Scholarships and Student Aid.

Departmental Assistants

Academic assistantships are open to upper division students who have been recommended by their respective departments. Departments may select sophomores with outstanding ability. These assistants grade papers, assist in laboratories, and assume the duties of clerical or technical assistants.

Clerical and Technical Assistants

Clerical assistants must be recommended by the department concerned. Technical assistants must have the Committee's permission,
be recommended by the department head, have upper division standing, and have an overall and major department grade of 2.25.

**Library Assistants**

Library work is available to both men and women students. Interested students should apply to the Librarian or to the Student-Alumni Employment Office.

**Custodial and Food Service Workers**

Work is available for a limited number of students in these areas. Interested students should apply to the Office of Buildings and Grounds or to the Office of Director of Food Service.

**Work-Study Program**

This program provides a limited number of part-time work assignments for students who are in need of earnings from such employment so as to pursue their courses of study.

Conditions of eligibility include that a student must:

1. If currently enrolled, be in good standing and in full-time undergraduate or graduate attendance. (Preregistered freshman and transfer students are also eligible.)
2. Be capable of maintaining satisfactory standing while employed.
3. Be a national of the United States or intend to become a permanent resident.

Those students from low-income families will be provided preference in placement, but all students of determined need will be considered for employment.

Employment will be limited to an average of 15 hours per week in which classes are in session, or for not more than 40 hours in any other week.

Selection of students to be employed will be made by the Office of Student Financial Aid, Room 101, Morrison Hall.

**FINANCIAL AIDS AND AWARDS**

Under the provisions of the 1963 Kansas Senate bill No. 152, a Board of Trustees was appointed by the governor. This Board of Trustees administers the endowment property formerly owned by the University of Wichita in support of the educational undertakings of Wichita State University. It receives and administers gifts, bequests and trusts and manages endowed property and funds as prescribed by the donors and approved by the State Board of Regents. Scholarship funds and awards now under the jurisdiction of the Board of Trustees and administered by them in cooperation with the State Board of Regents are listed below.
Educational Opportunity Grants

These grants are made from Federal Funds allocated to Wichita State University under Title IV of the Higher Education Act of 1965. Grants will range from $200 to $1000 per year.

Students who submit Financial Aid applications as of January 1 will be considered for these grants if they qualify under the requirements of the United States Office of Education for the program.

Eligibility will be assessed by consideration of the resources at the students’ command as well as assets of his parents.

Approval for these grants will be based upon the student’s financial need and capability of maintaining good standing. Full-time student status must be maintained.

A “Financial Aid Package” consisting of aid from various qualifying sources is approved for each recipient. The Educational Opportunity Grant portion does not have to be repaid; however, all loans received as a part of the “package” must be repaid. Other matching funds Wichita State University is required to use in approving such a “package” includes student employment, scholarships, and other qualified sources.

Information may be obtained from the office of Student Financial Aid, Room 101, Morrison Hall.

AWARDS

University Citizenship Award

The Wichita Branch of the American Association of University Women established in 1927 an annual gift of $25 to the girl of the junior class who attained the highest efficiency in university citizenship.

American Civilization Research Award

An award of $50 from a fund established by a private donor will be made annually to a student in American Civilization classes whose research project is judged by a selected committee to be the most outstanding submitted during the academic year.

Cosmopolitan Achievement Award in Accounting

Established in 1953. An award of $50 is made annually to an upper-division student with a declared major in accounting upon the recommendation of the Department of Accounting.

Thurlow Lieurance Memorial Fund

This award was established in 1964, is given to a senior in the Music Department of the College of Fine Arts in recognition of scholarship, service to the University and community, and outstanding achievement in the development of his talent.
Frank A. Neff Memorial Award

Established in 1961, in memory of Dean Frank A. Neff, this award is made to the outstanding junior in the College of Business Administration.

Parnassus Service Award

Established in 1954 by the University. This award is given annually to one or more students working on the Parnassus staff upon recommendation of the Student Publications Committee. The total annual stipend paid by the award is $600.

Sunflower Service Award

Established in 1954 by the University. This award is given annually to one or more students working on the Sunflower staff upon recommendation of the Student Publications Committee. The total annual stipend paid by the award is $600.

Larry Ricks Geology Award Fund

Established in 1957, in memory of Larry Ricks. The interest from the investment is used as a cash gift or award made at the end of each academic year to an undergraduate student in Geology who shows great promise and excellence in scholarship.

H. W. Sullivan Award

Established in 1966 in memory of H. W. Sullivan. This award is given annually to the graduating senior who has achieved the highest cumulative grade point index for work completed toward an engineering degree. The award consists of income from the H. W. Sullivan funds.

William H. Swett Prize for Efficiency

William H. Swett, by the terms of his will, established a prize consisting of the income from $5,000. “The yearly income therefrom shall be given at the end of each school year to the graduating student who shall have attained the highest average in his studies and school work during his or her last year in college.” The fund became available in 1924.

SCHOLARSHIPS AND LOAN FUNDS

The following scholarship and loan funds are available to students of Wichita State University. All inquiries regarding student aid and all applications for undergraduate scholarships or loans must be addressed to the Office of Student Financial Aid. Applications for graduate fellowships must be made to the Dean of the Graduate School.
UNDERGRADUATE SCHOLARSHIPS AND FINANCIAL AIDS

Regent's Recognition Scholarship

An honorary award given to a selected group of students with outstanding high school records. Certain special privileges are extended with this scholarship.

The Wichita Chapter of the National Association of Accountants Accounting Awards

These awards, established in 1962 by the Wichita Chapter of the National Association of Accountants, will be presented annually in the amount of $50 to two or more full-time male students who are juniors majoring in accounting. Criteria for selection consist of high academic achievement and qualities of leadership and character. Announcement of award winners will be made at the October meeting of the Association.

Administrative Management Society

Established in 1958 by the Wichita Chapter of the National Office Management Association. This is an annual scholarship in the amount of $350 for a junior in Business Administration majoring in Management. The basis for selection of the recipient will be scholastic achievement and financial need. The final date for application is January 1.

Advertising Club of Wichita Scholarship

Established in 1962 by the Advertising Club of Wichita, the scholarship is an annual award of $300 or $150 per semester to an advertising major or minor of junior or senior status. Criteria are need, scholastic record, and active participation record in outside advertising activities.

Aeronautical Local 733 International Association of Machinists Scholarship

Four scholarships were established in 1962 by Aeronautical Local 733 of the International Association of Machinists. They will be granted to members of Local 733 or their children in the amount of $200 for the year. The primary criterion for selection will be academic achievement. Each year one grant will be made to a freshman, a sophomore, a junior, and a senior. Final date for application is January 1.

Air Force ROTC Scholarships

Awarded to cadets in the AFROTC four-year program on a best qualified, competitive basis. Recipients have all tuition, fees, texts
and lab expenses paid, plus $50 per month in cash. For further information contact the Department of Aerospace Studies.

Alpha Tau Sigma Delta Gamma Elizabeth Spicer and Eva C. Hangen Memorial Scholarship Fund

Established by the alumni of Alpha Tau Sigma Sorority. Interest on the fund to be used to award a scholarship to a deserving member of the Delta Gamma Sorority.

The Wichita State University Alumni Scholarships

Established in 1950 by the Wichita State University Alumni Association, these scholarships are open to incoming freshmen and to undergraduate students. They are awarded on the basis of scholarship and need, and provide from $100 to $300 a year. The final date for application is January 1.

Armed Forces Communications and Electronics Association Scholarship Award

The AFCEA Scholarship in the amount of $500 is awarded annually to a sophomore ROTC student majoring in electronics, communications engineering or technical photography. The award is made on the basis of merit and need. Applications should be submitted to the Professor of Military Science by 15 April.

Army ROTC Scholarship

Established in 1964 by Department of the Army, these scholarships provide for payment of all tuition, books and fees plus $50 per month during the school year. The 4-year scholarship is awarded to qualified high school seniors or other students entering a four-year university for the first time. Awards are made on a best qualified, competitive basis. Three-, two- and one-year scholarships are available to qualified freshmen, sophomore and junior cadets respectively. Further information may be obtained from the Professor of Military Science.

Olive Baker-Nease Scholarship

Established in 1954 by Stephen G. Nease as a memorial to his wife. The annual income from the estate is available for the scholarship stipend. Selection of scholarship winners is based upon need, academic achievement, and personality development. Final date for application is January 1.

Beech Aircraft Corporation Scholarships

Beech Aircraft Corporation, through the Beech Aircraft Foundation, has established two yearly scholarships for entering freshmen.
who are sons or daughters of Beech Aircraft Corporation employees. The grants are for $500.00 each and are renewable for the second, or sophomore, year. Studies to be supported include the fields of Aeronautical, Industrial, and Electrical Engineering; Business Administration, including Accounting, Marketing, Production, Industrial Relations, Computer Application; Political Science; Education, and the Sciences. Students must maintain a grade of "C" or better and write a brief report at the end of the school year for Beech Aircraft Foundation. The final date for application is January 1.

The Olive Ann Beech Civil Aviation Private Pilot's License Award

The Olive Ann Beech Civil Aviation Private Pilot's License Award is presented each year to one member of the Olive Ann Beech Angel Flight and one member of the Walter H. Beech Arnold Air Society. The award provides for complete flying instruction culminating in a private pilot's license for both recipients. Applicants must be a junior or senior member of Angel Flight or Arnold Air Society. Applications for these awards should be submitted no later than September 1 of each year to the Department of Aerospace Studies, WSU Armory.

Olive Ann Beech Music Scholarship Fund

Student applicants must be recommended by the School of Music Scholarship Committee to the Wichita State University Scholarship Committee for scholarship grants. Applicants must be music majors with 3.000 overall grade point average. Grants are not limited to any specific amount.

Walter H. Beech Squadron Scholarship

Established in 1952 by Mrs. Olive Ann Beech and daughters. This scholarship carries a stipend of $600 ($300 per year for two years). Recipient must be a junior or senior and an active member of the Arnold Air Society. The final date for application is January 1.

The Walter H. Beech Scholarships in Aeronautical Engineering and Aerospace Studies

This scholarship is awarded in two parts. The freshman scholarship will be granted to five freshmen for one year in the amount of $250 each on the basis of their high school records and entrance examinations. The upperclass scholarship is awarded at the end of the freshman year to one of the five freshman scholars who attained the best academic record. This award shall be a three-year grant in the amount of $600 annually. A 3.0 grade average must be maintained to retain the scholarship. Final date for application is January 1.
Biological Science Scholarship

The Sedgwick County Medical Society has established a trust fund to provide scholarships for students preparing for careers in medicine or research relating to medicine. One scholarship in the amount of $250 will be granted each year to an incoming freshman. The grant may be renewed each year for three years if the recipient maintains a 3.0 grade average and remains in the biological science field. Final date for application is January 1.

The Boeing Company Scholarships

The Boeing Company contributes annually for scholarship purposes. The scholarship awards substantially cover tuition and fees. The awards are renewable for four years.

Boeing scholarship recipients must be students who enroll in courses leading to a degree in one of the following fields of study: Engineering, mathematics, physics or business administration. In selecting the winners of the scholarships the Committee will consider the applicant's scholastic record, his interest in and personal qualifications for his chosen field of study, character and leadership qualities, and need for financial assistance in carrying on his educational program. Application must be made through the office of Financial Aids no later than January 1.

Luella Bosworth Scholarship Fund

Established in honor of the class of 1902, income from this fund shall be used for scholarship awards to students majoring in English. Classification as a senior and the highest overall grade average will be considered by the Department of English and College of Liberal Arts in recommending students for this Award. Applications are made through the Department of English to the Office of Student Financial Aid prior to the close of each Spring semester.

Merrill Bosworth Music Scholarship

This scholarship, established in 1964, is administered by the School of Music, and is awarded to a music major whose chief performing medium is flute. Final date for application is January 1.

Steven W. Burnam Memorial Scholarship

Established in 1968, this award is made to a Mechanical Engineering student. The award may be renewed as long as scholarship requirements are met.

Marjorie Calkins Piano Scholarship

The Marjorie Calkins Piano Scholarships were created in 1968 through a bequest by Russell Calkins and his son Russell W. Calkins,
III. Designed specifically for Piano majors, this fund provides $300.00 to be awarded annually to a qualified applicant upon recommendation of the School of Music. Applicants should contact the Dean of Fine Arts, Wichita State University, Wichita, Kansas, on or before January 1, of each year.

**Wichita Chapter of Certified Public Accountants Scholarship**

Established in 1957 by the Wichita Chapter of the Kansas Society of Certified Public Accountants, these scholarships are awarded annually to full-time students who have signified their intention of taking a curricular emphasis in accounting and have at least a 3.000 overall grade point index. Other factors considered in granting the scholarships are financial need and accounting potential. The awards may consist of one $300 scholarship, two $150 scholarships, or three $100 scholarships, but, the total must not exceed $300.

**The Ann V. Christian Scholarship**

Established in 1964 by R. V. Christian and family. Income from the fund shall be used for scholarships to entering freshmen majoring in chemistry. Final date for application is January 1.

**City of Wichita Scholarships**

The City Commissioners annually award a sum of money from the one and one-half mill levy for scholarship purposes. The University makes a number of grants covering part or all of the fees to students with outstanding academic records. The grants are for one year and are renewable to students maintaining a B or better average. The stipulations of the scholarships are: Applicant must have a good scholarship record from high school and recommendations. Some grants are based on scholarship alone, others on scholarship and need for financial aid. Final date for application is January 1.

**Flora Colby Clough Scholarship**

Established in 1918, the interest on $500 to be awarded to a young woman in the Fairmount College or Liberal Arts and Sciences, preferably one specializing in English, awarded upon nomination by the English Department.

**Jenkin H. Davies Music Scholarship**

Established in 1964, this scholarship is awarded annually by the School of Music to Music majors. Final date of application is January 1.

**Delta Delta Delta Scholarships**

These are annual scholarships of at least $100 per year given to a junior or senior girl at the time it is awarded. The bases upon
which selection is made are scholastic achievement and financial
need. Applications may be obtained in the Financial Aids Office
at the beginning of second semester.

Ernst & Ernst Accountancy Award

Established in 1967 by Ernst & Ernst, an International CPA firm,
the award of $250 is made annually to a graduate or undergraduate
student majoring in accounting. The winner of the award will be
selected by a committee appointed by the Dean of the College of
Business Administration. The recipient will be known as the Ernst
& Ernst Scholar. To qualify for the award, a student must be en-
rolled in a program leading toward a degree with an emphasis in
accounting and have an interest in the public accounting profession.

Grand Army of the Republic Living Memorial Scholarship: For
a lineal descendant of a Union Veteran of the Civil War. See
Logopedics Scholarships.

The Grand Chapter of the Kansas Order of Eastern Star Scholarship

A scholarship of $300.00 is awarded to an eligible junior for use
in his senior year. The applicant must be a Mason or member of the
Order of the Eastern Star or a child of such members. Applications
may be obtained in the Financial Aids Office. The award will be
made in August.

Dr. John L. Evans Scholarship

Established in 1959, this award is available to those whom the
authorities of the University may deem worthy, whose ability merits
the award, and who need financial help to pursue the Pre-Medical
course at the University. The final date for application is January 1.

Fletcher-McKinley Scholarship Fund

The Fletcher-McKinley Scholarship Fund has been established in
honor of Dr. Worth A. Fletcher, Professor of Chemistry and in
memory of Dr. Lloyd McKinley who also served as Professor of
Chemistry at Wichita State University.

Contributions to this fund are made through the Alumni Office.
The amount of the scholarship will be determined each year by the
amount of income from the fund.

Foreign Student Scholarship

Wichita State University accepts the recommendation of the
Institute of International Education, 800 Second Avenue, New York
17 N. Y. Direct all queries to this address.
The Glen Gardner Memorial Prize

The Glen Gardner Memorial Prize shall be awarded annually at June commencement to a Wichita State University junior student, of a minority group, in recognition of outstanding university and community citizenship, without emphasis on academic attainment. The initial scholarship award shall be at least $300.00. At the appropriate time prior to commencement, the academic vice president and the dean of students of Wichita State University shall submit a list of candidates for the prize to the University Board of Trustees. The Board of Trustees, assisted by Mrs. Glen Gardner, shall then select the recipient.

Sam R. Gardner Memorial Golf Scholarship

This endowed scholarship, established in 1968 by the parents, Mr. and Mrs. Sam M. Gardner, and friends of Sam R. Gardner, is to be awarded to an upperclass student with a grade point average of 2.75 or better. The award will be income from the sum of more than $5,000. A selection will be made upon the recommendation of the coach of intercollegiate golf.

Garvey Geology Scholarship Fund

Scholarships are awarded annually to two or three students majoring in Petroleum Geology in the amounts from $200 to $500, depending on the financial need. The basis for selection of the recipients of these awards are academic achievements, interest and promise in the field of petroleum geology, and financial need. The final date for application is January 1.

Jacob M. and Molly Glickman Scholarship

This endowed scholarship was established by Milton and William B. Glickman in honor of their parents, Jacob M. and Molly Glickman, in 1970. The fund will provide a $500.00 yearly scholarship. The scholarship is restricted to Wichita residents and will be awarded on the basis of academic achievement.

The Harry Gore Scholarship Fund

Established in 1952, the fund provides that one-half of the income shall be used to make scholarship grants. Each scholarship grant is for $6,000 ($1,500 annually for four years), and is made to an entering freshman student. In determining the recipient of a Gore Scholarship the Committee considers the student's scholastic record in high school, his ability and participation in general school activities, and his character, industry, and ambition. The final date for application is January 1.
The Haskins & Sells Foundation Award for Excellence in Accounting

Established in 1966 by Haskins & Sells, an international CPA firm, the award of $500 is made annually to a student who is majoring in accounting and has completed, during the preceding year, the curriculum in accounting normally scheduled for the junior year, and who has enrolled for his senior year at the University. The award winner will be selected by a committee of faculty members to be appointed by the Dean of the College of Business Administration. The selection will be from the five students attaining the highest grade point average in accounting. The recipient of the award will be known as the Haskins & Sells Scholar.

Jim Hershberger Track and Field Scholarship

The Jim Hershberger Annual Track and Field Scholarship was established in 1969. This scholarship, in the amount of $1500.00, shall be awarded to a student-athlete in Track and Field upon recommendation by the University Track and Field coach, Mr. Jim Hershberger, and the University Financial Aids Representative.

Arthur J. Hoare Scholarship in Mathematics

Established in 1957, this fund provides that income shall be used for annual scholarships to students majoring in Mathematics. Students are recommended by the Mathematics Department to the Office of Student Financial Aid for these scholarships. The awards shall not exceed full annual fees and costs of books. Applications are made through the Department of Mathematics prior to the close of each Spring semester.

Earl R. Hutton Scholarship

Established in 1968 in honor of Mr. Earl R. Hutton. Annual award of $1,000.00, providing a renewable four-year scholarship for entering students in Aeronautical Engineering. The scholarship will be awarded on the basis of potential academic achievement in Aeronautical Engineering.

The Independent Insurance Agents of Wichita, Inc.

Established in 1956. Annual scholarship awarded to a junior or senior who is enrolled in the College of Business Administration or in the College of Liberal Arts with a major in economics. Carries a stipend of $375. The final date for application is January 1.

The John C. and Maude A. James Scholarship

Established in 1963 by Maude A. James in honor of her husband, John C. James, the fund provides an income of $500.00 a year to be
awarded to an outstanding senior student in the School of Engineering. Recommendations are made by a committee from the School of Engineering to the Office of Student Financial Aid.

**Kansas Chapter, National Electrical Contractors Association, Inc. Scholarship**

A scholarship of $250.00 will be awarded each year to a freshman and a sophomore majoring in electrical engineering. Selections will be based upon academic achievement, financial need, and character. Final date for application is January 1.

**Kappa Delta Pi, Wichita Alumni Chapter Scholarship**

Established in 1957, by the Wichita Alumni Chapter of Kappa Delta Pi. Provides an annual stipend of $100 awarded to an active member of the Campus Chapter of Kappa Delta Pi based on academic achievement, promise as a teacher and need. Final date for application is January 1.

**Kansas Federation of Women's Club Scholarship**

An award of $200.00 a year will be given to an upperclass woman studying to be a teacher in either elementary or secondary levels. Final date for application is January 1.

**Kappa Pi Art Scholarships**

Established in 1969, two scholarships are available to outstanding undergraduates currently enrolled on the basis of their art ability, and faculty recommendations, on a semester basis in the amount of $100.00 and $50.00. Scholarship money is made available by the student art fairs sponsored by the Alpha Omega Chapter of Kappa Pi, a national honorary art fraternity and Wichita State University. Application dates will be announced each fall and spring.

**The John Fitzgerald Kennedy Memorial Scholarship**

This fund, established in 1964 as a memorial to President John F. Kennedy, was initiated by Temple Emanu-El of Wichita and joined in by the Wichita Catholic Diocese, the Wichita Council of Churches, other organizations, and numerous individuals. This scholarship is to be awarded to academically promising Negro students from Wichita high schools who do not qualify for other scholarships on the basis of superior academic record in high school and who could otherwise not afford a university education. The final date for application is January 1.
KFH Scholarship in Radio

A grant of $300 is awarded annually. The basis upon which the selection of the scholarship winner will be made are academic achievement, need, potentiality for a career in Radio, character and leadership. The final date for application is January 1.

Logopedics Scholarships

The Logopedics Scholarship Fund provides for a limited number of scholarships ranging from $50 to $200 a semester for students planning to major in Logopedics. These scholarships are provided by the Women's Advisory Council of the Institute of Logopedics, Lambda Tau Delta, Sigma Alpha, Chi Sigma, and other interested groups. Applicants are recommended by the Department of Logopedics to the University Scholarship Committee. Further information may be secured by writing to the Scholarship Committee, Institute of Logopedics, Wichita, Kansas. Final dates for application for the Fall Semester is January 1 and November 1 for the Spring Semester.

The Anita Lusk Scholarship

This endowment fund was established by Anita Lusk. The income from this fund is to be used for scholarships to Business students, especially to students recommended by the Business department of Wichita High School West, Wichita, Kansas.

Leonora N. McGregor Scholarship Fund

Established in 1964. Income from this fund shall be used for scholarships for students of Wichita State University. Final date for applications is January 1.

The Men of Webster Scholarship

Established in 1967 by the men of Webster Fraternity, founded in 1895 by Nathaniel Morrison, then president of Fairmount College, which became a local chapter of Delta Upsilon Fraternity in 1959. Income from the funds of The Men of Webster Building Association, accumulated through the efforts of its 1,133 members, will be used to provide one or more scholarships for male students. Financial need is a primary factor of selection along with other usual criteria. Final date for application is January 1.

The Pearl J. Millburn Memorial Scholarship

Established in 1956, the fund provides a four-year scholarship carrying a stipend of $2,000 ($500 annually for four years) awarded to an entering freshman who has graduated from a Wichita public high school with B average or better, a record of high school ac-
tivities, and need for financial assistance. Recipient must maintain a better than average scholastic record in the University and take two years of English and two years of American history during his college course. Usually awarded once every four years. Final date for application is January 1.

**Mortar Board Alumni Scholarship**

Established in 1945, a grant of $100 will be awarded to the sophomore girl having the highest scholastic average at the end of her freshman year.

**Wichita State University Music Scholarships**

Each year a limited number of scholarships are granted to music students planning to major in this field. Evidence of financial need, musical aptitude and overall high school grade average of B or higher constitutes the basis for recommendation for Music Scholarship grants to the University Scholarship Committee. Interested students should contact the Dean of the School of Music, Wichita State University, Wichita, Kansas, for application blanks and detailed information.

**National Society of Bookkeepers Scholarship**

Established in 1964 by the Wichita Chapter of the National Society of Bookkeepers, this scholarship pays the tuition cost of the recipient in Accounting 114. Criteria are financial need, aptitude for bookkeeping, and scholarship. Applicants are chosen by the Department of Accounting, with final selection being made by the Education Committee of the National Bookkeepers' Society.

**Dr. Henry Onsgard Scholarship**

Established in 1958 by former students and friends of Dr. Onsgard. The interest from the investment will be used as a stipend for one or more scholarships awarded annually to an upper-division student majoring in history. Basis for selection will be academic achievement, activities record, personal achievement, and financial need. Final date for application is January 1.

**The Daniel S. Pajes Prize in Art History**

Established in 1971 in memory of Daniel S. Pajes, a sum of $100 to be awarded annually to a Junior student majoring in Art History.

**Payne Memorial Business Education Scholarship**

Established in 1959 in honor of Mr. and Mrs. C. B. Payne. The scholarship is available to business education students. The basis for selection of the winner will be academic achievement and fi-
nancial need. The stipend is $120. The final date for application is January 1.

The Personnel Management Association of Wichita Scholarship

This scholarship is available to a full-time student who has attained junior status and has a proven interest in Personnel Administration, Labor Relations, or Industrial Relations. The award is for $150.00 a semester for four semesters. Academic record must be commensurate with current scholarship requirements. Recipient will receive an honorary membership in the PMAW and must make at least one report to the PMAW each semester. Application blanks and further information are available in the Scholarship Office.

Pi Mu Epsilon Mathematics Scholarship

Established in 1950 by the University of Wichita (Kansas Gamma) chapter of Pi Mu Epsilon, honorary mathematics fraternity, consists of the interest on a scholarship fund. It is awarded to an upper-division student with a declared major in mathematics upon the recommendation of the Department of Mathematics. The award will be made upon the recipient’s enrolling as a mathematics major in the following semester.

The Theodore Presser Foundation Music Scholarship

The Presser Foundation offers scholarships to one or more music majors. The awards are granted each spring by the Committee on Scholarships and Student Aid upon the recommendation of the Music Department faculty. The award is granted to a student in need of financial aid and preference is given to those who expect to become music teachers.

The Wichita Purchasing Agents Association Scholarship

Established in 1964, the scholarship of $400 will be awarded annually to a junior in the College of Business Administration with an emphasis in the Department of Administration or Economics. This scholarship is renewable for the student’s senior year if he is eligible. Final date for application is January 1.

Ritchie Brothers Construction Company Scholarships

The Ritchie Brothers Construction Company will annually award two scholarships, one to a minority student and one to a son or daughter of an employee. Both carry stipends of up to $450 for the year. Basis for selection will be scholarship, need and character. Final date for application is January 1.
The Minisa Chapter (N. S. A. I.) Secretarial Scholarship

Established in 1958 by the Minisa Chapter of the N. S. A. I. An annual award of $300 is granted to a girl who has graduated from a high school in Sedgwick County and who has indicated an intention to enroll in the College of Business Administration with an emphasis in secretary training. Selection of the winner will be made on character, need for financial assistance, personality, and scholastic record in high school. Final date for application is January 1.

The Savings and Loan League of Wichita Scholarship

The Savings and Loan League of Wichita established this scholarship in the amount of $500.00 in 1967. The recipient of this scholarship shall be a graduate of a Sedgwick County high school, a business administration major in his junior or senior year, either male or female, with proven academic ability. Final date for application is January 1.

Social Work Scholarship Fund

A fund established in 1969 by the Wichita Chapter of National Association of Social Workers and the South Central Association of Social Services. Awards from this fund will be made upon recommendation of a subcommittee on Grants and Aids of the Professional Advisory Committee on Social Work Education. Applicants must be enrolled in a field experience course, be a social work major and be approved by a faculty teaching the social work sequence.

The Sorosis Alumnae Award

The interest earned by the Sorosis Alumnae Fund shall be awarded annually to a member of Delta Delta Delta Sorority who has completed at least five semesters of work, with an overall average of 3.0, and who has contributed in some outstanding manner to Wichita State University and the Delta Delta Delta Sorority.

F. C. Sauer Zoology Scholarship

Established in 1937 by Mary E. Sauer, the interest on $1000 to be awarded annually to a deserving student of high scholastic standing above the freshman year, preferably a zoology student, upon the recommendation of the Biology Department.

Wichita Community Theatre Scholarship

Established in 1962, a $250 scholarship will be awarded annually to a high school graduate of the Wichita area. High scholastic
standing and a desire to major in speech are requisites for application. Final date for application is January 1.

Dr. Walter A. Ver Wiebe Scholarship in Geology

Established in 1954 by former students and friends of Professor Walter A. Ver Wiebe. This scholarship bears the stipend of from $1600 to $2000 for four years and is awarded annually (for from $400 to $500 per year), and may be renewed provided the student is academically qualified. The applicant must be a graduate from high school (or the equivalent) with a high scholastic record, sound character, leadership qualities, and have a primary interest in Geology. The applicant must have recommendations and be available for interview. Recommendations are submitted to the University Scholarship Committee. The final date for application is January 1.

David Bard Wainwright Memorial Scholarship Fund

Established in 1968 by Mrs. Sharon Wainwright as a memorial to her husband, 1st Lt. David Bard Wainwright, graduate of WSU College of Education and distinguished military graduate of Army ROTC, who was killed in action in the Republic of Vietnam. Income from the fund will be used for a scholarship award to the outstanding ROTC cadet in sophomore ROTC who has not accepted a Two Year Army ROTC Scholarship. Cadet selected must maintain a minimum grade point average of 2.500, with a minimum of 3.000 in Military Science; he must have made contributions to Army ROTC activities during his freshman and sophomore years to include participation in Pershing Rifles and acquisition of honors for meritorious service. He must possess outstanding personality characteristics.

Wall Memorial Scholarship

This scholarship, given in memory of Lillie Striegel Wall and Henry V. Wall, is awarded to a foreign language major preparing to teach. It is awarded either during the student teaching semester or for summer study in Mexico or Europe. The stipend of $200.00 will be awarded upon basis of need, promise as a teacher, and academic achievement. G. P. A. of 3.000 or better. Final date for application is January 1.

Wichita State University Alumni of Arthur Andersen & Co. Scholarship Fund

Established 1965. Each year alumni of Wichita State University who are employees of Arthur Andersen & Co., an international CPA firm, contribute varying amounts which are matched by the firm to
the Wichita State University Alumni of Arthur Andersen & Co. Scholarship Fund. The purpose of this scholarship fund is to stimulate higher academic achievement on the part of students majoring in accounting. The awards are to be made by a faculty committee organized for such purpose. The committee is to have freedom in selecting the number and amounts of awards to be given. The recipients of the awards are to be known as Arthur Andersen Scholars.

The Grace Wilkie Scholarship

The scholarship is the interest from an invested principal for which women students are eligible; however, preference is given to Grace Wilkie Hall residents.

Women's Aeronautical Association of Kansas Aeronautical Engineering Scholarship

The scholarship is to be awarded to a junior or senior student enrolled in aeronautical engineering and carries a stipend of $400 annually. A grade average of 2.50 or better is required. The final date for application is January 1.

Women's Symphony Society Scholarship

Established by the Women's Symphony Society, the scholarship is open to music majors with a stipend of from $100 to $200 per year. Applications may be obtained through the Dean of the School of Music.

GRADUATE FELLOWSHIPS AND SCHOLARSHIPS

James H. Hibbard Memorial Scholarship

Established in 1952 by the Wichita Foundation of Medical Research. Provides awards to graduate students in Chemistry who are interested in the study of medicine or in research in some phase of medicine.

Kiwanis Scholarship in Public Administration

Established in 1964 a $1500 scholarship is being provided by the Downtown Kiwanis Club for graduate study leading to a Masters degree in Public Administration. Final date for application is January 15.

COMBINED STUDENT LOAN FUND

The special funds described below provide a Combined Student Loan Fund for students with satisfactory scholarship records. Total loans made to one student may not exceed $300 and satisfactory
endorsers are required for all loans. All loans made to students bear interest at the rate of 8.5% and a $3 service charge is made on each loan. The time and manner of repayment is to be agreed upon by the student and the University at the time the loan is made. Application for these loans is made in the Office of Student Financial Aid.

**Barclay Student Loan Fund**

Established in 1931, $100 given by Mr. and Mrs. W. Houston Barclay.

**Dr. L. A. Donnell Loan Fund**

Established in 1959 in memory of Dr. L. A. Donnell. The fund will be incorporated into the Combined Student Loan Fund with money being loaned to deserving and needy students who have satisfactory scholarship records.

**Edwards Loan Fund**

Established in 1910 by R. E. Edwards of Kinsley, available for aiding deserving students to secure an education in Fairmount College, now incorporated in Wichita State University. The article of gift specifies that recipients shall be encouraged to work and to add to the amount such sums as they can, in order that others may receive similar aid in obtaining an education.

**Goldsmith Student Loan Fund**

Established in 1943 by a gift of $2,140 by Dr. and Mrs. W. M. Goldsmith, available to juniors and seniors who have completed one year of residence work at the University of Wichita. The rules governing the fund provide that at least fifty percent of the fund shall be reserved for non-resident students.

**Inter-Racial Good Will Fund**

Established in 1926 for the benefit of Negro students enrolled in the University of Wichita, to be administered jointly by the University and a Commission of Inter-Racial Good Will.

**Laura Piper Hoop Memorial Fund**

Established in 1924 by a gift of $400 made by Major Oscar W. Hoop of the Fairmount class of 1920, in memory of his mother, Laura Piper Hoop. This is to be used as a perpetual loan fund to help worthy students and to be administered according to the discretion of the President of the University.
Fred C. Speh Student Loan Fund

Established in 1931 by Frederic C. Speh in memory of his son, Fred C. Speh, available to juniors and seniors and administered by the President of the University together with the committee. The maximum amount any one student may borrow is $200. Repayment time is governed by the student's financial circumstances and requires life insurance in an amount equal to the sum borrowed.

Student Council Loan Fund

Established in 1932 by the Student Council, a sum of $150 as a loan fund for needy students, preferably needing financial aid to defray graduation expenses.

Dr. T. Walker Weaver Memorial Loan Fund

Established in 1962 by gifts from friends in the memory of Dr. T. Walker Weaver, former Board of Regents member. This fund is to be used for loans to worthy and needy students.

Women's Aeronautical Association Loan Fund

Established in 1940 by the Women's Aeronautical Association of Wichita, a sum of $100 to be loaned to worthy students in the aeronautical curricula.

Women's Bible Class, First Presbyterian Church, Loan Fund

Established to provide assistance to worthy students.

LOAN FUNDS FOR SPECIAL PURPOSES

Alumni Loan Fund

Wichita University Alumni Association Loan Fund, established in 1956 by the Alumni Association of the University of Wichita. All money given by the Alumni Association for this fund is put in the regular loan fund and administered by the Committee on Scholarships and Student Aid.

Boeing Emergency Loan Fund

Established by Boeing Airplane Company. This fund was made available to Wichita State University to make short duration emergency loans to students having financial need who are citizens of the United States, and are making satisfactory academic progress. Any major field of study leading to a bachelor's degree will qualify; some preference is given to engineering and science students.
Christian Conference Loan Fund

Established in 1923 by a friend of Fairmount College, a fund of $300 to enable students more easily to attend Y. M. C. A., Y. W. C. A., and other Christian conferences. Loans may not exceed $75 each and must be repaid within three months after the date of leaving college, interest at four percent, payable annually.

C. U. W. Scholarship and Loan Fund

Established in 1952 by the Council of University Women and consist of $50 to be used only for loans to women and is available to new students on the campus.

Delta Epsilon Loan Fund

Established in 1956 by the Epsilon Chapter of Delta Epsilon, Science Fraternity, to be used for making loans to majors in the following departments: Chemistry, engineering, logopedics, geology, mathematics, physics, psychology, and zoology.

Kansas Engineering Society Loan Fund

Established in 1956 by the Kansas Engineering Society, a fund of $400 to be loaned to worthy students enrolled in accredited engineering curricula. Loans bear service charge but bear interest only after recipient has left the University.

Garvey Loan Fund

Established in 1958 by James S. Garvey, a fund to be loaned to worthy students who meet character, citizenship, and need qualifications.

Lucy Munro Barker Loan Fund

Established in 1968 in honor of Lucy Munro Barker by Aline Rhodes for students majoring in art at Wichita State University.

Wichita Community Theatre, Inc., Loan Fund

Established in 1968. This is to be used for National Defense Student Loan matching funds.

Alpha Phi Omega Loan Fund

Established in 1968 by the Beta Alpha Chapter of the National Service Fraternity. The fund is to be used for matching Federal funds for the National Defense Student Loan Program at Wichita State University.
Gamma Psi—Alpha Phi Omega Loan Fund

Established in 1969 by Gamma Psi of Alpha Chi Omega. This fund is used for National Defense Student Loan Matching funds.

Inter Fraternity Council

Established in 1965 by the Inter Fraternity Council. The fund is used for National Defense Student Loan matching funds.

John Liggett Loan Fund

Established in 1964 by John Liggett. This fund is used for National Defense Student Loan matching funds.

Pete Lightner Memorial Loan Fund

Established in 1962, in memory of Pete Lightner. This fund is to be used for loans to worthy and needy music students or athletes.

Eugene McFarland Loan Fund

Established in 1956 in memory of Dr. McFarland to be used for loans to students majoring in art.

The Robert H. McIsaac Memorial Loan Fund

Robert H. McIsaac Memorial Loan Fund established in 1969 in memory of Robert H. McIsaac, with the fund to be used as matching funds for the National Defense Student Loan Fund. Mr. McIsaac served for many years in the area of Pupil and Personnel Guidance with the Wichita Public Schools. His efforts helped to build a comprehensive guidance program at the Junior High and High School levels in the Wichita Public School System.

Reno B. Myers Memorial Loan Fund for Music Students

Established in 1962 by gifts from friends in the memory of Reno B. Myers. This fund is to be used for loans to worthy and needy students in music.

The Edda H. Lockhead Loan Fund

Established in 1966, through the estate of Mrs. Edda H. Lockhead. The loans in any given year shall not exceed five in number and shall be made to students of junior or senior standing in the Fairmount College of Liberal Arts. The loan to any one student can not exceed the sum of $250.00 per year.

Law Enforcement Education Program

Wichita State University entered this program at its inception (1968) and made its first commitments for the Spring semester 1969.
The funds are provided by the Federal Government through the Law Enforcement Assistance Administration, United States Department of Justice.

Students who are serving in the law enforcement field may be awarded grants for tuition, fees, books and supplies. They may also be eligible for consideration for loans.

Those students who are preparing for careers in law enforcement and are in full-time attendance in approved fields may also be considered for a Law Enforcement Student Loan.

Provision is made for cancellation of loans at the rate of 25 percentum for each year of full-time employment in a public State, local of Federal law enforcement agency. The notes are 3% interest bearing over a maximum of ten years repayment. Deferral of principal and interest is provided for a maximum of 3 years for military service in the Armed Forces of the United States.

National Defense Student Loan Fund

This fund established under Title II of Public Law 85-864 provides for major long-term loans for W.S. U. students of all class levels. Loans are granted on a competitive basis since funds available do not meet the demand. Undergraduates may borrow up to $1000 each year and not more than $5000 during their entire undergraduate program. Graduates may borrow up to $2500 each year. Total loans made to any student may not exceed $10,000.

These loans are made for educational expenses. Interest on these loans do not commence until nine months after leaving attendance. Interest of 3% per year is charged.

The principal payment plus interest thereon is repayable at the rate of 10% annually over a period of 10 years following graduation or leaving school. Monthly, bimonthly, or quarterly payments may be required.

Any borrower who serves as a full-time teacher in a public elementary or secondary school, in a private non-profit elementary or secondary school, or in an institution of higher education may have his loan cancelled at the rate of 10% for each year of approved teaching service up to a maximum of 50% of his total loan. Certain teaching positions qualify for a 15% cancellation rate and a maximum of 100% designated by the Commissioner of Education.

Applications are available at the Office of Student Financial Aid, Room 101, Morrison Hall. Interested applicants should observe deadlines of filing:

- For Fall Semester—January 1.
- For Spring Semester—November 1.
- For Summer Session—April 1.
Douglas Stucky Memorial Loan Fund

Established in 1964, in memory of Douglas Stucky. This fund is used for National Defense Student Loan matching funds.

Newton Teachers Association Loan Fund

Established in 1966 for matching funds for National Defense Loans at Wichita State University.

Minnie Ferguson Owens Loan Fund

Established in 1940 by Dorothy Owens Meyers, a fund of $200 for payment of fees, available to senior students of voice.

Charles E. Parr Loan Fund

Established in 1959 through the estate of Charles E. Parr, a fund to be loaned to worthy students desiring a higher education.

Rollins Memorial Fund

Established in 1927 in honor of Walter Huntington Rollins, third President of Fairmount College, by his classmates of Dartmouth College, Class of 1894, and certain Wichita friends, the sum of $1000 in perpetual trust, the income from which is to form an accumulative revolving fund to be loaned from year to year to a worthy student or students in the Fairmount College of Liberal Arts and Sciences.

Kansas Sales Executive Club Loan Fund

Established in 1957, $1000 available for loans to juniors and seniors with a major in marketing and who have an interest in selling.

Senior Class of 1961 Loan Fund

Established by the Class of 1961. The funds provided will be loaned to worthy and deserving graduating seniors. Repayment may be made after graduation.

George W. Shepherd Memorial Loan Fund

Established in 1962, the funds are to be loaned with no interest charge to students seeking careers as police officers.

United Student Aid Funds Loans

Many banks participate in this program which was designed to make available long-term loans to students.

Applicants contact the bank of their choice (one in the hometown or where residence has been established), complete the necessary
application forms, submit the forms to the Student Financial Aids Office for completion of the Education Certificate, return the application to their bank.

Eligibility policies require that a student be enrolled full-time and capable of maintaining satisfactory standing.

Preference is given to those of sophomore or higher standing; however, a limited number of entering freshmen loans may be available. $1000 per year to a maximum of $3000 on undergraduate work is available. Graduate students may borrow up to $1500 per year. A sum, not to exceed $7,500, may be borrowed including undergraduate and graduate study.

Notes bear 7 percent simple interest from the date of the loan until paid in full.

Federal Guaranteed Loans

This program became effective in September 1967 and is administered through Regional Offices of the Office of Education.

Through this program the maximum undergraduate loan is $1500 per academic year, not to exceed an aggregate total of $5000. The maximum graduate loan is $1500 per academic year, with the total aggregate of undergraduate and graduate not to exceed $7,500. Student with an adjusted family income of less than $15,000 a year pays no interest while in an eligible school. The Federal Government pays the lender the interest during this period. The student begins repayment to the lender when he graduates or withdraws from school.

An educational certificate is required from the Financial Aids Office, Room 101, Morrison Hall. Applications are available there.

Students must then apply to their hometown lending institutions (banks, savings and loan associations, credit unions, etc.).

George D. Wilner Loan Fund

Established in honor of George D. Wilner, Professor Emeritus of Speech and Dramatic Art. The fund is used for National Defense Student Loan matching funds.

Wichita State University Men’s Faculty Club

Established in 1965 by the Men’s Faculty Club of this University. The fund is used for National Defense Student Loan matching funds.

Alice Campbell Wrigley Memorial Loan Fund

Available to students with high academic achievement, interest, and promise in the field of theatre who have financial need.
FOUNDATIONS FOR RELIGIOUS EDUCATION

The Ransom Foundation

Established by Katherine S. Ransom as a memorial for her husband by a gift of $75,000. It is administered as a trust fund under the name of “The Ransom Fund for Religious Education.”

The Butler Foundation

Established by Emily Butler. It is a trust fund of $10,000 to be used for the purpose of assisting in the financing of the “Department of Religious Education of the University of Wichita.”

At the specific request of the trustees of Fairmount College a small portion of the income of the Joint Ransom-Butler Foundation is now set aside annually for use in defraying the cost of outstanding lectures in religion, science and literature.

The Louisa J. Byington Foundation

Established in 1930 and consists of the sum of $1,000 to be used in the Department of Religious Education.
University College

WALTER S. FRIESEN, Ed. D., Dean

All freshmen admitted to Wichita State University are enrolled in University College. Primarily designed to aid the freshman through his first year of higher education, University College provides for the transition from high school into any of the baccalaureate degree colleges, usually at the end of the freshman year. In order to properly acquaint the student with university life, the freshman year is characterized by emphasis upon the use of test results, an intensive faculty advising and orientation program, enrollment in general requirements courses, and the aid of several auxiliary services. Removal of high school deficiencies and fulfilling prerequisites of the baccalaureate colleges should also be accomplished during the first year in University College.

In addition to the Freshman Division, University College also administers the Division of Continuing Education and certain special service courses.

REQUIREMENTS FOR ADMISSION AND REGISTRATION

(1) Complete Application for Admission form and file with the Admissions Office, Wichita State University, listing high school and colleges previously attended.

(2) Request high school and colleges to send official transcripts to the Office of Admissions.

(3) Take the American College Test (ACT) and HAVE RESULTS SENT TO WICHITA STATE UNIVERSITY. Registration blanks and information are available through high school counselors or through the Director of the Testing Center, Wichita State University. (Students transferring to Wichita State University with 24 or more semester hours and at least a 2.0 grade point average are exempted from this requirement.)

(4) Present a health certificate duly signed by a licensed physician. (Certificate will be mailed to the student along with a University College GUIDEBOOK after he has been officially admitted by the Office of Admissions.)

(5) Attend an Orientation and Academic Planning Session before registering. The student must secure three planning documents: A University CATALOG; a semester SCHEDULE OF COURSES booklet; and a PERSONAL PLAN AND RECORD book. Special Orientation and Academic Planning sessions are scheduled daily.
during the July pre-registration program and several times early in the registration week of each semester.

Note to Transfer Students: All transfer students admitted on probation are enrolled in University College and must complete all of the requirements listed, including the filing of ACT scores. Transfer students with 24 or more acceptable hours, and not on probation, should seek admission to one of the six baccalaureate degree colleges.

HIGH SCHOOL PREPARATION

Adequate high school preparation is a prerequisite for admission to introductory college courses and degree-granting colleges. Hence, it is necessary that high school courses be chosen which will provide the proper background for college work. The following requirements are considered a minimum for successful college work and are required if a degree in Liberal Arts and Sciences is desired.

- English—3 units required, 4 recommended.
- Foreign Language *—2 units in one language.
- History and Social Science—2 units required.
- Mathematics †—1½ units algebra, 1 unit geometry.
- Science—2 units of laboratory science, exclusive of general science.

ORIENTATION, PERSONAL PLANNING AND REGISTRATION ACTIVITIES

The most important function of University College is that of academic advising. Faculty from the six degree colleges and successful students from the various academic departments in the University join the professional counselors and staff of University College and the Office of Student Services in providing orientation, personal planning, testing, academic advising and registration services to students in University College.

(1) July Orientation and Registration. All new freshmen and transfers should definitely attend an intensive night and day program of orientation, personal planning and registration in July. Specific information and reservation materials are mailed to all newly admitted students late in the spring or early summer. The advantages for the student are significant: he will have a much better understanding of the University, he will have initiated friendships with other new students and become acquainted with one or more faculty; he will receive much more personal attention

* With the permission of the appropriate department a student with high school credit in foreign language may enroll for college credit at a level one semester below that for which his high school credit makes him eligible. Such permission is granted on an individual basis to students whose language experience has been interrupted, or for whom special circumstances prevail. Without this permission no credit will be given for work done at a level which duplicates high school foreign language study.

† In addition, the College of Engineering requires mathematics through college algebra and trigonometry.
in his planning than is available in the fall enrollment; and he will have space reserved for the classes he chooses.

Note: Students must complete Steps 1-3 of the admission and registration requirements before attending an Orientation and Personal Planning session.

(2) Shocker Week. The Office of Student Services together with the Student Governing Association and all other divisions of the University conducts a special program of orientation activities during registration week in the fall. All new students are expected to participate.

Note: Students who were unable to attend one of the July Orientation and Registration events must attend one of the two-hour Orientation and Personal Planning sessions scheduled during Shocker Week before they are permitted to enroll.

(3) University College Seminars. Two one-hour credit courses have been established to help students develop their personal plans thoughtfully and systematically over a semester time period. PD 100. Freshman Seminar is designed for the new student and is led by a team of advisers and student assistants. PD 102. Occupation Seminar has been created to help students who after several semesters of college work have not been able to decide on an occupational goal or educational major. (See course descriptions on page 105.)

(4) Academic Advising. All students have the benefit of academic advising throughout their stay in University College. Students who have declared an academic major field of study will, in most cases, be advised by faculty from their field. Students who are undecided will be served by University College counselors or faculty advisers from various academic departments. Students enrolled in PD 100. Freshman Seminar, or PD 102. Occupation Seminar will be advised by the Faculty Dons and Student Leaders who direct these courses.

PROBATION AND DISMISSAL STANDARDS

(1) A student will be placed on probation for the next term in which he enrolls if his cumulative grade point index falls below the following levels: (a) 1.500 if the student has earned 1 to 63 credit hours; (b) 1.700 if the student has earned 64 or more credit hours.

(2) A student on probation shall be dismissed if his cumulative grade point index fails to meet the required minimum standards and if his grade point index for the term during which he is on probation falls below 2.000.

(3) See the heading Probation and Dismissal Standards in the general section of this catalog for regulations concerning:

(a) removal of probation

(b) continuing on probation
Students are expected to maintain a C average in all work for which they are registered for credit during any semester. Failure to maintain this standard implies the advisability of limiting the student's program.

No student shall be allowed credit toward graduation for D grade work in excess of one-quarter of total hours.

Only credit of C average or better for work taken at Wichita State University applies toward a degree at W. S. U. One cannot use higher grades from another college or university to make up a less than C grade point average at W. S. U.

At the end of the first eight weeks in each semester, reports of unsatisfactory grades are mailed to the student. It is the student's responsibility to determine the meaning of his unsatisfactory grades, to seek advice and to plan steps to improve his performance. University College advisers and counselors expect to help students analyze their difficulties and make adjustments.

STUDENT RESPONSIBILITY

As part of his adjustment to the university's academic environment, the new student is expected to know the academic rules and regulations of the university as contained in this catalog and the Schedule of Classes booklet. In the event of complete withdrawal, students must complete all the steps of the withdrawal procedure listed in general regulations section of the catalog.

READMISSION ON PROBATION

Students who have been academically dismissed for failure to maintain satisfactory grades must file a written request seeking readmission. Except in rare situations where there are important changes in circumstances, the student will not be readmitted for a period of at least one full semester. Counselors in the University College will advise dismissed students regarding other educational and training opportunities and will consult with students on the request for readmission.

All students readmitted to University College are placed on probation and must register for a course of study approved by the Dean to assist the student to achieve success. Because such a program requires careful planning, the student must file his petition for readmission at least 10 days before the beginning of the academic term.

PREPARATION FOR DEGREE-GRANTING COLLEGES

When the student has completed 24 hours of credit and a minimum grade point average of 1.70, he is eligible to transfer from
the University College to one of the six degree-granting colleges. (College of Education requires a 2.0 average.) All credits earned in University College, except courses numbered 99 or lower, apply toward a degree, if acceptable to the degree-granting college of the student's choice.

The student should transfer from the University College to the degree-granting college as soon as he has decided on a major course of study and has met the requirements. In any event, he must qualify himself to make a transfer by the time he has accumulated 72 hours of credit, or be withdrawn from the University.

The student who has accumulated 50 semester hours and still has not declared an academic major may be required to take PD 102, Occupation Seminar to assist him in his planning. The student who has accumulated 50 semester hours and has not yet achieved the required grades must plan his program carefully with a counselor to repeat courses failed earlier so that the necessary grade points can be acquired before the 72-hour rules forces him to be withdrawn from the University.

In addition to the general requirements stated here, some of the degree-granting colleges have specific requirements to be met as conditions to acceptance. The student must acquaint himself with these requirements and build his personal plans and schedule of courses accordingly.

Procedure for Transferring to a Degree College

To transfer from the University College to a degree-granting college the student consults with his Faculty Adviser and/or a University College Counselor regarding his curriculum choice and academic eligibility. Then he signs a form requesting the Dean to transfer his records to the Dean of the college he has selected.

If the student has already accumulated the credit hours and grade points required to transfer, he may request a transfer at any time in the semester.

If the student decides on a curriculum during the semester in which he will complete 24 hours, he should request that his records be evaluated and that a transfer be made. The transfer will, in such cases, be made after the grades for that semester are recorded and the Dean of the degree college has officially accepted the student into the degree program.

Note: The student initiates his own transfer: No one else can take this action for him.

SPECIAL PROGRAMS OF STUDY

University College provides courses which are basic to certain technical and professional fields. In some of these programs a two-
year certificate, the Associate of Applied Science, is offered to those completing the program.

**ADMINISTRATION OF JUSTICE**

In cooperation with the Department of Administration of Justice, Fairmount College of Liberal Arts and Sciences, the Wichita Police Department, and other area Justice Agencies, a two-year certificate of applied science is available in Administration of Justice.

New students interested in the Administration of Justice programs, whether two-year certificate or baccalaureate, will be advised by University College staff and the Administration of Justice faculty.

Courses in administration of justice are designed to meet the growing demand for better educated personnel in all sectors of the justice system, i.e., law enforcement, the courts, and corrections. The specific objective of the two-year program is to provide a specialized educational program primarily for employees of the justice system. The curriculum is designed to provide a rapid exposure to a variety of educational experiences which can be put to immediate use in the student's professional work. The program is so designed that on completion of the two-year certificate program the student can continue this academic program within the Department of Administration of Justice, culminating in a Bachelor of Science degree in Administration of Justice; however, it is not necessary to pursue the two-year certificate program to enter the baccalaureate (four-year) degree program.

The prescribed curriculum for the certificate follows:

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<thead>
<tr>
<th>Core Curriculum</th>
<th>Cr. Hrs.</th>
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<tbody>
<tr>
<td>English 111</td>
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<tr>
<td>Speech 111</td>
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<tr>
<td>Science</td>
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<td>Humanities</td>
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<td>Psychology 111</td>
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<td>Sociology 211</td>
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Remainder of the Program

<table>
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<th>Administration of Justice</th>
<th>24</th>
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<tbody>
<tr>
<td>Political Science 121; 321 or 493</td>
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</table>

One course from each of the following groups:

- Psychology 246 (3), 275 (3), 444 (3).

Electives to complete a total of 64 hours for the Associate of Applied Science certificate.

**GENERAL AND PREPROFESSIONAL PROGRAMS**

Minimum requirements for the Bachelor's degree are 124 semester hours with a 2.0 grade point average. To graduate in four years, a student should take 15 to 16 hours each semester. In most cases, a typical semester load of 15 hours is equivalent to 15 class meetings per week, except that laboratory hours are usually double the regular class hours.
If the student is undecided as to his area of emphasis, he may enroll in any of the courses selected from the 45 hours of required courses listed under the "University Requirements for Graduation," found on page 55, or other courses approved by the adviser and Dean. If, however, the student is firm in his conviction as to a major, or field of professional interest, the student's adviser will suggest courses from both areas, i.e., those from the "University Requirements" mentioned above, as well as introductory courses, in areas of major or professional goals.

The core curriculum studies offered in University College are applicable to most of the pre-professional programs which may be pursued at Wichita State University.

Prelaw

The prelaw student is advised to obtain a general education, concentrating on studies which emphasize verbal comprehension and expression, creative thinking, and critical understanding of human institutions and values with which the law deals. The prelegal adviser will provide information relative to requirements for entrance to law school.

Counseling Health Related Programs

The Dean of the College of Health Related Professions and his staff provide counseling in career planning for all health related professions including medicine, veterinary medicine, dentistry, optometry, pharmacology, osteopathy, physical therapy, occupational therapy, radiologic technology, mortuary science, etc.

Students interested in these health professions will enroll through the University College for their first 24 semester hours and then transfer to either the College of Health Related Professions or the College of Liberal Arts and Sciences for the degree program of studies.

Health Professions 101. Introduction to Health Professions is a one-hour credit course which should be taken by new students who are interested, but uncertain in their choice of a health related profession. (Examples: Nursing, medical technology, inhalation therapy, physical therapy, etc.) Enrollment in this course is also highly recommended for students who are firm in their decision to enter a specific health related profession. (See College of Health Related Professions for course description.) Pre-nursing students (Diploma programs) will be advised through University College until this program is fully integrated with the College of Health Related Professions.
DIVISION OF CONTINUING EDUCATION

The Division of Continuing Education, an administrative unit of University College, was established to meet the educational needs of those citizens in our community who are not regularly enrolled students in another college of the University, through academic work of a cultural, vocational or semi-professional nature.

The functions of this program, which is directed to the adults of our community, are:

1. To provide continuing education in a variety of fields for those who wish to study for their own personal enrichment.
2. To cooperate with business and industry in providing for groups of employees specialized courses, with or without credit.
3. To sponsor lectures, conferences and institutes for the benefit of students and the general public.
4. To afford, through cooperation with degree-granting colleges, courses during evening hours leading to a degree in one of the colleges of the University.
5. To maintain administrative facilities for students who have matriculated for special programs or for an unspecified degree, and who are not enrolled in another college of the University.

Notice: Veterans expecting to secure GI Bill benefits for education should note that Continuing Education does not offer a degree and, therefore, cannot extend GI benefits except under most unusual circumstances. To secure such benefits the student must be enrolled in University College or in one of the six degree-granting colleges.

Transferring Credit from Continuing Education

Students who accumulate credits in the Division of Continuing Education and who subsequently wish to work toward a degree, must transfer to the University College or to one of the degree-granting colleges. In making that transfer the student must meet all of the requirements for registering in that college.

Students transferring to the University College must file high school transcripts, college transcripts and scores of the American College Test.

Residence and Extension Credit

All credit courses offered by Wichita State University within the City of Wichita carry residence credit; credit courses offered at locations outside the city may carry extension credit. Correspondence work is offered by Wichita State University through the University of Kansas.

Standards and Requirements

Students who do not meet the requirements for admission to credit courses may be admitted to such courses as audit students.
Such persons are enrolled as special students, pay the same fees and receive the same lecture and classroom privileges as credit students. They are not required to take announced examinations.

Bulletin

Prior to each semester a bulletin is prepared by the Division of Continuing Education announcing registration dates, courses offered, schedule of classes, and other pertinent information. The bulletin is available upon request.

SPECIAL UNIVERSITY COLLEGE COURSES

HUMANITIES

299. International Seminar. (4). An interdisciplinary travel seminar: a study of European culture which includes observations of art and architecture in principal European cities, lectures and discussions of European political, social and economic problems given by foreign nationals; and conducted visits to various historic places of interest. Seminar under direction of a member of the faculty.

PERSONAL DEVELOPMENT

100. Freshman Seminar. (1). A study of the University as a resource for personal development, and the development of an individual master plan for study and self-development in the University.

102. Occupation Seminar. (1). A study of occupations and curriculums; development of a personal profile from test results and past experiences; selection of a major curriculum; and development of a master plan to be followed.

Self Improvement Courses

The following courses are not applicable to a degree in the baccalaureate colleges.

Psych. 60. Reading Improvement Technique. (1). Designed for those students who seek to improve reading skills. Reading and study habits are diagnosed and practice toward improvement is provided. Prerequisite: Approval of instructor.

Engl. 70. English for Foreign Students. (3). 2R; 1C. Designed to determine the students' facility with the English language. All foreign students are required to enroll and participate until approval of the instructor is obtained.

Engl. 80. Writing Improvement Techniques. (3). 3R.

Math. 52. Algebra (5). The topics from high school algebra essential to the study of university level mathematics. May be used, in meeting department prerequisites, in place of one and one-half units of high school algebra. Prerequisite: None.

Math. 60. Plane Geometry. (2). For students without high school credit in plane geometry. May be used in meeting department prerequisites, in place of one unit of high school geometry. Prerequisite: One unit of high school algebra or Mathematics 52, or concurrent enrollment in Mathematics 52.
Regardless of the area of his ultimate specialization, man is, before all else, a member of civilization. Ours is a complex civilization, one which requires an ever-increasing degree of sophisticated understanding. To study the liberal arts and sciences means, in essence, to study the range and scope of man’s knowledge about himself and about his universe.

Consequently, the College of Liberal Arts and Sciences has a number of functions, purposes, and responsibilities. Above all, it must provide a broad educational basis for all students, regardless of their specific major, their educational goal, or their college. We ask each student to strive for a well-balanced and integrated study of the basic areas of human knowledge and creativity.

Within the College a student’s education is developed according to his particular interest in one of the four main types of study: Preparation for professional and technical studies, education in a specified discipline, cross-cultural education, and preparation for teaching. The concept as outlined above underlies most of the requirements and curricula of the College and hopefully encourages students to explore a variety of possibilities. The College expects all students to become literate in at least one foreign language, as well as proficient in English and to give attention to the natural sciences and social sciences and to humanities, regardless of their professional interests. Faculty and students are constantly at work to maintain flexibility in the face of pressures to conform, to develop leadership in defining issues, and to discover, if possible, better answers to continuing problems. Liberal Arts and Sciences hopes to accomplish these aims while maintaining academic freedom and the right of dispassionate inquiry into all areas of human knowledge. In this manner, we hope that students will learn to make vigorous responses to all manner of contemporary, social, and academic problems which do not always lend themselves to traditional solutions.

Liberal Arts, then, in addition to preparation for teaching, Graduate School, and professional endeavors, is also the college within the University for students who do not specifically aim at a career objective but seek to find themselves in the thrill of the discovery
of new and challenging ideas and ways of making their life experiences meaningful.

REQUIREMENTS

ADMISSION

A student may be admitted to Fairmount College of Liberal Arts and Sciences if he has successfully completed 24 semester hours and is not on probation as defined by this College.

PROBATION AND DISMISSAL STANDARDS

It is expected that students will make satisfactory progress in their studies. A student who fails to do so may be placed on probation at any time and ultimately dismissed from the University.

Students who have earned up to 63 hours will be required to earn a Grade Point Average of at least 1.7 each semester. Students who have completed more than 63 hours will be required to earn an average of at least 2.000 each semester. Students who do not achieve the required Grade Point Average will be placed on probation and must make at least 2.000 each semester while on probation.

A student with 63 hours or less not on probation who fails to earn a Grade Point Average of at least 1.7 in any semester will be placed on probation for the following semester. At the end of the semester in which the student has been placed on probation, and was required to earn at least a 2.000 grade point average, his transcript will be reviewed. Students who failed to earn the required average will be dismissed. Students who live up to the probation requirements will be continued on this status as long as they earn at least a 2.000 average and until their accumulative Grade Point Average has reached the minimum level commensurate to their hours of college credit earned.

A student with more than 63 hours not on probation who fails to earn a Grade Point Average of 2.000 in a semester will be placed on probation for the following semester. At the end of the semester in which the student has been on probation, he will be continued on probation if his Grade Point Average for the semester is at least 2.000 and until he reaches a cumulative Grade Point Average of 2.000. If he fails to earn at least a 2.000 for any semester on probation, he will be dismissed for poor scholarship.*

* NOTE: No student on probation who enrolls in fewer than 7 hours shall be placed on academic dismissal for failure to raise the cumulative grade point index to the required level; however, if such a student has earned 7 or more hours in two or more terms, he must achieve a Grade Point Average for the semesters of 2.000 as listed above to be continued on probation.

A student who has been dismissed for poor scholarship may enroll only with special permission of the Committee on Admissions and Special Programs.
TRANSFER OF CREDIT WITHIN THE UNIVERSITY

Hours completed in colleges other than Fairmount College or University College shall be transferred for credit under the following general rules:

(1) Credit shall transfer when, in the judgment of the academic official charged with reviewing the transcript of a student, the work offered constitutes progress toward his new degree goal in Fairmount College. Not more than 21 hours shall be transferred, except in cases involving state certification requirements.

(2) In the courses listed below the following limitations shall be in effect:

(3) Credit in courses in Industrial Education, Library Science, and Elementary Education (except for Children’s Literature) will not be transferred.

Only one credit hour in one semester and not more than eight hours maximum credit shall transfer for chorus, band, or other ensembles.

Applied music shall transfer not to exceed 8 hours.

Applied art shall transfer not to exceed 8 hours.

DEGREE REQUIREMENTS

The Bachelor of Arts and Bachelor of Science degrees are conferred in this college. Each degree requires a minimum of 124 credit hours and a grade point index of 2.000. The general requirements for graduation are listed on page 57. The following are the requirements for a degree from Fairmount College:

English: The student must complete English 111, and 211 or 225, with a grade of C or better, and at least three semester hours of American or English literature. (Note: Such a course may be chosen in such a way as to satisfy core curriculum requirements simultaneously.)

History—Political Science: The student must demonstrate a proficiency in the field of American political system and institutions by (a) passing an examination offered once each semester, at an announced time, by the Departments of History and Political Science, or (b) passing one of the following courses: History 131 or 132, or Political Science 100 or 121 or 211. (Note: These courses also satisfy core curriculum requirements.)

Mathematics: The student must complete satisfactorily five or six semester hours of mathematics courses numbered 100 or above. (Note: All such mathematics courses will satisfy core curriculum requirements.)

Foreign Languages: In fulfilling his degree requirements in foreign languages, the student may choose either (1) or (2) below:

(1) a. If a candidate for the B.A. degree, he must complete
satisfactorily five (5) semester hours beyond the level of 112. While high school credit may apply to this requirement, the student must take at least one college course, regardless of the number of high school credits presented, or demonstrate equivalent proficiency through examination.

b. If a candidate for the B. S. degree, he must complete satisfactorily three (3) semester hours beyond the level of 112. While high school credit may apply to this requirement, the student must take at least one college course, regardless of the number of high school credits presented, or demonstrate equivalent proficiency through examination.

(2) He may complete satisfactorily the 111-112 sequence, or the equivalent, in a second language, if he also can present at least two high school units or two college semesters of another language. Regardless of the number of high school credits presented, at least one course must be taken in college.

Note: One year of high school work will be considered as the equivalent of one college semester. With the permission of the appropriate department a student with high school credit in foreign language may enroll for college credit at a level one semester below that for which his high school credit makes him eligible. Such permission is granted on an individual basis to students whose language experience has been interrupted or for whom special circumstances prevail. Without this permission no credit will be given for work done at a level which duplicates high school foreign language study.

Natural Science: A student presenting fewer than two units of high school laboratory science (exclusive of general science) must complete satisfactorily fourteen semester hours, four of which must be in a laboratory science. A student presenting two units of high school laboratory science (exclusive of general science) must complete satisfactorily a minimum of nine semester hours, four of which must be in a laboratory science. Except for students majoring in the natural sciences, four semester hours must be taken in each of the physical and biological science divisions as listed in the University core curriculum. Courses elected by the student may satisfy core curriculum requirements.

Note: It is recommended that the following course work be completed by the time the student achieves 50 hours and 120 credit points or within the next semester thereafter:

- 6 semester hours of English composition
- 5 or 6 hours of Mathematics, depending on the sequence the student chooses
- 10 hours of foreign language or the equivalent
- 4 or 5 hours of a laboratory science course.

It is not expected that students working toward a Bachelor of
Science degree will be able to fulfill the foreign language requirement within this time limit.

**MAJOR AND MINOR OFFERINGS**


Candidates for the Bachelor of Arts degree shall elect: (1) A major in one field of study of not less than 24 hours or more than 41 hours, or a combined major consisting of 24 hours from one field of study and 12 hours from an allied field of study (such combined major must be arranged with approval of the departments involved by the beginning of the junior year), or a major from a professional field, including art, economics, logopedics, and music; (2) at least 12 hours of upper division work in the major field; (3) work in such additional fields of study outside the major field of study as the faculty of the major field of study may deem appropriate. Any hours in one field of study above 41 must be counted as in excess of the 124 hours required for graduation.

Students who major in art, logopedics, and music must establish two minors in the College of Liberal Arts and Sciences. Minors are offered in all fields of study listed above and in geography, and police science. Minors acceptable from outside Fairmount College are engineering and accounting, and such education courses as are necessary for certification.

Candidates for the Bachelor of Science degree should consult with their major adviser relative to requirements. The Bachelor of Science degree is available in the following fields of study: administration of justice, biology, chemistry, geology, mathematics, and physics and normally requires 43 hours for the major. However, any hours in one field of study above 43 must be counted as in excess of the 124 hours required for graduation.

**SPECIAL PROGRAMS OF STUDY**

The Fairmount College of Liberal Arts and Sciences provides courses which are basic for certain professional fields and for subsequent professional studies. The liberal arts studies are recognized as vital in establishing the background resources for such areas. Although there are many similarities in the broad pattern of pre-professional education, there are marked differences in specific requirements.
ART HISTORY

The program in art history is designed to prepare students for the whole range of activities related to the art of the past: criticism, connoisseurship, college and secondary level teaching, and conservation.

Major: A major in art history leading to a Bachelor of Arts degree in the College of Liberal Arts, requires a minimum of 30 hours of art history and must include Art 101, 102, and 463. In addition, the course Introduction to Methods and Media of Painting (Art 229) must be taken.

Because of the international nature of the study, the student must become proficient in reading one of the following languages: French, Italian or German. (A minimum of 13 hours in one language is required.)

Minor: Students will complete 15 hours in art history. Art 101 and 102 are required. (Courses are listed under Art in the College of Fine Arts.)

MUSIC

See page 297 for requirements and curriculum.

FIELD MAJOR

This major is designed to provide a field of study wherein three or more fields of study are correlated to secure a broader appreciation of the cultural and dynamic factors of human conduct. The selection of the courses is made with the counsel of the adviser and the approval of the dean of the college. Such a major cuts across departmental lines and is determined by the field of specific interest but must be an acceptable combination. Normally the allocation of the 36 hours required for the major is 18 in the major department and not less than 9 in each of two allied departments.

LATIN AMERICAN STUDIES

The Latin American Studies Program consists of courses from several departments and allows the major to pursue a broadly-based program of study which will lead to a better understanding of both historic and contemporary Latin America. The major in Latin American Studies offers two alternatives with emphasis on either Spanish language or the social sciences. (See description below.) A minor is also offered.

Spanish Language Emphasis. Major: A major in Latin American Studies with an emphasis in Spanish consists of at least 32 hours and must include Anthropology 308, Economics 370 or 471, History 225, 226 and 328, Geography 364, Political Science 423, Spanish 426 and any other 300-400 level course in Latin American literature.
Other courses must be elected from the following: Anthropology 346, History 325, 326, 327, 329, and Political Science 420. Approved special projects courses related to Latin America taken in the departments listed above may also count toward the major in Latin American Studies. Proficiency in reading Portuguese is required.

_Social Science Emphasis._ **Major:** A major in Latin American Studies with an emphasis in social science consists of at least 30 hours and includes 21 hours of required courses (Anthropology 308, Economics 471, History 225, 226, 228, Geography 364 and Political Science 423). An additional 9 hours must be selected from the following: Anthropology 346, History 325, 326, 327, 329, Economics 370 or 470, and Political Science 420. Approved special projects courses related to Latin America taken in the departments listed above may also count toward the major in Latin American Studies. Majors must take at least 13 hours of Spanish or demonstrate equivalent competence in reading and conversation.

**Minor:** A minor in Latin American Studies consists of the following: Anthropology 308, Economics 471, Geography 364, History 226, and Political Science 423. In addition, Spanish must be chosen to meet the Liberal Arts language requirement.

**AFRO-AMERICAN STUDIES**

The major is designed to enable students to become proficient in this area by following an interdepartmental and far ranging course of studies. The pattern of courses comprises offerings in three colleges and several departments of the University. A field major in Afro-American Studies consists of thirty or more hours drawn from the selections listed below. For prerequisites and course descriptions see the departmental listings.

**Anthropology:** 130, 305, 307, 322, 360.
**Economics:** 492
**English:** 280
**Fine Arts:** Music 162
**History:** 335
**Political Science:** 317, 318, 400
**Sociology:** 226, 326, 334

**FIELD TRIPS**

Student attendance on field trips is mandatory in those courses for which trips are (1) listed in the catalog description of the course or (2) are identified by the instructor as essential for earning credit in the course. Absences from such trips are permitted only when prior approval is granted by the instructor. Credit may be withheld.

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* One 3-hour prerequisite: Either Anthropology 124 or 202.
† One 3-hour prerequisite: Econ. 222. Econ. 221 as a prerequisite for Econ. 222 may be waived for students choosing the Latin American minor, but who are not majoring in economics.

FAIRMOUNT COLLEGE 113
for the course until the field trips have been completed by the student.

Inasmuch as field trips constitute an extension of classroom or laboratory instruction into areas removed from the campus, student behavior and conduct on field trips must accord with the appropriate patterns of conduct established for students in classrooms and laboratories on the University campus.

SPECIAL PROGRAMS OF PREPROFESSIONAL NATURE

The advisers in the various preprofessional fields and closely related departments will provide specific information relative to courses and requirements.

PRELAW

In a statement of policy by the Association of American Law Schools, emphasis is placed upon undergraduate studies which provide "comprehension and expression in words; critical understanding of the human institutions and values with which the law deals; and creative power in thinking," to be achieved through disciplined study in the fields of the student's choice.

Degree requirements for a Bachelor of Arts degree will provide a general education and concentration in a field of major study. The prelegal adviser will provide information relative to requirements for entrance to law school.

PREMEDICAL, PREDENTAL, PREVETERINARY, PREPHARMACY, PREOPTOMETRY

Schools of Medicine emphasize for admission a broad education as well as prescribed studies in the sciences. Preparation for the study of medicine should include, therefore, courses of study which develop disciplined thinking, intelligent appreciation of values, and sympathetic understanding of man and society. Since vital aspects of the study of medicine are associated with scientific knowledge and techniques, courses in biology, chemistry, physics, and allied fields are required. Students may choose to major in these fields but other majors may be selected in preparation for the study of medicine. The prospective physician should also possess those qualities of character which make for effective citizenship and professional competence. The adviser for premedical studies will provide information relative to the Medical College Admission Test recommended by the Association of American Medical Colleges and, upon request, a detailed outline of the various curricula for admission to medical school. Students are urged to consult with him at the earliest possible time in regard to the opportunities and requirements in this professional field.
While the four-year degree program is definitely preferable, it is possible in some medical schools to gain admission on the basis of a three-year program of studies. Students of Wichita State University who have taken 94 hours of preparation, the last 30 of which must have been taken at Wichita State University, have complied with the prescribed fields of study requirements, have 188 credit points with no more than 20 hours of D grade work, have passed the first year of medical or dental school (for 30 hours) and are eligible for admission the second year may be granted the degree of Bachelor of Arts by Wichita State University if application be made by the candidate for such a degree. Students with a major in biology are required to complete within the 94 hours either the zoology or microbiology option listed under the biology department. Schools of Dentistry require prescribed preparation in the sciences as well as general education. Although the entrance requirements are generally of the same character, the student should give careful attention to the pattern in the school of his choice. Emphasis upon the sciences, generally with a major in biology, is recommended. The adviser for predental studies will provide a specific program of course work for either the three-year or four-year program.

The preparation for the study of veterinary medicine generally includes the essential pattern of basic education and emphasis upon science with special reference to biology. The adviser for pre-veterinary medicine studies will provide a specific program of course work.

Schedules may be arranged to meet entrance requirements of the various schools of optometry, osteopathy, pharmacy, mortuary science, and related professional fields.

PRETHEOLOGICAL

Students interested in pursuing graduate theological work should arrange their programs of preparation in consultation with the chairman of the department of Religion. Specific requirements set forth by the individual seminaries can thus be satisfied.

PUBLIC SERVICE

There is a growing demand for college graduates in the field of public service. The foreign service of the United States offers an attractive field to a limited number of young men and women who desire a career abroad. The federal government and an increasing number of cities and states are using the principles of the merit system for their employees. Related fields open to properly trained college graduates are found in municipal research bureaus and legislative reference bureaus. Preparation for such service is not confined to any one department. Students interested in public service as a career should consult with their advisers or the heads of
their departments as to the courses which will best prepare them. Students interested in public administration should also consult the civil service bulletins.

SOCIAL WORK

A major and minor are provided in the Sociology Department of the Fairmount College of Liberal Arts and Sciences for training in various areas of social work. Courses are designed for four types of students: (1) All students as preparation for intelligent and responsible community participation; (2) the student who, upon graduation, may accept a position not now requiring professional graduate training; (3) the student who plans to go on to a graduate school of social work; (4) the student who is preparing to enter another of the helping professions. The offerings in social work are listed on page 180. The University is a member of the Council on Social Work Education.

TEACHING

Students in the College of Liberal Arts and Sciences may qualify for secondary teaching certificates in Kansas and in several other states. Those who plan to qualify for the standard secondary teaching certificate must complete the program as outlined in items I and II on page 212.

LIBERAL ARTS AND SCIENCES CURRICULUM

COURSES IN THE HONORS PROGRAM

The following courses are designed for use by the Honors Program for Honors Students. The precise content of any such course for a given semester must be approved for each offering by the Honors Committee. Any such course may be taken no more than twice by any one student for academic credit toward a degree. The A designation indicates the course may apply as credit for Group I core curriculum requirements; B indicates the course may apply as credit for Group II core curriculum requirements; C indicates the course may apply as credit for Group III core curriculum requirements; D indicates the course may apply as credit for Group IV core curriculum requirements. The general course titles are worded according to these core curriculum group titles.

Honors 100A. Special Studies in Mathematics and Natural Science. (1-4).
Honors 100B. Special Studies in Communications. (1-4).
Honors 100C. Special Studies in Humanities. (1-4).
Honors 100D. Special Studies in Social Sciences. (1-4).
Honors 200A. Proseminar in Mathematics and Natural Sciences. (1-4).
Honors 200B. Proseminar in Communications. (1-4).
Honors 200C. Proseminar in Humanities. (1-4).
Honors 200D. Proseminar in Social Sciences. (1-4).
Honors 300A. Colloquium in Mathematics and Natural Science. (1-4).
Honors 300B. Colloquium in Communications. (1-4).
Honors 300C. Colloquium in Humanities. (1-4).
Honors 300D. Colloquium in Social Sciences. (1-4).
Honors 400. Honors Seminar. (1-4).
Honors 410. Independent Study. (1-4).

SPECIAL INTERDEPARTMENTAL COURSES

Humanities 299. International Seminar (4). An interdisciplinary travel seminar: A study of European culture which includes observations of art and architecture in principal European cities, lectures and discussions of European political, social and economic problems given by foreign nationals; and conducted visits to various historical places of interest. Seminar under direction of a member of the faculty.

ADMINISTRATION OF JUSTICE

The program in Administration of Justice provides a broad, multidisciplinary, liberal background for individuals interested in a career in the American Justice System. The program provides for a specialization in a field of the student's particular interest, i.e. law enforcement, legal defense, prosecution, courts, probation, correctional programs, parole process, crime prevention, treatment, and rehabilitation.

MAJOR: A major consists of at least 24 hours from the Administration of Justice curriculum, including A. J. 100 or 101, 221, and 12 hours of upper division including A. J. 403. Required also are nine hours from each of two related disciplines such as Sociology, Psychology, Political Science (Public Administration), Anthropology, etc. The balance of the courses are selected by the student, with the approval of his advisor.

MINOR: The minor consists of 15 hours of Administration of Justice courses including one upper division course.

CERTIFICATE: An Associate of Applied Science Certificate in Administration of Justice will be awarded by University College on completion of a 64-hour, two-year program. (See University College, Special Programs of Study, p. 101.)

Lower Division Courses

100. Introduction to the Administration of Justice. (3). Primarily for pre-service students. An introduction to the philosophy and history of law enforcement, identifying multiple facets of the administration of justice system, including the police, the courts, correctional agencies, and the offender. The administration of justice role as it relates to the individual and to society. Through visitation and contact with administration of justice agencies, the
student is acquainted with the responsibilities and problems of his personal
development for an administration of justice career.

101. Law Enforcement Operations and Procedures. (3). An introduction to
law enforcement operations and procedures including police organization and
administration. Emphasizes the police role in society and operational proce-
dures including deployment of personnel, arrest procedures, crime scene tech-
niques, and other basic police tactics. Prerequisite: A. J. 100 or consent of
department.

103. Law Enforcement in the Community. (3). Rights and duties of citizens.
Constitutional provisions affecting law enforcement officers, emphasizing due
process, search and seizure, and informant identity. Interview and interrogation
techniques and procedures used in all phases of contacts within the community
structure.

106. Traffic, Transportation and Highway Safety. (3). Enforcement problems
created by modern transportation in society. Traffic control, engineering, edu-
cation, enforcement procedures, as well as accident investigation, are included.
Use of traffic records and statistics for selective enforcement.

124. Dactyloscopy and Personal Identification. (3). Physical descriptions
emphasizing the science of fingerprints and personal identification. The Henry
system of classification including individual characteristics, patterns, and
classifications. Comparison procedure.

221. Criminal Law . (3). History, scope and nature of law; parties to crime;
classification of offenses; act and intent; capacity to commit crime and de-
fenses. Elements of major criminal statutes. An overview of criminal processes

243. Special Investigation. (3). Care, collection and preservation of evi-
dence. Sources of information and locating subjects. Crime scene recording.
Investigative techniques applicable to specific offenses. Prerequisite: A. J. 221
or consent of department.

244. Criminalistics and Scientific Crime Detection. (3). Scientific aids avail-
able to law enforcement officers, including forensic chemistry, physics, and
microanalysis. Investigative procedures from crime scene, through laboratory
analysis, to court presentation. Prerequisite: A. J. 243.

245. Investigative Photography. (3). Photography as applied in law enforce-
ment. This includes field experience and the use of specialized equipment.
Diagramming the crime scene. Prerequisite: A. J. 243 or consent of depart-
ment.

Upper Division Courses

301. Law Enforcement Administration. (3). An in-depth survey of admin-
istration and management in law enforcement and other Justice System agen-
cies. Special attention is given to developing concepts and practices. Pre-
requisite: Political Science 321, or consent of department.

321. Law II—Legal Research and Case Interpretation. (3). An advanced
course in criminal law. Examination of recent judicial interpretations affecting
legal process, rules of evidence and substantive law. In-depth study of statutory
provisions with emphasis on the conflict of laws and legal trends affecting
enforcement personnel. Prerequisite: A. J. 103 and A. J. 221, or consent of
department.

403. Senior Seminar. (3). An intensive study of the theory and operation of
the total criminal justice system. Required of all Administration of Justice
majors. Prerequisite: Senior standing and consent of department.

421. Independent Study. (1-3). Study in a specialized area of the Admin-
istration of Justice System with emphasis on the student's research project.
Pre-service students may be assigned intern positions in one or more of the operational agencies. Prerequisite: 15 hours in the Administration of Justice core and department consent. May be repeated for credit not to exceed a total of six hours.

AMERICAN STUDIES

The program in American Studies provides a broad cultural background in American studies, and provides, proportionately, for a specialization in a field of the student's particular interest.

MAJOR: 37 hours minimum, consisting of Amer. Studies 301 (2-4), 9 hours from Amer. Studies 311, 312, 321, 322, 411, 412, and Amer. Studies 498 (3-6) and 499 (3-6) (required); 18 hours to be chosen from at least three of the following groups:

- English: 252, 262, 302, 303, 440
- History: 131, 132, 313, 314, 331, 333, 334, 437, 438, 441, 444, 445
- Political Science: 121, 211, 315, 316
- Anthropology: 309, 310, 336, 337, 490, 498
- Philosophy: 356
- Economics: 307
- Speech: 432
- Geography: 302

MINOR: A minor in the College of Liberal Arts and Sciences consists of 15 hours, including American Studies 301 (2-4) plus at least six other upper division hours.

301. Introduction to American Studies. (2). An examination of the American background from an interdisciplinary perspective. The intent is to show how the humanities and social sciences can be linked in the study of America. Prerequisite: Consent of the department. May be repeated for a total of 4 hours credit.

311. The Colonial Period. (3). Those ideas and ideals, originally fostered by the English colonists, which were to become the foundation of the new democracy.

312. The Twentieth Century. (3). The many contributing factors shaping the Twentieth Century American civilization.

321. The Midlands and the High Plains. (3). The background, the factors in the settlement of this vast area, and the results of this settlement.

322. The American Southwest. (3). The background of the settlement of the American Southwest, the impact of the comingling of three different cultures, and the evolving of a fourth culture.


412. The Growth of Nationalism. (3). American Civilization during the period of its awakening to its place as a nation and the problems encountered.

498. Introduction to Research. (3). Bibliography, methodology, and the philosophy of research. Prerequisite: Department consent. May be repeated for a total of 6 hours credit.
499. Seminar in American Studies. (3). Seminar and individual conferences organized around a problem or problems presented by a representative figure, theme, or period, e.g., the Industrial Revolution, Reconstruction, Westward Migration, Mark Twain and the Mississippi. Prerequisite: Department consent. May be repeated for a total of 6 hours credit.

ANTHROPOLOGY

MAJOR: A major in anthropology consists of at least 30 hours, including Anthropology 124 or 202, 201, 447, an area course and one course in Archaeology (308, 336, or 337). Certain courses in related departments not to exceed 6 hours, when they meet the particular needs of the student and are approved by his adviser, may be counted on the major.

MINOR: The minor consists of 15 hours of anthropology selected in consultation with the student's major adviser.

Lower Division Courses

124. General Anthropology. (3). An introduction to the fields of physical anthropology, archaeology and linguistics, analysis of the concepts of society and culture with special emphasis on nonliterate peoples of the world.


201. Paleanthropology. (3). The study of man's biological and cultural development from early Paleolithic times through the rises of Bronze Age civilizations.

202. Cultural Anthropology. (3). The meaning of culture, its significance for human beings, its diverse forms among peoples of the world, past and present.


Upper Division Courses

301. Approach to Archaeology. (3). An introduction to the problems of studying past cultures. Special attention is focused on methodology and techniques available to archaeologists and the theoretical rationale leading to sound interpretations of the structure of extinct cultures. Prerequisite: Anthro. 124 or 201 or equivalent.


308. High Cultures of Central and South America. (3). A cultural survey of the Aztec, Maya and Inca Indian civilization. Prerequisite: Anthro. 124 or 202.


312. Peoples of Asia. (3). Study of tribal cultures and civilizations of Asia in terms of major culture areas, racial varieties and linguistic patterns. Prerequisite: Anthro. 124, 201 or 202.

318. Culture and Personality. (3). The relationship of individual personality, both normal and abnormal, to group membership and cultural configuration. Prerequisite: Anthro. 124 or 202, or department consent.

319. Applied Anthropology. (3). The application of anthropological knowledge in the solution of social problems in industry, public health and public administration. Prerequisite: Anthro. 124 or 202.

322. Primitive Esthetics. (3). A survey of the arts of preliterate peoples with special attention to their function in the cultural setting. Prerequisite: Anthro. 124 or 202.

323. Primitive Folklores. (3). Survey of the oral literature of Africa, the Americas, and the Pacific. The role of myths, tales, riddles and proverbs in reflecting a people’s value and world view. Prerequisite: Anthro. 124 or graduate standing.

325. Social and Cultural Change. (3). A critical examination of the processual dynamics of social and cultural change the world over, with special emphasis on contemporary non-European areas. Prerequisite: 6 hours of Anthropology.

326. Social Organization. (3). A survey of the varieties of social organization among non-industrialized peoples throughout the world. Deals with family systems, kinship, residence patterns, and lineage, clan and tribal organizations. Prerequisite: 6 hours of Anthropology.

327. Primitive Religion. (3). An examination of various concepts concerning the realm of the supernatural as held by primitive people. Relates such religious and magical beliefs—and the resultant practices—to the larger patterns of cultural context. Prerequisite: 6 hours of Anthropology.

328. Introduction to Linguistics. (3). Principles of descriptive and historical linguistics: Phonetics and phonology, morphology and syntax. (Also German 327.)


337. North American Archeology II. (3). Analysis of Woodland, Mississippi, Hopewell, and other archeological cultures of the eastern United States. Prerequisites: Anthro. 124 or 201.

345. Economics of Pre-Industrial Societies. (3). The study of methods of production, division of labor, organization of markets, concepts of money and property allocation in tribal societies. An emphasis will be placed on kinship units as units of consumption and production. Prerequisite: 6 hours of Anthropology.

346. Peasant Society. (3). A cross-cultural survey of anthropological studies of peasant societies in Asia, Europe, Latin America, etc. Emphasis will be placed on the nature of peasant societies as compared with tribal or industrial societies. Prerequisite: 6 hours of Anthropology.
354. **Physical Anthropology.** (4). A course dealing with the biological evolution of man through time, and the variations among populations past and present. Prerequisite: Anthro. 201 and department consent.

360. **Primitive Law and Government.** (3). Organizational structures and processes which maintain social order in pre-industrial societies. Prerequisite: 6 hours of Anthropology.

436. **Advanced Studies in Archeology and Ethno-History.** (3). Special area and theory problems in an historical approach to culture. Prerequisite: 12 hours of Anthropology.

447. **Theories of Culture.** (3). A survey of the main theoretical movements in cultural anthropology, including both historical and contemporary schools of thought. Prerequisite: 6 hours of Anthropology.

449. **Educational Anthropology.** (3). A course dealing with the basic concepts of anthropology and their application to social science units in elementary and secondary grades. Explores the nature of sub-cultures in American society and the problems they pose for the classroom teacher. A course for education majors and graduate students. Also listed as Fcl. Ed. 449. Cannot be used to meet requirements of the core curriculum for Anthropology.

451. **Language and Culture.** (3). An introduction to historical and descriptive linguistic. Deals with the ethnography of communications, lexicostatistics and linguistic determinism. Prerequisite: 6 hours of anthropology.

455. **Perspectives on Human Design and Behavior.** (3). Surveys of concepts from anatomy, medicine, biology, anthropology, neuropsychology—concerned with human form and behavior. Discussion of individual differences. Consent required. (Also P. E. 455.)

462. **Aspects of Linguistic Theory.** (3). (Also English 462 and Linguistics 462.)

490. **Field Methods in Anthropology.** (3-8). A course which instructs the student in archeological and ethnological field methods through actual participation in a field research program. The project depends upon the specific summer session and varies from year to year. Prerequisite: Consent of Instructor.

498. **Anthropological Problems.** (2-3). Special problems in cultural anthropology. Prerequisites: 12 hours of Anthropology. May be repeated up to 6 hours.

**Graduate Courses**

500. **Comprehensive Seminar in Anthropology.** (3). A review of the important concepts in archeology, physical anthropology and cultural anthropology in preparation for graduate comprehensive examination. Prerequisite: Open only to graduate majors in anthropology.

502. **Methods in Anthropology.** (2-3). A course designed to develop abilities in the conception and investigation of anthropological problems, interview and observation techniques as well as more specialized methods such as photography, mapping and tape recording. Prerequisite: Department consent. May be repeated up to 6 hours.

505. **Museum Methods.** (3). An introduction to museum techniques relating to acquisition of collections and related procedures such as accessioning, cataloging, documentation, presentation and storage. Emphasis will be given to current trends in museological philosophy concerning purpose, function and relevance of museums, as well as career opportunities. Prerequisite: Consent of instructor.
506. **Museum Exhibition.** (3). Contemporary philosophy of exhibition design; the application of recent concepts to the planning and installation of an exhibit. Prerequisite: Anthropology 505 and consent of instructor.

537. **Special Problems in Anthropology.** (1-3). Intensive study on advanced theoretical questions in cultural anthropology or archaeology. Prerequisite: 5 hours of Anthropology. May be repeated up to 6 hours.

548. **Recent Developments in Anthropology.** (3). A review of the latest discoveries and interpretations in the science of man. Prerequisite: 5 hours of Anthropology. May be repeated up to 6 hours.

570. **Independent Reading.** (1-3). Prerequisite: Department consent. May be repeated up to a total of 6 hours.


**BIOLOGY**

**Major:** A major in biology leading to a Bachelor of Arts degree requires 30 hours of biology, and must include Biology 111, 112, and 201, or the equivalent. Chemistry 111, 112, 231 and 232 or the equivalent, are required.

A major in biology leading to a Bachelor of Science degree requires 40 hours of biology, and must include 111, 112, and 201, or the equivalent, Chemistry 111, 112, 231, 232, or the equivalent, Physics 123, 124, and the courses listed in one of the three options, said option to be selected by the beginning of the Junior year.

**Botany Option:** Biology 322, 329 and 330.

**Microbiology Option:** Biology 301, 324 and either 325, 424, or 460. Students planning to do graduate work in Microbiology are expected to complete satisfactorily Mathematics 142.

**Zoology Option:** Biology 225 or 310, 309 and 320.

**Minor:** A minor in biology requires 15 hours, including Biology 111, 112 and 201.

Several of the courses offered in the Biology department are service courses, and are so designated. Service courses cannot be taken for credit toward a biology major or minor.

**Lower Division Courses**

100. **Principles of Biology.** (4). 3R; 2L. A general course in biology designed for students not majoring in sciences. Credit will not count toward a major or minor in Biology. Credit will not be given for both Biology 100 and Science 102: Biological Science.

102. **Biological Science.** (5). 5R. Man in the living world. An introduction the basic concepts of the biological sciences, with emphasis upon man himself.

111. **Introductory Botany.** (4). 3R; 3L. Fundamentals of plant science including plant structure, development and physiology; relationships of major plant groups, and biological principles illustrated with plant materials. Concurrent enrollment in freshman Chemistry is recommended.

FAIRMOUNT COLLEGE 123
112. Introductory Zoology. (4). 3R; 3L. Fundamentals of animal science including animal structure, development and physiology; relationship of major animal groups, and biological principles illustrated with animal materials. Concurrent enrollment in freshman Chemistry is recommended.

120. Introduction to Microbiology. (4). 3R; 2L. Service course. Fundamentals of microbiology with emphasis on microorganisms important in sanitation and disease.


223. Human Biology. (5). 3R; 4L. Service course. An introduction to the structure and functions of the human body. Credit not applicable toward the core requirement for laboratory science. Prerequisite: Biol. 100 or 112.

225. Comparative Anatomy. (5). 3R; 4L. An intensive study of representative chordates, with emphasis on vertebrate anatomy. Prerequisite: Biol. 201.

Upper Division Courses

300. Ecology and Man. (3). 3R. An introduction to the fundamentals of ecology with emphasis on man as a part of the environment. Service course. Not for core credit.

301. Bacteriology. (5). 3R; 6L. An introduction to growth, development and metabolism of bacteria and related forms. Prerequisite: Biol. 201; and Chem. 231 or concurrent enrollment.

302. Pathogenic Microbiology. (4). 3R; 3L. An introduction to the important pathogenic microorganisms and their relations to health and disease in man. Prerequisite: Biology 301.

309. Invertebrate Zoology. (4). 3R; 3L. A comparative study of the morphology and phylogeny of the invertebrates with emphasis on the basic body types and their major variations. Prerequisite: Biol. 201.


311. Microscopic Technique. (3). 9L. Preparation of materials for the study of minute anatomy. Prerequisite: Biol. 201.

312. Parasitology. (3). 1R; 6L. The parasites of man and other vertebrate hosts. Prerequisite: Biol. 201.

320. Comparative Animal Physiology. (4). 3R; 3L. A survey of physiological phenomena in the major groups of animals with attention to physiology as a unifying discipline in zoology. Prerequisite: Biol. 201 and Chem. 231.

322. Plant Physiology. (5). 3R; 6L. The functional dynamics of plant metabolism and growth, including water relations, nutrition, translocation, photosynthesis, respiration, and various aspects of development. Prerequisite: Biol. 201 and Chem. 231.

324. Microbial Physiology. (3). 3R. The physiology and metabolism of microorganisms. Prerequisite: Biol. 301 and Chem. 231.

325. Microbial Physiology Laboratory. (2). 6L. An introduction to the basic techniques involved in the study of microbial physiology. Prerequisite: Biology 301 and Chem. 231.

330. Vascular Plants. (4). 2R; 6L. An introduction to the structure, reproduction and evolution of the major groups of living and extinct vascular plants. An introduction to flowering plant systematics will be included. Prerequisite: Biol. 201.

343. Mycology. (4). 2R; 4L. The structure, development and reproduction of fungi with emphasis on the cytology and physiology of forms of scientific and economic importance. Prerequisite: Biol. 201.


410. Animal Behavior. (5). 3R; 4L. Physiological basis, sensory reception, orientation and ethology. Prerequisite: Biol. 320 or consent.


415. Limnology. (5). 2R; 6L. Introduction to the biological and physical processes that operate in lakes, streams, and estuaries. Assigned readings, individual projects and field trips required. Prerequisite: Biol. 201 and consent of instructor.

419. Ecology. (3). 3R. Principles underlying the interrelationships of living organisms and their environments. Prerequisite: Biol. 201 or consent of Department.

420. Field Ecology. (3). 9L. Techniques for analysis of systems consisting of living organisms and their environments. Field trips required. Prerequisite or corequisite: Biol. 419 or consent of instructor.

421. Genetics Laboratory. (3). 9L. Use of viruses, bacteria, fungi and Drosophila to illustrate principles of mutagenesis, gene action, recombination and population dynamics. Prerequisite: Biol. 301 and 401.

422. Protozoology. (4). 2R; 6L. Survey of the free-living and parasitic protozoa; identification, life cycles and host-parasite relationships emphasized. Prerequisite: Biol. 301 or 309 or 312.

423. Cytology. (3). 2R; 3L. The structure, chemistry, development, and function of the cell with particular reference to chromosomes and their bearing on genetics. Prerequisite: Biol. 201.

424. Immunobiology. (3). 3R. The nature of antigens, antibodies, and their interactions; cellular and humoral aspects of immunologic phenomena. Prerequisite: Biol. 201.
425. Immunobiology Laboratory. (2). 6L. Methods of immunization and techniques for qualitative and quantitative determinations of antibody production and antigen-antibody reactions. Prerequisite or corequisite: Biol. 424, Chem. 232 or consent of instructor.

430. Histology. (4). 2R; 6L. Microscopic anatomy of vertebrates with emphasis on the mammal. Prerequisite: Biol. 225.

460. Microbial Genetics. (4). 4R. The relationship between development, metabolism, and genetics in microorganisms. Prerequisite: Biol. 301 and 401 or department consent.

482. Topics in Botany. (2). Prerequisite: Consent of instructor. May be repeated once for credit.

483. Topics in Zoology. (2). Prerequisite: Consent of instructor. May be repeated once for credit.

484. Topics in Microbiology. (2). Prerequisite: Consent of instructor. May be repeated once for credit.


Graduate Courses

500. Biology Seminar. (1). Reviews of current research in biology. Prerequisite: Biol. 490 or consent of instructor. May be repeated once for credit.

501. Comparative Invertebrate Morphology. (3). 3R. A detailed analysis of the anatomy of invertebrate organ systems and their evolution. Prerequisite: Biol. 309 or consent of instructor.

502. Special Problems in Animal Behavior. (3). 3R. Emphases are on prey-predator interactions and the effect of a changing environment on behavioral patterns. Prerequisite: Biol. 410 or consent of instructor.

503. Special Problems in Ecology. (5). 2R; 6L. Emphasis on conservation of natural resources, land and water use, wildlife and fisheries management, and effects of pollution. Assigned readings, individual projects, and field trips required. Prerequisite: Biol. 411, 415 or consent of instructor.

504. Advanced Immunology. (3). 3R. Contemporary problems in immunologic research. Lectures, assigned readings and reports. Prerequisite: Biol. 424 and consent of instructor.


507. Microbial Metabolism. (3). 3R. Studies of the degradative and biosynthetic metabolic pathways of representative bacteria, yeasts and higher fungi. Prerequisite: Biol. 301 or consent of instructor.

510. Physiological Basis of Behavior. (3). 3R. A modern approach to coordinate mechanisms which will stress the essential unity of nervous and endocrine function. Prerequisite: Biol. 320 or consent of instructor.

520. Radiation Biology. (3). 3R. Mechanisms of the genetic and non-genetic effects of radiations on unicellular and multicellular systems. Surveys of the physical properties of radiations and of radiation chemistry are included. Prerequisite: Consent of instructor.

561. Research. (1 to 5). Research opportunities offered in botany, microbiology and zoology. A maximum of 8 hours may be taken for credit.

CHEMISTRY

Major. A major with a Bachelor of Arts degree requires Chemistry 324, 332, 346, 347, and the necessary prerequisites, which include Mathematics 244 (or equivalent) and one year of college physics. Students with a substantial interest in the biological sciences may satisfy the B. A. requirements by substituting Chemistry 461 for Chemistry 324 or Chemistry 346. If substitution is made for 324 Chemistry 323 is required.

A major with a Bachelor of Science degree consists of the B. A. requirements, a reading knowledge (or two semesters) of German, and a minimum of eight hours of 400 level courses which must include Chemistry 411. Chemistry 461 may be included in the 400 level courses, but it cannot be substituted for Chemistry 324 or 346 in meeting the B. S. requirements. It is recommended that at least one credit hour of laboratory work be included in the 400 level courses. Additional physics and mathematics beyond the minimum requirements is strongly recommended. This curriculum meets the standards of the American Chemical Society in the Professional Training of Chemists. The student who is working toward the Bachelor of Science degree should consult closely with the Department in planning his curriculum.

The premedical student who majors in Chemistry should be advised by a member of the Chemistry Department faculty.

Minor. The chemistry minor consists of at least 14 hours and must include at least four hours from Chemistry 231, 302, 304, 323, and 331.

Lower Division Courses

103. General Chemistry. (5). 3R; 4L. A brief survey of inorganic, organic, and biological chemistry for the student who plans to take only one course in chemistry. This course is recommended for students in Dental Hygiene, and Nursing, as well as those majoring in Social Science and the Humanities. Students who expect to major in the Natural Sciences should take Chem. 111-112. Credit will not be granted for both Chem. 103 and Chem. 111.

111. General Chemistry. (5). 3R; 4L. An introduction to the general laws of chemistry and the non-metals and their compounds. The Chem. 111-112 course sequence is designed to meet the needs of natural science majors and is not recommended for students who plan to take only one course in chemistry. Students who have had good high school preparation in chemistry and mathematics should consider the alternate afforded by Chem. 123-124. Prerequisite: 1.5 units of high school algebra or Math. 52. Credit will not be granted for both Chem. 103 and Chem. 111.

112. General and Inorganic Chemistry. (5). 3R; 4L. The chemistry of metals, electrochemistry, ionic equilibria, and introduction to qualitative analysis and organic chemistry. Prerequisite: Chem. 111 with a grade of C or better.

123-124. General and Analytical Chemistry. (5-5). 3R; 6L-3R; 6L. General chemistry and introductory quantitative analysis, including much of the material ordinarily presented in Chem. 323. Students who successfully complete this sequence are not required to take Chem. 323 as a prerequisite for Chem. 324. Prerequisite: 1.5 units of high school algebra, 1 unit of high school chemistry, and consent of department.
201. Glass Blowing. (1). 2L. Limited enrollment open to students upon recommendation of the chemistry department.

231-232. Organic Chemistry. (5-5). 3R; 6L-3R; 6L. For majors and pre-medical students. Introduction to the chemistry of carbon compounds. Prerequisite: Chem. 112 (or equivalent) with a grade of C or better.

Upper Division Courses

302. Chemistry of Materials. (2). Fundamental general chemistry applied to chemical technology. Prerequisite: Chem. 112 (or equivalent) with a grade of C or better.

304. Elementary Physical Chemistry. (3). For students preparing for geology, biology, and medicine. Not for chemistry majors. Prerequisite: Chem. 112 (or equivalent) with a grade of C or better.

323. Introductory Analytical Chemistry. (4). 2R; 6L. The fundamental principles of gravimetric and volumetric analysis. Prerequisite: Chem. 112 with a grade of C or better.

324. Analytical Chemistry. (4). 2R; 6L. Analysis of complex mixtures and introduction to instrumental methods and organic analysis. Prerequisite: Chem. 231 and 323 (or 123-124), and 345. Corequisite: Chem. 346.

331-332. Organic Chemistry. (5-5). 3R; 6L-3R; 6L. The subjects of Chemistry 231-232 presented in a way designed to meet the needs of transfer students and others who may have had analytical chemistry in the sophomore year. Prerequisite: Chemistry 112 (or equivalent) with C or better and consent of department.

Note: Chem. 331 and 332 are equivalent to Chem. 231 and 232 as prerequisites for subsequent courses. Credit will not be granted for both Chem. 231 and 331 or Chem. 232 and 332.

345-346. Physical Chemistry. (3-3). 3R-3R. Introductory physical chemistry for students having a background in physics and calculus. Prerequisite: Chem. 231, Math. 243 (or equivalent), and one year of college physics.


401. Chemical Literature. (1). The use of the chemical literature. Prerequisite: 20 hours of chemistry and consent of instructor.

402. Numerical Methods. (2). 1R; 3L. Applications of numerical methods to problems in chemistry and physics. Roots of equations; curve fitting; interpolation, extrapolation and smoothing of experimental data; numerical differentiation and integration; computer programming. Prerequisite: Consent of department.

411. Inorganic Chemistry. (3). The periodic table; theoretical and descriptive inorganic chemistry. Prerequisite: Chem. 345. Corequisite: Chem. 346.


413. Inorganic Chemistry Laboratory. (1 to 2). 3L or 6L. Experimental methods of inorganic chemistry. Prerequisite: Chem. 411 or concurrent enrollment.

424. Advanced Analytical Chemistry. (3). 2R; 3L. Instrumental methods of chemical analysis. Prerequisite: Chem. 324 and consent of instructor.

425. Electronics. (2). 1R; 4L. Provides a working knowledge of electronic devices and circuits for the student or research worker who has little or no background in electronics. Prerequisite: Consent of instructor.
433. **Organic Techniques.** (3). 1R; 6L. The theory and practice of organic chemical preparations. Prerequisite: Chem. 232 and consent of instructor.*

441. **Advanced Physical Chemistry.** (3). Introduction to quantum chemistry, atomic and molecular spectra, statistical thermodynamics, and reaction rate theory. Prerequisite: Chem. 346.

461. **Biochemistry.** (4). 3R; 3L. An introduction to protein lipide, and carbohydrate chemistry. Prerequisite: Chem. 232 and 323 (or equivalent) or consent of instructor.*

499. **Independent Study and Research.** (1 to 3). Prerequisite: Chem. 346 and consent of department. May be repeated for credit up to a maximum of three hours.

* At least one semester of physical chemistry is recommended in addition to the prerequisites listed.

**Graduate Courses**

500. **Chemistry Seminar.** (1). Review of current periodicals. Reports on student and faculty research. Prerequisite: 20 hours of chemistry. May be repeated for credit.

504. **Radiochemistry.** (3). 2R; 3L. Natural and artificial radioactivity; sources, preparations and properties. Prerequisite: Consent of instructor.

511. **Theoretical Inorganic Chemistry.** (3). Theory of bonding, molecular structure and spectra. Prerequisite: Chem. 411 and consent of instructor.

512. **Coordination Chemistry.** (3). Principles of coordination chemistry; structures and reactions of complex compounds. Prerequisite: Consent of instructor.

519.* **Special Topics in Inorganic Chemistry.** (1 to 3). Prerequisite: Consent of instructor.

521. **Advanced Analytical Chemistry.** (1). Analytical chemistry of the less familiar elements. Prerequisite: Consent of instructor.

523. **Analytical Spectroscopy.** (3). 2R; 3L. Absorption, emission, NMR and mass spectroscopy. Prerequisite: Consent of instructor.

524. **Electroanalytical Chemistry.** (3). 2R; 3L. Electrometric methods of analysis. Prerequisite: Consent of instructor.

529.* **Special Topics in Analytical Chemistry.** (1 to 3). Prerequisite: Consent of instructor.

531. **Advanced Organic Chemistry.** (3). Recent advances in organic chemistry. Prerequisite: Consent of instructor.

532. **Heterocyclic Chemistry.** (3). Prerequisite: Consent of instructor.

533. **Qualitative Organic Analysis.** (3). 1R; 6L. Identification of organic compounds. Prerequisite: Consent of instructor.

534. **Quantitative Organic Analysis.** (3) Prerequisite: Consent of instructor.

535. **Physical Organic Chemistry.** (3). Prerequisite: Consent of instructor.

539.* **Special Topics in Organic Chemistry.** (1 to 3). Prerequisite: Consent of instructor.

541. **Quantum Chemistry.** (3). Quantum chemistry with emphasis on valence theory. Prerequisite: Consent of instructor.

542. **Chemical Kinetics.** (3). Prerequisite: Consent of instructor.
543. Introductory Statistical Mechanics. (3). Prerequisite: Consent of instructor.

545. Chemical Thermodynamics. (3). Classical Thermodynamics with an introduction to statistical thermodynamics. Prerequisite: Consent of instructor.

546. Molecular Spectroscopy. (3). Modern techniques and theory in the area of fluorescence spectroscopy and nuclear and electron spin resonance. Prerequisite: Consent of instructor.

549. Special Topics in Physical Chemistry. (1 to 3). Prerequisite: Consent of instructor.

561. Advanced Biochemistry. (3). Enzyme mechanisms, metabolic feedback, transport phenomena, hormones, porphyrins and nucleic acids. Prerequisite: Chemistry 461 or its equivalent.

569. Special Topics in Biochemistry. (1 to 3). Prerequisite: Consent of instructor.

591. Research in Inorganic Chemistry. (1 to 5).

592. Research in Analytical Chemistry. (1 to 5).

593. Research in Organic Chemistry. (1 to 5).

594. Research in Physical Chemistry. (1 to 5).

596. Research in Biochemistry. (1 to 5).

* May be repeated for credit.

ECONOMICS

Major: The economics major in the College of Liberal Arts consists of a minimum of 30 hours and a maximum of 41 hours. Econ. 221, 222, 238, 340, 421 or 424, and 425 are required.

Minor: A minor in economics in the College of Liberal Arts consists of 15 hours exclusive of Econ. 100 and 190 and must include Econ. 221.

(Courses are listed under Economics in the College of Business Administration.)

ENGLISH LANGUAGE AND LITERATURE

Major: A major consists of 33 hours and must include 225, 260, 261, 262, and 446. In addition, courses must be selected from three groups as indicated below:

Period Courses:

(1) One of the following: 370, 371, 373, 374, 375, 376, 401, 402.
(2) One of the following: 252, 341, 342.

Major Author Courses: One of the following: 301, 430, 431, 433, 434.

Studies in Literary Types: One of the following: 302, 303, 321, 323, 324, 331, 332, 333.
English 111 is not counted on an English major. Also, only six hours from the following will be credited toward the major: 211, 311, 312, 313, 314, 316, 317 (except as noted below for the Major with a Creative Writing Sequence).

**MINOR:** A minor consists of 15 hours. Required are the following: two of these courses: 260, 261, 262; and at least six hours of upper division work. English 111 is not counted on a minor.

**MAJOR WITH A CREATIVE WRITING SEQUENCE:** With the written permission of the Chairman of the Department, a student desiring a creative writing sequence will fulfill the requirements for the regular major with the following exceptions: required courses are 225; 261 or 262; and 446. (The group requirements remain as set forth above.) In addition, the student must select at least twelve hours from the following: 311, 312, 313, 314, 316, 317, and University Honors (1-6).

**MAJOR FOR STUDENTS PLANNING TO TEACH ENGLISH IN SECONDARY SCHOOL:** The teaching major in either the College of Liberal Arts or the College of Education is 36 hours with the same requirements as listed for the regular major above, plus these additions: *Studies in Language:* 215; 461, 462, or 463; and *Major Author Course:* 433 or 434.

**MINOR FOR STUDENTS PLANNING TO TEACH ENGLISH AS A SECOND SUBJECT IN SECONDARY SCHOOL:** The teaching-minor requirement is 24 hours, including the following: 215; 225; 252 or 262; 260 or 261; 323 or 324; 433 or 434.

**NOTE:** A 2.5 grade point index in English is required of all majors and minors applying for admission to the professional semester of student teaching in secondary school English.

**MINOR FOR OTHERS IN THE COLLEGE OF EDUCATION:** The English minor requirement for those planning to teach in elementary school is 18 hours, including the following: 211; 215; 260 or 261; 262; 302 or 323 or 324 or 342; 433 or 434.

**NOTE:** A 2.00 grade point index in the minor field is required for admission to the elementary professional semester in the College of Education.

**Lower Division Courses**


111. *College English.* (3). Planning, writing, and criticizing compositions; classroom discussions; conferences. See University College.

201. *Narrative in Literature and Film.* (3). (2-Lecture; 2-Laboratory). A comparative aesthetic analysis of the art of narration in literature and especially in film.

FAIRMOUNT COLLEGE 131
211. Advanced Writing. (3). Prerequisite: English 111 and sophomore standing. Recommended for non-English majors.

215. Introduction to English Linguistics. (3). Introduction to linguistic principles, including phonological and grammatical concepts. (Same as Linguistics 215.) Required of all English teaching majors.

223. Books and Ideas. (3). Open to any student but designed primarily for those who wish a course in literature which is appreciative rather than historical. Recommended for non-English majors.

224. Twentieth Century British and American Literature. (3). Not credited toward an English major or minor.

225. Literary Theory and Critical Writing. (3). Instruction in critical reading and critical writing through study of representative works in drama, poetry, and prose fiction. Limited to English majors or minors. Required of all English majors. Prerequisite: English 111 and sophomore standing.

240. Major Plays of Shakespeare. (3). Not credited toward an English major or minor.

226. Major British Writers I. (3). From the beginnings through the 16th century. Required of all English majors. (Formerly Engl. 221.)

227. Major British Writers II. (3). From the 19th century to the present. Required of all English majors. (Formerly Engl. 222.)

228. American Drama. (3). Emphasis on the plays of various authors.

Upper Division Courses

Note: No difference is implied between 300 and 400 courses in the English curriculum. All are open to juniors and seniors alike.

301a. American Authors. (3). Emphasis on Hawthorne and Melville.

301b. American Authors. (3). Emphasis on Emerson, Whitman, and Dickinson.

301c. American Authors. (3). Emphasis on James and Twain.


301e. American Authors. (3). Emphasis on Faulkner and the Moderns.

301f. American Authors. (3). Emphasis on writers selected by the individual instructor.


303. American Drama. (3).
309. Theme and Idea in Literature. (3). Reading, discussion, and some writing on literature from all periods, centered on great themes of human thought and action, designed especially for non-English majors. May not be offered for graduate credit.

310. Inter-related Arts. (3). Inter-departmental course presenting an aesthetic analysis of three arts, emphasizing style rather than the history of art. May not be offered for graduate credit.

311 & 312. Creative Writing: Workshop in Prose Fiction. (3-3). May not be repeated for credit. May not be offered for graduate credit. Prerequisite: Consent of instructor.

313 & 314. Creative Writing: Workshop in Poetry. (3-3). May not be repeated for credit. May not be offered for graduate credit. Prerequisite: Consent of instructor.

316 & 317. Playwriting I & II. (3-3). The writing of scripts for performance. Emphasis on both verbal and visual aspects of playwriting. If possible, the scripts will be performed. Prerequisite: English 324 and Speech 243 and 259; or consent of instructor. (Same as Speech 316 & 317.) May not be repeated for credit. May not be offered for graduate credit in English.

321. Elizabethan and Jacobean Drama. (3).

323. Later British Drama. (3). Selected plays from the Restoration to the modern period.


333. Contemporary Fiction. (3). English, American, and continental novels of the twentieth century.

341. Modern British and American Literature from 1900 to 1922. (3).

342. Modern British and American Literature from 1923 to 1945. (3).

343. Modern British and American Literature from 1946 to present. (3).


371. The Age of Donne. (3). The Metaphysical poets, the Cavalier poets, and their contemporaries.

373. The Romantic Age. (3). Wordsworth, Coleridge, Byron, Shelley, Keats, and their contemporaries.


375 & 376. The Neo-Classical Age I & II. (3-3). I: Dryden, Pope, Swift, and their contemporaries. II: Johnson, Fielding, Richardson, Sterne, and their contemporaries.

399. The Bible as Literature. (3).

401. Old English. (3).

402. Medieval Literature. (3). Middle English poetry, prose, and drama from the twelfth to the fifteenth century.

430. Milton. (3).
431. Chaucer. (3).

433 & 434. Shakespeare I & II. (3-3). I: Shakespeare's work to 1600. II: Shakespeare's work after 1600.

440. Folklore. (3).

446. Literary Criticism. (3). Explores various historical and modern approaches to literary criticism and research. Required of English majors. Prerequisite: English 225. May not be offered for graduate credit.

450. Workshop. (1-4). Prerequisite: Consent of instructor. May be repeated for credit.

461. History of the English Language. (3). Linguistic and cultural investigation of the development of English. Prerequisite: English 215 or Linguistics 327 or consent of instructor.

462. Aspects of Linguistic Theory. (3). Examination of aspects of the structure of English and their relation to linguistic theory. Prerequisite: English 215 or Linguistics 327 or consent of instructor. (Same as Linguistics 462.)

463. The English Language in America. (3). Investigation of English, both past and present, in the Western Hemisphere. Prerequisite: English 215 or Linguistics 327 or consent of instructor.

471 & 472. World Masterpieces I & II. (3-3). I: Selected readings in Oriental, Hebrew, Greek, Roman, and Medieval European literature in translation. II: Selected readings in European literature of the late Medieval, Renaissance, and modern periods in translation.


475 & 476. Independent Reading. (1-3; 1-3). Designed for majors and non-majors who wish to pursue special reading or research projects in areas not normally covered in course work. Admission to courses is by departmental consent. May not be offered for graduate credit.

480 & 481. Special Studies. (1-3; 1-3). The individual instructor will select and announce his own topic. May be repeated for credit.

Graduate Courses

501a. Graduate Studies in Medieval Literature. (3). Middle English poetry, prose, and drama from the twelfth to the fifteenth century with particular emphasis on Chaucer.


501g. Graduate Studies in Victorian Literature. (3). Writers from Carlyle to Yeats studied in relation to political events and the social, scientific, and religious thought of the age.
Graduate Studies in Twentieth-Century British Literature. (3). Yeats, Joyce, Lawrence, Auden, Spender, and their contemporaries.

Graduate Studies in American Literature I & II. (3-3). First semester: classic American writers, such as Hawthorne, Melville, Thoreau, Emerson, Whitman, Dickinson. Second semester: later American writers, such as Twain, James, Hemingway, Faulkner, and poets of the 20th century renaissance. Extensive reading in primary and secondary materials, lectures, discussions, reports.

Graduate Studies in Drama. (3). Selected topics in the history and nature of dramatic literature. With departmental consent, may be repeated for credit.

Graduate Studies in Fiction. (3). Selected topics in the development of the form and content of prose fiction. With departmental consent, may be repeated for credit.

Graduate Studies in Poetry. (3). Selected topics in forms, techniques, and history of poetry. With departmental consent, may be repeated for credit.

Graduate Studies in Criticism. (3). Selected topics in the theory and practice of literary criticism. With departmental consent, may be repeated for credit.

Graduate Studies in Linguistics. (3). Selected topics in theories of language and methods of linguistic study. With departmental consent, may be repeated for credit.

Introduction to Graduate Study in English. (3). A course especially designed to prepare students to perform effectively in graduate classes in English. The course is concerned with: (1) basic bibliographical tools; (2) terminology, both technical and historical; (3) various approaches to the study of literature, such as intrinsic analysis of a literary work, the relationships of biography to literary study, and the relevance of other disciplines, such as psychology, to literature; (4) the writing of interpretative and research essays. Throughout the semester a balance between criticism and research is maintained.

Creative Writing: Fiction. (3-3). Advanced work in creative writing. Students who plan to offer creative writing in prose fiction as a thesis will be required to complete two semesters. Prerequisite: Consent of Coordinator for Creative Writing. With departmental consent, may be repeated for credit.

Creative Writing: Poetry. (3-3). Advanced work in the writing of poetry. Students who plan to offer creative writing in poetry as a thesis will be required to complete two semesters. Prerequisite: Consent of Coordinator for Creative Writing. With departmental consent, may be repeated for credit.

Directed Reading. (1-3). Designed for graduate students who want to pursue special research in areas not normally covered in course work. Prerequisite: Departmental consent. With departmental consent, may be repeated for credit.

Graduate Seminars in Special Topics. (3). Intensive study of selected texts, writers, or literary problems. Seminar discussions, reports, and research projects. With departmental consent, may be repeated for credit.

Major Plays of Shakespeare. (3). Careful study of Shakespeare’s more important plays or of a pattern in Shakespeare’s development as a dramatist. Readings in secondary sources, reports, class discussions, and papers.

Master’s Essay. (1-3).

FRENCH (See Romance Languages)
GEOLOGY AND GEOGRAPHY

The Geology Department is re-evaluating its course offerings and its undergraduate and graduate programs. Please contact the department for current additional information.

MAJOR: A major with a Bachelor of Arts degree requires 35 hours of Geology including:

1. Geology 333, 337, and prerequisite courses;
2. At least two additional courses from the following: 331, 336, 347, 350, 361, 440;
3. A summer field course from an accredited university (or Geol. 335-336 if approved by the Department).

A major with a Bachelor of Science degree requires 40 hours of Geology including:

1. Geology 333, 337, and prerequisite courses;
2. At least two additional courses from the following: 331, 336, 347, 350, 361, 440;
3. A summer field course from an accredited university (or Geol. 335-336 if approved by the Department);
4. In addition 35 hours are to be selected from the fields of the sciences and mathematics to include:
   a. a minor in one of the sciences or in Mathematics;
   b. Mathematics through Math. 243 or 246;
   c. 10 hours of Physics;
   d. not less than 5 hours of Chemistry;
   e. not less than 4 hours of Biology.

NOTE: No major is offered in geography.

MINOR: A minor in geology consists of 15 hours. A minor in geography consists of 15 hours, including Geography 201 and at least one upper division course.

GEOLOGY

Lower Division Courses

101. Physical Science. (5). 5R; D. Man in the physical world; offering some basic concepts in the physical sciences.

102. Earth and Space Science. (4). 3R; 2L. A general survey of man's physical environment; includes elements of geology, geography, meteorology, climatology, oceanography, and astronomy. Lectures, films, and demonstrations. Laboratory and field experiences. Not open to students who have taken Geology 105, Geology 111, or Geography 201. Not for major or minor credit in Geology.

111. General Geology. (5). 3R; 4L. The earth and its materials, structure and history; the various processes operating to change its aspects and composition. Field trip(s) required.

112. Historical Geology. (4). 2R; 6L. History of the earth from the time of its origin as a planet to the appearance of man. Prerequisite: Geol. 111. Field trip(s) required.
211. Descriptive Astronomy. (3). 2R; 2L. An introductory study of extraterrestrial realms and materials, including the solar and galactic systems, their apparent origins, developmental histories, components, and motions. Prerequisite: Math. 141. Does not not apply toward a major or minor in Geology.

225. Mineralogy. (5). 3R; 6L. Crystallography, and the determination of minerals by physical, optical, and chemical methods. Prerequisite: Geol. 112 and Chem. 111 or concurrent enrollment. Field trip(s) required at the option of the instructor.

226. Petrology. (4). 3R; 3L. The origin, modes of occurrence, alterations, classifications, and methods of determination of the igneous, sedimentary, and metamorphic rocks. Prerequisite: Geol. 112 and 225. Field trip(s) required.

Upper Division Courses

331. Geomorphology. (3). 2R; 3L. Genesis and interpretation of land forms; major physiographic provinces of North America. Prerequisite: Geol. 112 or Geog. 201. Field trip(s) required at the option of the instructor.

333. Structural Geology. (3). The mechanics of rock deformation; the description and genesis of features resulting from diastrophism. Prerequisite: Geol. 226 and Physics 123 or 103. Field trip(s) required.

335. Field Mapping. (2). 6L. Field mapping methods, with special reference to use of level, compass, barometer, alidade, and air photos. Prerequisite: Geog. 201 or Geol. 112. Field trip(s) required.

336. Field Geology and Stratigraphic Mapping. (3). 9L. Field geology and stratigraphy of Eastern Kansas. Prerequisite: Geol. 112. Field trips required.

337. Invertebrate Paleontology. (3). 2R; 3L. Invertebrate fossils, criteria of identification, classification. Prerequisite: Geol. 112, or Biology majors upon instructor's consent. Field trip(s) required.

347. Sedimentology. (3). 2R; 3L. Origin, classification, textures, and structures of sedimentary rocks. Prerequisite: Geol. 225 or department consent. Field trip(s) required.

350. Principles of Stratigraphy. (3). 2R; 3L. Principles and techniques of description, classification, correlation, interpretation, and dating of the sedimentary rock record. Prerequisite: Geology 337. Geology 347 recommended. Field trip(s) required.

361. Economic Resources. (3). 2R; 3L. Distribution, classification, composition, and origin of economic resources, metallic and non-metallic. Prerequisite: Geol. 226. Field trip(s) required.

405. Regional Geology of the United States. (3). A detailed regional survey of the general geology, geomorphology, stratigraphy, and structural geology of the United States. Prerequisite: Geol. 331 or concurrent enrollment.

425. Optical Analysis. (4). 2R; 6L. Use of the polarizing microscope; mineral identification and rock classification. Prerequisite: Department consent.

436. Vertebrate Paleontology. (3). 2R; 3L. Systematic study of the fossil record of the vertebrates; laboratory training in identification of fossil bones and teeth; emphasis on regional faunas; collecting and museum trips required. Prerequisite: Geol. 112; Biology majors upon instructor's consent.

438. Micropaleontology. (3). 2R; 3L. This course is designed to prepare students for research work in laboratories of oil companies, geological surveys and oceanographic stations. Emphasis on latest techniques, identifications, and use in correlation of foraminifera (including fusulinids), dinoflagellates, coccoliths, palynomorphs, etc. Prerequisite: Geology 112 and consent of instructor. Field trip(s) required at the option of the instructor.
439.° Palynology. (3). 2R; 2L. An introduction to the study of both modern and fossil spore and pollen morphology as applied to problems of plant taxonomy and evolution, paleoclimates, phytogeography, paleoecology, interpretation of sedimentary environments, biostratigraphy, Pleistocene climates and archeology. Emphasis is on vascular plants, but includes study of dinoflagellates and related algae and nonvascular plants. Prerequisites: Geology 112, or Biology 330 and consent of instructor.

440.° Map Interpretation and Photogeology. (3). 2R; 3L. Construction, use, and interpretation of maps; use and interpretation of aerial photographs. Prerequisite: Geol. 112 or Geog. 201.

443.° Subsurface Geology. (3). 2R; 3L. All subsurface methods, including laboratory, logging, testing, treatment, valuation, and mapping methods. Prerequisite: Geol. 226 and Physics 124 or 103. Field trip(s) required at the option of the instructor.

444.° Petroleum Geology. (3). 2R; 3L. Origin, migration, and accumulation of oil and gas in the earth’s crust. Distribution and significant features of modern fields. Prerequisite: Geol. 112. Field trip(s) required at the option of the instructor.

445.° Subsurface Formation Evaluation. (2). Detailed study of fluid content, fluid pressures, and other characteristics of subsurface formations as revealed by electric logs, other types of mechanical logs, and various testing devices. Introduction to the principles and uses of shut-in pressure build-up data. Prerequisite: Consent of instructor.

480.° Geochemistry. (3). 3R. The chemistry of earth materials; the important geochemical processes and cycles operating on and within the earth through time. Prerequisites: Geology 226 and Chem. 112 or consent of instructor.


490.° Special Studies in Geology. (1-3). Prerequisite: Consent of instructor. May be repeated, but total credit may not exceed six hours.

499.† Research in Geology. (1-3). Research on special problems in the field of geology: (a) General; (b) Mineralogy; (c) Petrology; (d) Structural; (e) Paleontology; (f) Economic; (g) Sedimentation; (h) Petroleum; (i) Stratigraphy; (j) Geophysics. Prerequisite: Department consent.

May be offered only in alternate years.
† May be repeated for credit up to 6 hours.

Graduate Courses

500.† Research in Geology. (1-3). Research on special problems in the field of geology: (a) General; (b) Mineralogy; (c) Petrology; (d) Structural; (e) Paleontology; (f) Economics; (g) Sedimentation; (h) Petroleum; (i) Stratigraphy; (j) Geophysics. Prerequisite: Department consent.

505.° Advanced General Geology. (4). 2R; 6L. Principles, physical processes, structure, earth history, and economic implications of geology, based upon a study of original sources; student reports. Prerequisite: Instructor’s consent. Field trip(s) required at the option of the instructor.

506.° Advanced Historical Geology. (3). Historical geology of the world. Emphasis on original sources and current research investigations. Prerequisite: Instructor’s consent. Field trip(s) required at the option of the instructor.

515.° Volcanology. (3). A study of the distribution, form, composition and activities of major volcanoes and volcanic areas in the world. The topics will include petrology and geomorphology of selected volcanoes, the geochemistry of magmas, and volcano tectonics. Prerequisite: Instructor’s consent.
521.° Advanced Stratigraphy. (3). 2R; 3L. Advanced concepts and principles of stratigraphic analysis and interpretation. Emphasis on original sources and current research investigations. Field problem required. Prerequisite: Geol. 350 or consent of instructor. Field trip(s) required at the option of the instructor.

525.° X-ray Analysis and Clay Mineralogy. (4). 3R; 3L. Introduction to the principles of x-ray diffraction and spectography; use of x-ray diffraction apparatus in mineral identification and crystal structure study. Special emphasis on the origin and identification of clay minerals. Prerequisite: Geol. 225 or consent of instructor.

530.° Igneous and Metamorphic Petrology. (4). 2R; 4L. Mineral paragenesis, bulk chemical compositions, physical-chemical relationships, textures, structures, origins, and classifications of igneous and metamorphic rocks. Thin-section studies facilitate rock identifications and the determination of petrogenetic relationships. Prerequisite: Geol. 425 and consent of instructor.

532.° Sedimentary Petrology. (3). 2R; 3L. Detailed study of sedimentary rocks and their origins. Determinations of mineral compositions, textures, structures, fabrics, and petrogenetic relationships are facilitated by the use of thin sections, peels, and geochemical analyses. Prerequisite: Geol. 425 and consent of instructor.

534. Geotectonics. (3). Physical and geological principles of crustal deformation and tectonic interpretation; orogenies and epeirogenies in their time-space relationships; especial reference to structural geology of North America. Prerequisite: Instructor’s consent. Field trip(s) required at the option of the instructor.

537.° Paleocology. (3). Reconstruction of ancient terrestrial and marine environments. Emphasis on synthesis of total raw data (paleontological, sedimentary, mineralogical, stratigraphic, etc.). Prerequisite: Instructor’s consent. Field trip(s) required at the option of the instructor.

542.° Ore Deposits. (3). 2R; 3L. An advanced treatment of the occurrence, classification, and origin of metalliferous ore deposits. Prerequisite: Instructor’s consent. Field trip(s) required at the option of the instructor.

549 & 550. Geology Seminar. (1-1). Review of current periodicals. Reports on students and faculty research. Prerequisite: Instructor’s consent. May be repeated for credit up to 2 hours each.

° May be offered only in alternate years.
† May be repeated for credit up to 6 hours.

GEOGRAPHY

Lower Division Courses


201. Physical Geography. (3). 2R; 3L. Emphasis upon the physical basis of geography, including climate, terrain, soils, landforms, and the seas; economic resources; cartographic elements; introduction to regional studies. Field trip(s) required at the option of the instructor.

210. World Geography. (3). A general survey of world geography, including an analysis of the physical, political, economic, historical, and human geography of the major world regions.

FAIRMOUNT COLLEGE 139
223. Economic Geography. (3). A geographical analysis of the distribution and utilization of basic world resources.

235. Descriptive Meteorology. (3). 2R; 2L. An introductory study of the atmosphere and its properties and the various phenomena of weather; a brief survey of important principles of physical, dynamic, synoptic, and applied meteorology. Prerequisite: Consent of instructor. Does not apply toward a major or minor in Geology. Field trip(s) required at the option of the instructor.

Upper Division Courses

302. Geography of the United States and Canada. (3). Physical, political, economic, historical, and human geography of the United States and Canada. Lectures, assigned readings, films, and reports.

331. Geomorphology. (3). 2R; 3L. (See Geol. 331.)

335. Field Mapping. (2). 6L. (See Geol. 335.)

342. Geography of Europe. (3). 3R. Physical, political, economic, historical, and human geography of Europe. Lectures, assigned readings, films and reports.

361. Economic Resources. (3). 2R; 3L. (See Geol. 361.)


440. Map Interpretation and Photogeology. (3). 2R; 3L. (See Geol. 440.)

* May be offered only in alternate years.

GERMAN

Major A: A major in German consists of a minimum of 24 hours beyond the level of German 112 and including German 325 and 327. It is strongly recommended that the major program include at least two of the survey courses offered. In addition, the student should elect courses in one other foreign language, English language and literature, linguistics, history, and philosophy.

Native speakers of German are not normally permitted to enroll in 100-200 level German courses nor to receive credit in such courses by advanced standing examination. A minimum of 12 hours in upper division courses including German 325 and 327 is normally required for a native speaker to earn a German major. Native speakers of German should consult with the department before enrolling in German courses.

Minor: A minor in German consists of a minimum of 11 hours beyond the 112 level, to include German 225 and one upper division course.

Major B: The teaching major in German in either Fairmount College of Liberal Arts and Sciences or in the College of Education
consists of at least 50 semester hours chosen from the following categories:

At least 24 hours in the language beyond the 111-112 level, as listed under Major A, and

(A) At least 21 hours in a second language as listed under Minor, or

(B) At least 15 hours from one or more of the following related fields: History, English, Linguistics, Philosophy, Political Science (these will be chosen in consultation with the Teacher Education advisor) or

(C) A totally separate second major as prescribed by the catalog.

NOTE: Students who wish to enter the student teaching program must have a 2.75 grade point average in German and departmental consent in order to be admitted to the professional semester, which includes Secondary Education 442F and 447. It is urgent that such students consult with the departmental professor in charge of teacher education early in their college careers.

Lower Division Courses

60. German for Graduate Reading Examination. (3). Open to upper division and graduate students only. A reading course designed to prepare students to fulfill department requirements of a reading knowledge of German for the M. A. or M. S. degrees. No previous knowledge of German required. Will not count toward a degree.

111-112. Elementary German. (5-5).

191. Elementary German Review. (3). Intensive practice and review of basic German structure. Primarily for students whose study of German has been interrupted or whose preparation in elementary German is inadequate to permit satisfactory performance in 223 or 225. Does NOT apply on Liberal Arts and Sciences language requirement for graduation nor on German major or minor. Prerequisite: German 112 or equivalent and departmental consent.

223-224. Intermediate German. (3-3). Grammar review; intensive reading of short stories; extensive reading of one short novel. Prerequisite: German 112 or equivalent. (224 satisfies core curriculum literature requirement.)

225-226. German Conversation and Composition. (2-2). Use of language laboratory develops fluency; dictation and free composition exercises develop style. Prerequisite: German 112 or equivalent.

Upper Division Courses

Except as noted, all upper division courses have as prerequisite German 224 or departmental consent.

321. German in Technical Fields. (3). Supervised individual readings in the student’s field of specialization—humanities, social sciences, or natural sciences. Prerequisite: German 223. Does not satisfy core curriculum literature requirement.

325-326. Advanced Composition and Grammar. (2-2). Prerequisite: German 226 or departmental consent.

327. Introduction to Linguistics. (3). Principles of descriptive and historical linguistics: phonetics and phonology, morphology and syntax. The phonological and grammatical structures of Modern Standard German and its development from Proto-Germanic. Required for a German major. Prerequisite: Completion of L. A. foreign language requirement. (Same as Linguistics 327.)
341. Survey I. Humanism through *Sturm und Drang.* (3).
342. Survey II. Classicism and Romanticism. (3).
343. Survey III. Nineteenth Century. (3).
344. Survey IV. Naturalism to 1945. (3).

427. Comparative Germanic Readings. (3). Historical development of German and its relationship to other Germanic languages based on text material in Old English, Old Norse, Gothic, and Old High German. Prerequisite: German 327 or consent of instructor.

428. Middle High German Language and Literature. (3). The guided reading of Middle High German epic and lyric poetry and shorter verse narratives; fundamentals of Middle High German grammar. Prerequisite: German 327 or consent of instructor.

435. Drama. (3).

436. Contemporary Literature. (3).

437. Goethe. (3). Intensive study of some significant works of Goethe, predominantly *Werther* and *Faust.*

438. Lyric. (3). The reading, interpretation, and appreciation of selected lyric poetry of leading German poets.

441. Seminar in Special Topics. (3). Special studies in (a) a particular period, (b) a specific genre, (c) the works of one outstanding author, or (d) stylistics and literary translation. Prerequisite: two upper division literature courses or department consent. May be repeated once for credit.

HISTORY

**MAJOR:** 31 hours minimum. The major will specialize in one of the following areas:

1. Ancient and Medieval.
2. Modern Europe.
4. United States.
5. Latin America.

Students electing group I through III will take 101 and 102 and one other lower division course. Students electing group IV or V will take 131 and 132 and one other lower division course. Nine upper division hours are to be selected from courses in the appropriate group, chosen in consultation with an adviser. All majors will take 498 and 300. In addition, sufficient hours will be elected to bring the total to 31. At least 5 of these hours must be at the upper division level and may not be in the area of specialization.

**MINOR:** A minor in the College of Liberal Arts and Sciences consists of 15 hours, including either 101 and 102 or 131 and 132 and at least three upper division hours.

**Lower Division Courses**

101 & 102. *History of Western Civilization.* (4-4). 101: Prehistory to 1648. 102: 1648 to the present.
103 & 104. Evolution of the Non-Western World. (4-4). 103: An examination of the political, social and cultural roots of the non-Western peoples; Africa, Near East, Inner Asia, China, Japan, India and Southeast Asia. 104: A study of the non-Western world in modern times; Africa, Near East, Inner Asia, China, Japan, India and Southeast Asia.

113 & 114. English History. (3). 113: From the earliest times to the beginning of the Stuart period, emphasizing the origin and development of institutions, customs, and nationalism. 114: From the beginning of the Stuart period to the present.

131 & 132. History of the United States. (4-4). 131: Survey from the colonial period through the Civil War. 132: Survey from Reconstruction to the present.


271 & 272. The Far East. (3-3). A survey of the social, economic, and political development of the Far East with emphasis on China, India, and Japan. Prerequisite: Sophomore standing.

Upper Division Courses

300. Introduction to Historical Research and Writing. (2). Basic instruction in research methodology, composition, and criticism. Required of history majors.

301. The Ancient Near East. (3). Political and cultural history on ancient Mesopotamia, Iran, Egypt, Palestine, Syria, and Asia Minor to the death of Alexander the Great.


321. Medieval Social and Intellectual History. (2). Survey of the social and intellectual history of Europe from the 4th to the 15th centuries.

322. Byzantine History. (3). Survey of Byzantine history from its origins in the late Roman World to its fall in 1453 with an investigation of its major institutions and foreign relations.

323 and 324. Medieval History. (3-3). 323: The history of Europe from the fall of the Roman Empire through the Crusades. 324: Continues to 1500.

325. The Bolivarian States. (3). Venezuela, Colombia, Ecuador, Peru, and Bolivia from independence to the present.

326. Republic of Mexico. (3). Mexico from the independence movement to the present.

327. Argentina, Brazil, and Chile. (3). From independence to present.

328. Inter-American Relations. (2). Includes economic and cultural as well as political topics.

329. Central America and the Caribbean. (2). From the independence period to the present, with special attention to U. S. involvement in this area.
331. The American Colonies. (3). Colonization of the New World with emphasis on the British peoples and their development.

333. The American Revolution and the Early Republic. (3). Examination of selected phases of the Revolutionary, Confederation, and Federal periods.

334. Age of Jefferson and Jackson. (3). Political, economic and cultural development of the United States from the election of Thomas Jefferson to the end of the Mexican war, with emphasis on the growth of American Nationalism.

335. The Negro in the United States. (3). Negro life, culture, and history from the seventeenth century to the present.

337. Economic History of Europe. (3). Same as Economics 305. (See for description.)

338. Economic History of the United States. (3). Same as Economics 307. (See for description.)

350. Military History. Major military developments and the conduct of war from antiquity to the mid-twentieth century.

352. The Indian in American History. (3). Indian life, culture, and history from the early sixteenth century to the present, with emphasis on the impact of federal Indian policy since 1800.

380 & 381. History of Science. (3-3). 380: Ancient and Medieval Science from its beginnings in the Near East to the end of the Middle Ages. 381: Rise of Modern Science from its first formative steps in the Medieval world to the 20th century.

411. England under the Tudors. (3).

412. England under the Stuarts. (3).

413. Eighteenth Century Great Britain. (3). From the accession of William and Mary to the French Revolution.


415. The Reign of George III. (3). Political, constitutional, economic, and religious developments in England from 1760 to 1820.

423. The Italian Renaissance. (3). Italian history from the fourteenth through the sixteenth centuries with an emphasis on cultural achievements.

424. The Reformation. (3). The great religious changes of the sixteenth century in their political, social, and intellectual contexts.


431. Civil War and Reconstruction. (3).

442. America's Gilded Age, 1877 to 1900. (3). Emphasis on roots of urban problems, foundations of dissent, policy toward minority groups, and evaluation of imperial expansion.

433 & 434. The United States; The Twentieth Century. (3-3). 433: The Progressive Era, the First World War, and the Twenties. 434: The Great Depression, the New Deal, the Second World War, the Post-War Era.

437 & 438. Social and Intellectual History of the United States. (3-3) 437: Survey of American thought and society to the end of the Civil War. 438: The significant social and intellectual currents from the middle of the nineteenth century to present, with special reference to the interaction between ideas and social structure.

440. History of the Old South. (3). Examination of Southern Civilization prior to the American Civil War.

441. History of Kansas. (3). History of the Kansas region from Spanish exploration to the present, with principal emphasis on the period after 1854.

442 & 443. History of Eastern Europe. (3-3). The development of the Bulgar, Czech, Magyar, Polish, Rumanian, and Yugoslav peoples.

444. The Atlantic and Trans-Appalachian West. (3). Exploration and settlement of the coastal and trans-Appalachian frontiers from colonial times to about 1840.

445. The Trans-Mississippi West. (3). Spanish, French and Anglo-American penetration and settlement west of the Mississippi River from the 16th century to about 1900.


450. The French Revolution and the Napoleonic Period. (3).


453 & 454. History of Russian Thought. (3-3).

455. Europe 1870-1914. (3). Politics and diplomacy leading to World War I.

456. Europe 1914 to Present. (3). Politics and diplomacy leading to World War II.


462. Seventeenth Century Europe. (3).


464. Europe, 1815-1870. (3).


470 & 471. Modern Germany. (3-3). 470: Creation of the German Empire and its role in world affairs 1848 to 1914. 471: Establishment and collapse of the Weimar Republic, the rise and fall of Hitler's Third Reich, the divided Germany of the present, and the role of each in world affairs, 1914 to the present.

472 & 473. Modern France. (3-3). 472: Restoration, Reaction and Revolution; Bourbon Restoration, Revolution of 1848, Napoleon III and Second Empire, and the Franco-Prussian War. 473: Crisis and Decline; Formation of the Third Republic, impact of World War II, interwar challenges, Vichy, problems of the Fourth and Fifth Republics, withdrawal from Indochina and Middle East, and prelude to major power involvement.

487 & 488. European Diplomatic History. (3-3). 487: European International politics and diplomatic practices, with emphasis and actions of the great powers and their statesmen, Concert of Europe to World War I. 488: Versailles
settlement, totalitarian aggression, appeasement, World War II, the "cold war," and decolonization of Southeast Asia and Middle East as prelude to major power involvement.

491. Workshop in American History. (1-3). May be repeated for graduate credit but will not satisfy requirements for the Master of Arts or Ph. D. degree programs.

492. Workshop in European History. (1-3). May be repeated for graduate credit but will not satisfy requirements for the Master of Arts or Ph. D. degree programs.

495. Special Topics in History. (1-3 in an area).

498. Historiography. (2). Review of the major schools of historical thought, philosophies of history, and eminent historians, from the ancient world to the present.

Graduate Courses

505. Seminar in Ancient History. (3). Prerequisite: Consent of department.

506. Seminar in Medieval History. (3). Prerequisite: Consent of department.

507. Seminar in Renaissance and Reformation. (3). Prerequisite: Consent of department.

508. Seminar in 17th and 18th Century Europe. (3). Prerequisite: Consent of department.

509. Seminar in English History. (3). Prerequisite: Consent of department.

510. Seminar in Modern German History. (3). Prerequisite: Consent of department.

511. Seminar in Modern French History. (3). Prerequisite: Consent of department.

512. Seminar in Slavic History. (3). Prerequisite: Consent of department.

513. Seminar in the History of Science. (3). Prerequisite: Consent of department.

514. Seminar in Latin American History. (3). Prerequisite: Consent of department.

520. Seminar in American Colonial History. (3). Prerequisite: Consent of department.

521. Seminar in American Constitutional History. (3). Prerequisite: Consent of department.

522. Seminar in American Diplomatic History. (3). Prerequisite: Consent of department.

523. Seminar in American Civil War and Reconstruction. (3). Prerequisite: Consent of department.

524. Seminar in American Economic History. (3). Prerequisite: Consent of department.

525. Seminar in American Social and Intellectual History. (3). Prerequisite: Consent of department.

526. Seminar in the American West. (3). Prerequisite: Consent of department.

527. Seminar in American State and Local History. (3). Prerequisite: Consent of department.
528. Seminar in 20th Century America. (3). Prerequisite: Consent of department.

531. Reading Seminar in American History. (3). Prerequisite: Consent of department. May be repeated for credit.

532. Reading Seminar in American History. (3). Prerequisite: Consent of department. May be repeated for credit.

534. Reading Seminar in Latin American History. (3). Prerequisite: Consent of department. May be repeated for credit.

535. Reading Seminar in the History of Science. (3). Prerequisite: Consent of department. May be repeated for credit.

533. Readings in Modern European History. (3). Prerequisite: Consent of department. May be repeated for credit.

534. Readings in Modern European History. (3). Prerequisite: Consent of department. May be repeated for credit.

535. Reading in Ancient History. (3). Prerequisite: Consent of department. May be repeated for credit.

536. Readings in Medieval History. (3). Prerequisite: Consent of department. May be repeated for credit.


595. Special Topics in History. (1-3). Open only to graduate students. May be repeated for credit to a maximum of 4 hours.


ITALIAN (See Romance Languages)

JOURNALISM

Major: The major in journalism consists of at least 26 hours, including journalism 115, 226, 330, 336, 380, 444, 445 and 447, and a concentration of not less than 15 hours in one additional field of study in a school or college of the University. In addition, one of the following sequences must be completed:


Radio-Television Sequence: Speech 114, 225 and 314.


Lower Division Courses

115. Introduction to Mass Communication. (3). Required for the major in journalism. The role of mass communication in media, with emphasis on the history of American journalism. Consideration of the freedom and responsibilities of the mass media.
226. Newswriting. (3). 2R; 3L. Required for the major in Journalism. Evaluation, reporting and writing of various types of news stories. Qualified students will participate in production of the laboratory newspaper, The Sunflower. Prerequisite: Journalism 115. Reasonable typing competence required.

232. Introductory Photojournalism. (3). 2R; 3L. Basic photographic theory and technique, with emphasis on aspects of importance to journalists, writers and editors. Using the department's cameras and laboratory facilities, students take, develop and prepare photographs for publication. Prerequisite: Journalism 115.

238. Advertising Principles. (3). Survey of advertising fundamentals and media in relation to modern business activities; introduction to copywriting, layout, visualization, market research, packaging and related problems. Prerequisite: Journalism 115.

247. Journalism Research. (2). Introduction to basic research technique and sources of particular value to the professional journalist and their application in the preparation of several research papers. Prerequisite: Journalism 226.

**Upper Division Courses**

321. News Film. (3). A course in the techniques used in the production of news film and news documentaries. Prerequisite: Journalism 336.

325. Radio and Television News. (4). 2R; 3L. Reporting and writing news with emphasis on the special requirements of broadcast media. Prerequisite: Journalism 321.

330. Advanced Newswriting and Reporting. (3). 2R; 3L. Reporting and writing the more demanding types of material: feature, interpretive and public affairs and stories, editorials and interviews. Prerequisite: Journalism 226.

336. Editing. (3). 2R; 3L. Selection, evaluation and preparation of copy and pictures for publication; copyreading, rewriting, headline and caption writing, page makeup. Prerequisite or concurrent: Journalism 330.

360. Journalism Internship. (1-4). On-the-job experience and training in news, advertising or public relations. Special readings and research projects for students professionally employed in the communications media. Prerequisite: Journalism 330.

380. History of Communications. (3). Research into the development of mass media. Emphasis will be given to the development and presentation of original research papers. Bibliography and criticism in mass communications. Prerequisite: Journalism 330.

427. Magazine and Feature Writing. (3). Researching and writing non-fiction articles for submission to magazines and newspapers. Enrollment limited. Prerequisite: Journalism 330.

444. Policies and Problems in Mass Communications. (3). Functions and responsibilities of mass media management; development and direction of policy, with emphasis on ethical and legal considerations. Prerequisite: Journalism 336.

445. Editorial Writing. (3). A study of editorial judgment, including practice in the writing of editorials and editorial page features. A study of research materials available to editorial page writers. Prerequisite: Journalism 336.

447. Law of the Press. (3). An examination of libel laws, including studies of the laws themselves, with substantive research into case histories. Prerequisite: Journalism 336.
448. Special Topics in Journalism. (3). Directed individual research in various aspects of journalism and mass communications, or related topics. Preparation of a major term paper. Prerequisite: Journalism 380 and senior standing.

450. Public Affairs Reporting. (3). An analysis of the methods and problems of reporting governmental affairs on the local, state and federal levels. Prerequisite: Journalism 336.

466. World Press. (3). A study of international comparative press and broadcast systems with emphasis on press freedoms and their relation to historical political freedoms; plus cross-cultural communications. Open to Journalism juniors and seniors and seniors and graduate students from throughout the University.

LATIN AND GREEK (See Romance Languages)

LINGUISTICS

MAJOR. A major in linguistics must be combined with a minor in a foreign language. The major consists of: (1) a minimum of 21 hours from the courses listed below, including at least 12 hours from group A and at least one course from each of groups B and C. At least one phonetics course (Linguistics 223, French 305 or Spanish 335) must be included. (2) One course beyond the 112 level in a foreign language other than the student's minor. The same course may not be counted towards more than one of these requirements.

MINOR. A minor in linguistics consists of 15 hours from the courses listed below which are not also counted towards the student's major. At least 9 hours must be taken from group A.

Courses

Group A (basic linguistic theory)

215. Linguistics. Introduction to English Linguistics. (3). (Same as English 215.)


327. Linguistics. Introduction to Linguistics. (3). (Same as German 327.)

462. Linguistics. Aspects of Linguistic Theory. (3). (Same as English 462.)


465. Linguistics. Structure of a Selected Non-Indo-European Language. (3). The language offered will depend on student demand and availability of staff. May sometimes be conducted as a field methods course. May be repeated for credit when different languages are offered. Prerequisite: Linguistics 215 or 327.
Group B (linguistic study of specific languages or language groups)

401. English. Old English. (3).
461. English. History of the English Language. (3).
463. English. The English Language in America. (3).
428. German. Middle High German. (3).

Group C (areas of contact between linguistics and other disciplines)

325. Philosophy. Symbolic Logic. (3).
440. Philosophy. Philosophy of Language. (3).
345. Psychology. Psycholinguistics. (3).
499. Linguistics. Directed Readings. (1-3). Credit will be assigned to Group A, B or C depending on content. May be repeated for credit.

MATHEMATICS

Since a satisfactory major depends primarily on a suitable combination of courses, the courses which comprise the major must be approved by the department. Because of the importance of verbal experience in learning mathematics, a student intending to major in mathematics should take English 111 or Speech 111 during his first college semester.

MAJOR: For the B. A. degree in mathematics, the major requires Mathematics 244 and 18 semester hours of upper division work in the department which must include Mathematics 307, 313 and 335. In addition, Philosophy 325 or Computer Science 300 is required. The foreign language should be French or German.

For the B. S. degree in mathematics, the major requires Mathematics 244 and 24 semester hours of upper division work in the department which must include Mathematics 307, 313, 335, 336, and 346. In addition, Philosophy 325 or Computer Science 300 is required. The student must also complete 9 semester hours of upper division work in Philosophy or in one of the natural or social sciences. The foreign language must be French or German.

For the B. S. degree in mathematics with emphasis in computer science, the student must complete Mathematics 244, 307, 313, 335, 346, and 470; Statistics 471; and Computer Science 199, 230, 300, 381, and 382. Recommended electives are Statistics 472 and Mathematics 336 and 452.
For the B. S. degree in mathematics with emphasis in statistics, the student must complete Mathematics 244, 307, 313, 335, 336, 470, and Statistics 371-372 and 471-472. He must also complete either Philosophy 325 or Computer Science 300 and 9 semester hours of upper division work in Philosophy or one of the natural or social sciences.

Recommended schedules for each of these degree programs are available in the department office. A calendar indicating when particular courses are to be offered is also available. A student majoring in mathematics should consult closely with his advisor on any of these programs.

**MINOR:** A minor in mathematics requires a minimum of 15 semester hours of credit courses, including 3 hours of upper division work.

For some curricula in the University, one and one-half units of high school algebra and one unit of high school geometry is required. For students lacking such prerequisites, the Mathematics Department offers remedial courses, as listed below.

### Remedial Courses

52. **Algebra.** (5).° The topics from high school algebra essential to the study of university level mathematics. May be used, in meeting department prerequisite in place of one and one-half units of high school algebra. Prerequisite: None.

60. **Plane Geometry.** (2).° For students without high school credit in plane geometry. May be used in meeting department prerequisites, in place of one unit of high school geometry. Prerequisite: One unit of high school algebra or Mathematics 52, or concurrent enrollment in Mathematics 52.

° Hours do not apply toward a Wichita State University degree.

### Lower Division Courses

121. **Discrete Mathematics I.** (3). Set theory, probability, and the elements of statistics. Prerequisite: One unit of high school algebra.

122. **Discrete Mathematics II.** (3). Linear algebra and related topics. Prerequisite: 121.

140. **College Algebra.** (3). Function, theory of equations and inequalities, complex numbers, and exponential and logarithmic functions. Prerequisite: One and one-half units of high school algebra or Mathematics 52 and one unit of high school geometry or Mathematics 60. (For those students who doubt the adequacy of their high school preparation, a mathematics placement test is available for advisory purposes.)

141. **Algebra and Trigonometry.** (5). Functions, theory of equations and inequalities, complex numbers, the trigonometric functions, exponential and logarithmic functions, and other standard topics prerequisite to a beginning study of analysis. Prerequisite: One and one-half units of high school algebra or Mathematics 52, and one unit of high school geometry or Mathematics 60. (For those students who doubt the adequacy of their mathematical preparation, a placement examination is available for advisory purposes.)

142. **Introductory Analysis I.** (5). Analytic geometry and the Calculus in an inter-related form. Prerequisite: Mathematics 141 with a C or better or two
units of high school algebra, one unit of high school geometry, and one-half unit of high school trigonometry. (For those students who doubt the adequacy of their high school preparation, a placement examination is available for advisory purposes.)

243. Introductory Analysis II. (5). A continuation of Mathematics 142. Includes a study of integration and applications and an introduction to infinite series. Prerequisite: Mathematics 142 with a C or better.

244. Introductory Analysis III. (3). A continuation of Mathematics 243. Includes a study of multiple integration and partial derivatives. Prerequisite: Mathematics 243, with a C or better.

245. Survey of Analysis. (3). A brief, but careful introduction to mathematical analysis for students of the humanities, the social sciences, and business. Prerequisite: Mathematics 140 or 141. Credit in both 245 and 142 is not allowed.

Upper Division Courses

303-304. Topics in Modern Mathematics I and II. (3-3). An investigation of the newer topics of secondary school curriculums. Not open to mathematics majors. May be repeated for credit with consent of the department. Prerequisite: Consent of the department.

307. Linear Algebra I. (3). An elementary study of linear algebra including a study of linear transformations and matrices over finite dimensional spaces. Prerequisite or corequisite: Mathematics 244.

311. Elementary Geometry. (3). The structure of Euclidean geometry. Prerequisite: Mathematics 243 or 245.

313. Fundamental Concepts of Algebra I. (3). Groups, rings, fields. Prerequisite: Mathematics 307 or consent of department. (Not for major graduate credit.)

315. Elementary Number Theory. (3). Properties of the integers studied by elementary means. Prerequisite: Mathematics 245 or upper division standing or mathematics 244 or consent of department.

335. Intermediate Analysis I. (3). A detailed study of limits, continuity, and integration. Prerequisite: Mathematics 244 with C or better. (Not for major graduate credit.)

336. Intermediate Analysis II. (3). The calculus of functions of several variables, line and surface integrals. Prerequisite: Mathematics 307 and 335 with C or better in each.

346. Ordinary Differential Equations. (3). Integrating factors, separation of variables, critical points, linear differential equations with constant coefficients, variation of parameters, existence and uniqueness for initial value problems, and systems. Prerequisite: Mathematics 244 with a C or better. (Not for major graduate credit.) Not open to students with credit in 349 or 446.

373-374. Elementary Mathematics I and II. (3-3). Topics necessary to an understanding of the elementary school curriculum, such as set theory, the real numbers and geometry. Prerequisite: Elementary Education major or consent of department. Not for major or minor credit.

412. Modern Geometry. (3). Fundamental concepts of geometry. Prerequisite: Mathematics 313 or consent of department.

414. Fundamental Concepts of Algebra II. (3). A continuation of Mathematics 313. Prerequisite: Mathematics 313 with a C or better.

416. Topics in Number Theory. (3). Prerequisite: Mathematics 315 and consent of department.
431. Intermediate Analysis III. (3). A continuation of Mathematics 336. Prerequisite: Mathematics 336 with C or better.

437. Elementary Topology. (3). Primarily the topology of metric spaces. Prerequisite: Mathematics 335 with a C or better or consent of department.

438. Introduction to Complex Analysis. (3). Basic treatment of analytic functions. Prerequisite: Mathematics 335 or 447 with a C or better or consent of department.

447-448. Engineering Mathematics I and II. (3-3). Vector analysis, matrices, infinite series, orthogonal and special functions, Fourier series, and boundary value problems. Prerequisite: Mathematics 346, with C or better. (No credit for Mathematics majors.)

452. Numerical Analysis. (3). Numerical solutions of algebraic and differential equations. Prerequisite: Mathematics 307 and 335 with C or better in each.


470. Introduction to Combinatorial Mathematics. (3). Permutations, generating functions, partitions, distributions, and elements of graph theory. Prerequisite: Mathematics 335 or consent of department.

499. Individual Projects. (1 to 5). May be repeated to a total of 10 credits. Prerequisite: Consent of department. (Not for graduate credit.)

Graduate Courses

501-502. Real Analysis I and II. (3-3). A study of the foundation of analysis and of the fundamental results of modern real analysis. Prerequisite: Mathematics 431 or consent of department.

503-504. Abstract Algebra I and II. (3-3). A treatment of the standard basic topics in abstract algebra. Prerequisite: Mathematics 414 or consent of department.

505-506. Complex Analysis I and II. (3-3). Theory of analytic functions. Prerequisite: Mathematics 431 or consent of department.

507-508. Topology I and II. (3-3). Point set and algebraic topology. Prerequisite: Mathematics 437 or consent of department.

520. Proseminar. (1). Oral presentation of research in areas of interest to the students. Prerequisite: Major standing.

521. Individual Reading. (1 to 5). Prerequisite: Consent of department. May be repeated up to a maximum of 5 hours with the consent of the department.

525. Special Topics. (2 or 3). May be repeated by consent.
   A. Analysis.
   B. Algebra.
   C. Geometry.
   D. Topology.
   E. Applied Mathematics.
   F. Foundations.
   G. Number Theory.
   H. Statistics.
   I. Methodology of Science.
   Prerequisite: Consent of instructor.

546. Ordinary Differential Equations. (3). Existence, uniqueness, stability, and other "qualitative theories" of ordinary differential equations. Prerequisite: Mathematics 335 and 346 or consent of department.
553-554. Numerical Analysis I and II. (3-3). Numerical approximations of solutions to initial and boundary value problems of ordinary and partial differential equations. Prerequisite: Mathematics 335 or consent of department.

555-556. Partial Differential Equations I and II. (3-3). Existence and uniqueness theory for boundary value problems of partial differential equations of all types. Prerequisite: Mathematics 335 or consent of department.


STATISTICS AND COMPUTER SCIENCE

The courses in statistics and computer science listed here are offered by the Mathematics Department. No major or minor is offered, but a B.S. degree in mathematics with emphasis in computer science and a B.S. degree in mathematics with emphasis in statistics are available and are described at the beginning of the mathematics section of the catalog. For further information, consult the Mathematics Department. All courses here satisfy core and liberal arts mathematics requirements.

As a part of the 124 semester hours required for graduation, a student may take up to 15 semester hours of statistics and/or computer science courses in addition to the 43 semester hours of course work allowed in mathematics.

STATISTICS

Upper Division Courses

301. Elementary Statistics. (3). Elementary descriptive statistics, binomial and normal distributions, elementary problems of statistical inference; linear correlation and regression. Prerequisite: Mathematics 121, 140, or 141. Not open to students with credit in Mathematics 243 or to mathematics majors.


371-372. Statistical Methods I and II. (3-3). 2R; 2L. In 371, basic experimental statistics; problems of statistical inference; confidence limits; forms of correlation; and analysis of variance. In 372, sampling; additional analysis of variance; randomized block; Latin square; factorial; multiple and curvilinear correlation. Prerequisite: Mathematics 243 or 245.

471-472. Probability and Statistics I and II. (3-3). A course in the theory of the subject. Prerequisite: 335 with C or better.

COMPUTER SCIENCE

Lower Division Courses

199. Introduction to the Computer. (3). Automatic data processing, digital computers, flow charting, computer languages, Fortran IV, sorting techniques, and the solution of elementary problems. Prerequisite: Mathematics 140 or 141.

230. Assembler Languages. (3). Logical computer structure and organization. Use of IBM 360 languages for the study of logical operations. Indirect addressing and data access methods. Prerequisite: Computer Science 199.
Upper Division Courses


381. Computer Solution of Numerical Problems. (3). Finite differences, interpolation, solution of systems of equations, numerical integration. The student will use the computer facility in the solution of problems. Prerequisite: Computer Science 199 and Mathematics 244 and 307, with C or better in each.

382. Special Topics in Computer Science. (3). Topics such as sequential machines, automata theory, computability and solvability. Prerequisite: Computer Science 381 and Mathematics 313.

498. Individual Projects. (1-3). May be repeated for a total of 6 hours credit. Prerequisite: Consent of department.

MEDICAL TECHNOLOGY

Note: The courses in Medical Technology are prescribed by the ASCP and are offered by the School of Medical Technology, St. Francis Hospital, St. Joseph Hospital, and Wesley Hospital, Wichita, Kansas. For the curriculum in Medical Technology see page 323.

MUSIC

See page 297 for requirements and curriculum.

PHILOSOPHY

The Department of Philosophy offers a wide range of courses in order to enable an undergraduate major to acquire familiarity with the varieties of philosophic inquiry, and to pursue in some detail those topics in which he becomes especially interested.

Major: A major requires (1) a minimum of 24 semester hours of philosophy courses, at least 12 of which must be upper division courses, and (2) included within the 24 hour major, certain required courses selected from three areas of study as follows:

I. Logic (3 hours): 225 or 325 or 426.
II. Value Theory (3 hours): 244 or 313 or 360 or 375.
III. History of Philosophy (6 hours): 331, and 333 or 334.

Minor: A minor consists of 15 hours of philosophy selected in consultation with the department, with the aim of orienting the student to the philosophical aspects of his major field.

Lower Division Courses

121. Introduction to Philosophy. (3). An introduction to the philosophic

* When applicable, Philosophy 490 (Special Studies) can be substituted for one or more of the required courses, with the approval of the department. Also, university honors courses having core credit which are taught by the philosophy staff can be included as part of the 24 hour major requirement, with the approval of the department.
principles and methods employed in treating the problems of truth and validity, reality and appearance, and good and evil, by means of an analysis of the classical doctrines of the nature of things, the structure of knowledge, and the criteria for moral value.

150. Introduction to Contemporary Philosophy. (3). An introduction to the basic problems and trends in recent philosophy.

225. Logic. (3). An introduction to the basic principles of rational thinking, with an emphasis on argument forms, deductive techniques, and methods of proof.

226. Introduction to Philosophy of Science. (3). A study of the basic philosophical presuppositions of the scientific method, as exemplified in the problems of induction, deduction, hypothesis, evidence, probability, verification, definition, and experimental technique.

244. Ethics. (3). A comprehensive study of the classical and modern theories of social and moral value as they give meaning to the concepts of law, morality, tradition and social reality.

Upper Division Courses

304. Analytic Philosophy. (3). A critical examination of various contemporary philosophical problems as seen through the writings of philosophers such as Moore, Carnap, Ayer, Russell, Ryle, Wisdom, Strawson, Quine, Wittgenstein and others. Prerequisite: Three hours of philosophy or consent of instructor.

305. Philosophy of Education. (3). An examination of educational concepts with an emphasis on the implications of such concepts with respect to the problems of moral, political and religious education in a secular, democratic society.

313. Social and Political Philosophy. (3). An examination of various philosophical theories of the state and society.

325. Symbolic Logic. (3). The logic of truth-function and quantification; relations, identity and definite descriptions, Russell's paradox.

331. Ancient Philosophy. (3). A study of the basic philosophic systems from the Pre-Socratic to the Hellenistic Period, with an emphasis on the works of Plato and Aristotle.


334. Late Modern Philosophy. (3). A study of the philosophical thought of the eighteenth century with selections from such philosophers as Berkeley, Hume, and Kant.

335. Nineteenth Century Philosophy. (3). A study of the philosophical thought of the nineteenth century including selections from such philosophers as Hegel, Fichte, Schelling, Schopenhauer, Mill, Marx, Kierkegaard, Peirce, and Nietzsche.

340. Epistemology. (3). A critical examination of the nature of knowledge and of the philosophical problems concerning skepticism, knowledge of the self, material objects, other minds, the past, present and future, universals, and necessary truths. Selections from both historical and recent writings. Prerequisite: Phil. 121 or equivalent.
350. Metaphysics. (3). An exploration of some basic topics in the theory of reality. Issues include such notions as space, time, substance, causality, particulars, universals, appearance, essence and being. Prerequisite: Phil. 121 or equivalent.

356. American Philosophy. (3). A study of philosophy in America with readings selected from such authors as Peirce, James, Royce, Santayana, Dewey, Lewis and Quine.

360. Ethical Theory. (3). A concentrated study of ethical theory in the context of certain fundamental ethical problems. Prerequisite: 121 or 244 or equivalent.

366. Philosophy of Literature. (3). An exploration of the philosophic themes present in literature. Special attention is devoted to literature as an aesthetic phenomenon and the associated problems of the essential nature of literature as a particular art form, the author's intentions, the criteria of aesthetic appreciation, and literature as knowledge. Emphasis on the special type of literature—poetry, drama, the novel, the short story—is the instructor's choice.

369. Existentialism. (3). An examination of the leading contemporary philosophic movement in Europe as expressed in the writings of Kierkegaard, Nietzsche, Schopenhauer, Heidegger, Sartre, Camus and Jaspers. Prerequisite: Phil. 121 or equivalent.

375. Aesthetics. (3). A study of the various philosophic conceptions of the fine arts, and an analysis of the notions of imitation, imagination, expression, creativity, feeling, intuition and technique, as they relate to the aesthetic context of artist, audience and the work of art.

380. Phenomenology. (3). A study of the phenomenological movement in philosophy, with special attention to its source in Husserl; and an introduction to its recent developments in such thinkers as Scheler, Heidegger, Sartre, Merleau-Ponty, and Straus. Prerequisite: 121 or equivalent.

420. Logical Theory. (3). A study of the views of selected philosophers concerning the nature and function of logic and other selected problems in logical theory. Prerequisite: Philosophy 225 or 325, or consent of instructor.

425. Philosophy of Science. (3). Consideration of the presuppositions, results and limitations of the natural and social sciences; the relations among the sciences; the nature of the philosophic problems and scientific methods used.

426. Advanced Symbolic Logic. (3). An axiomatic development of the propositional and first-order functional calculi, including such topics as proofs of consistency and completeness, prenex and skolem normal forms, Lowenheim's theorem, and the decision problem. Prerequisite: Consent of the instructor.

440. Philosophy of Language. (3). An examination of philosophical problems concerning the nature and function of language; discussion of traditional and recent theories of meaning, and of the relevance of philosophy of language to other areas of philosophy. Prerequisite: Philosophy 225 or 325 or equivalent, or consent of the instructor.

446. Philosophy of Religion. (3). An examination of some basic religious problems such as the nature grounds of religious belief, religious language, the existence and nature of God, human immortality, the problem of evil.

475. Philosophy of the Social Sciences. (3). A study of such topics as the relations of social science with natural science and philosophy, methodological problems peculiar to social science, the nature of sound explanation, concepts and constructs, the roles of mathematics and formal theories in social science.

480. Studies in a Major Philosopher. (3). A concentrated study of the thought of one major philosopher announced by the instructor when the course is scheduled. May be repeated for credit. Prerequisite: Consent of instructor.
490. Special Studies. (3). The instructor will announce the topic for study. May be repeated for credit. Prerequisite: Consent of the instructor.

499. Directed Readings. (1-3). A course designed for the student interested in doing independent study and research in a special area of interest. Prerequisite: Departmental consent. May be repeated for credit.

Graduate Courses

500. Seminar. (3).

501. Selected Topics in Epistemology. (3). The instructor will announce the topic for study. May be repeated for credit with department consent. Prerequisite: Consent of the instructor.

502. Selected Topics in Metaphysics. (3). The instructor will announce the topic for study. May be repeated for credit with department consent. Prerequisite: Consent of the instructor.

506. Selected Topics in Ethical Theory. (3). The instructor will announce the topic for study. May be repeated for credit with department consent. Prerequisite: Consent of the instructor.

510. Directed Readings. (1-3). Repeatable for credit up to six hours. Prerequisite: Department consent.


PHYSICS

MAJOR: The following courses are required for a physics major: General College Physics (123-124 or 234-244), 311, 333-334, 339-340, and 454, Math 335 and 346, and one semester of Chemistry. For a Bachelor of Arts degree, one upper division physics laboratory course and three additional hours of physics are required. For a Bachelor of Science degree, three upper division physics laboratory courses and eight additional hours of Physics are required. Also required for the Bachelor of Science degree is a reading knowledge, or two semesters of German, Russian, or French.

MINOR: A minor in Physics consists of General College Physics (123-124 or 243-244) and at least six additional hours of physics.

Lower Division Courses

103. Introductory Physics. (5). 4R; 3L. A general physics course for liberal arts students and those who have not had physics in high school. Topics to be included are: Mechanics, heat, electricity and magnetism, wave phenomena, and modern physics. Not open to students who can meet the prerequisites for Physics 243. Prerequisite: One year of high school algebra.

123-124. General College Physics. (5-5). 4R; 3L. First semester: Mechanics, heat and sound. Second semester: Electricity, light, and modern physics. Intended for students who have a working knowledge of algebra and trigonometry but who have had no calculus. Prerequisite for 123: High school trigonometry or Math 141. Prerequisite for 124: Physics 123 or 243.

243-244a General College Physics. (5-5). 4R; 3L. Intended for students who have had an introduction to calculus. First semester: Mechanics and heat. Second semester: Electricity and light. Prerequisite: High school physics, or Introductory Physics 103, or junior standing in the University. Co-requisite for Physics 243: Math 243. Prerequisite to Physics 244: Math 243
with a grade of C or better and, Physics 123 with consent of the department, or Physics 243.

243(E)-244(E). General College Physics Lectures. (4-4). 4R; 0L. The lecture portion of Physics 243-244 and carries the same prerequisites. Open only to engineering students.

261. General Physics Laboratory. (1 or 2). 3L. The general college physics laboratory for students who have taken Physics 243(E) and 244(E) and wish to transfer to Liberal Arts. Prerequisite: Physics 243(E).
* Credit will not be given for both 123 and 243 or both 124 and 244.

Upper Division Courses

300. Seminar. (1). Student reports on topics of general interest in physics. May be repeated for credit up to two hours. May not be counted for credit toward a minor in physics. Prerequisite: Completion of, or concurrent enrollment in an upper division physics course, and consent of instructor.

311. Topics in Modern Physics. (3). An introduction to selected areas of modern physics with emphasis on the features of atomic, nuclear, and solid state physics which require modifications of classical physics for their explanation. Prerequisite: The sequence of 123-124 with a grade of B or better in both, or Physics 244. Corequisite: Math 244.

320 & 321. Classical Physics Laboratory. (1-1). 3L. An intermediate laboratory with experiments drawn from the following areas of classical physics: Mechanics, optics, electricity and magnetism. Corequisite: Physics 333 or 345.

333-334. Electricity and Magnetism. (3-3). Direct and alternating currents: electric and magnetic field theory including an introduction to Maxwell’s electromagnetic wave theory. Prerequisite for 333: The sequence of Physics 123-124 with a grade of B or better in both, or Physics 244 with a grade of C or better, and Math 244 with a grade of C or better. Prerequisite for 340: Physics 339.

339-340. Elementary Mechanics. (3-3). Motion of a particle in one and several dimensions; motion of systems of particles; motion of rigid bodies; moving coordinate systems, mechanics of continuous media, and the Lagrangian Equations of Motion. Prerequisite for 339: The sequence of Physics 123-124 with a grade of B or better in both, or Physics 244 with a grade of C or better, and Math 244 with grade of C or better. Prerequisite for 340: Physics 339.

345. Physical Optics. (3). Electromagnetic waves, diffraction and interference, radiation, scattering, and optical properties of solids. Prerequisite: The sequence of Physics 123-124 with a grade of B or better in both, or Physics 244, and Math 244.

350. Thermophysics. (3). The laws of thermodynamics, thermodynamic potentials and applications; distribution functions, Boltzmann equation, transport phenomena and fluctuations; introduction to statistical mechanics. Prerequisite: The sequence of physics 123-124 with a grade of B or better in both, or Physics 244, and Math 244.

380. Special Studies in Physics. (1 or 2). May be repeated, but total credit may not exceed two hours. Prerequisite: Department consent.

402. Numerical Methods in Chemistry and Physics. (2). 1R; 3L. Applications of numerical methods to problems in chemistry and physics. Roots of equations, curve fitting, interpolation, extrapolation and smoothing of experimental data, numerical differentiation and integration, computer programming. Prerequisite: Consent of instructor.

421 & 422. Modern Physics Laboratory. (1-1). 3L. An advanced laboratory with experiments drawn from various areas of modern physics. In 421, the emphasis is on a determination of the fundamental constants of physics. 422 is devoted to experiments in nuclear physics. Prerequisite for either course: Physics 311, and 320 or 321.
425. Electronics. (2). 1R; 4L. Provides a working knowledge of electronic devices and circuits for the student or research worker who has little or no background in electronics. Prerequisite: Consent of instructor.

454-455. Modern Physics. (3-3). Introduction to quantum mechanics, the Schrödinger equation, elementary perturbation theory, one- and multi-electron atoms, molecular physics. Prerequisite: Math. 346; Physics 311 and 340. Physics 454 is a prerequisite for 455.

456. Applications of Quantum Mechanics. (3). Applications of quantum mechanics to problems in solid state and nuclear physics. Prerequisite: Physics 454.

460. Introduction to Theoretical Physics. (3). Techniques of mathematical physics and their application to boundary value problems in mechanics, electricity and magnetism, wave motion, etc. Prerequisite: Physics 334, 340; Math. 346.

Graduate Courses


512. Elementary Statistical Mechanics. (3). An introduction to the basic concepts and methods of statistical mechanics with applications to simple physical systems. Prerequisite: Math 346; Physics 340.

515-516. Introduction to Solid State Physics. (3-3). The basic knowledge of the nature and properties of the solid state including the structural, thermal, mechanical, electrical, and magnetic properties. Electron theory of metals, band theory of solids. Prerequisite: Physics 311, or departmental consent, and Math 346.

521. Individual Readings. (1 to 3). Prerequisite: 30 hours of physics and department consent. May be repeated for credit up to three hours.

529. Selected Topics in Physics. (2 or 3). May be repeated for credit up to six hours. Prerequisite: Department consent.

533-534. Elementary Quantum Mechanics. (3-3). Elementary principles, formulations, and methods of quantum mechanics with special application to atomic and molecular phenomena. Prerequisite: Physics 340 and 454 or department consent, and Math. 346.


537-538. Nuclear Physics. (3-3). The nuclear two-body problem and nuclear forces, models of the nucleus, nuclear decay, theory of nuclear reactions, and strange particles. Prerequisite: Physics 455.

550. Seminar. (1). Review of current periodicals. Reports on student and faculty research. May be repeated for credit up to two hours. Prerequisite: 20 hours of physics.

551. Research and Thesis. (1-3). May be repeated for credit up to six hours.

POLITICAL SCIENCE

Major: A major consists of 30 hours. Requirements are as follows: Pol. Sci. 345 or 444, and 447 or 449; 3 hours each from Group
2, 3, 4, and 5; and enough additional hours to complete the 30-hour major requirement.

MINOR: A minor consists of 3 hours from Group 1; and 12 additional hours, 6 of which must be upper division.

4. (International Relations), 335, 336, 433, 434, 436.
5. (Public Administration), 321, 464, 467, 487.

Lower Division Courses

121. American Political System. (3). An analysis of the basic patterns and structure of the American Political System, with emphasis on policies and problems of American Politics.

150. Workshop. (1-4). Prerequisite: Consent of instructor.

200. Research Techniques. (3). Introduces the beginning student to research techniques in political science. Recommended for majors.

211. American Democracy. (3). Currents in the development of American democracy with emphasis on the ideas and ideals which have contributed to the development of Americanism and the literature which deals with these currents of thought.

219. State Government. (3). The role of the states in the federal system, and the patterns of politics and institutions in the several states. Particular attention to the State of Kansas. (Formerly offered as Pol. Sci. 319.)

226. Comparative Politics. (3). An analysis of the basic patterns and structures of Western democratic political systems, transitional systems, and dictatorial or totalitarian systems.

227. Comparative Analysis of Western Democracies. (3). Utilizing experience from Great Britain, France, the British-speaking Commonwealth and Western Europe, and analysis of the characteristics of these systems.

228. Autocracy, Dictatorship, and Totalitarianism. (3). An analysis of limited access—mass-participatory—political systems, their traditions and development, with special emphasis on Nazi Germany, Soviet Russia, and Mainland China.

232. Basic Ideas in Political Theory. (3). Introduces the student to recurring themes of political thought, examines their diverse meanings and considers problems that arise when values seem to be in contradiction.

Upper Division Courses

315 & 316. The Presidency, Congress, and Public Policy. (3 & 3). First semester focuses upon the evolution of the Presidential office, the recruitment of Presidents, and the nature of Presidential power. Second semester focuses on the Congress, with particular attention to interest articulation in the legislative process. Either semester may be taken independently of the other, but if both are taken it is recommended that they be taken in sequence.

317. Urban Politics. (3). An analysis of politics in urban areas, including such topics as the nature and distribution of community power, influence, and leadership, the nature of community conflict, the formation of policy, urban problems and political solutions, and trends in urban politics.
318. Political Parties. (3). The role of political parties in the American political decision-making process at the national, state and local levels.

321. Introduction to Public Administration. (3). A general survey of the scope and nature of public administration; policy and administration; administrative regulation and adjudication; organization and management; budgeting and fiscal management; public personnel administration; political, judicial, and other controls over the administration.

330. Soviet Politics and Government. (3). A general introduction to the study of Soviet Russia. Discussion of historic and demographic factors; the Marxist-Leninist ideology; party, state, and legal structure; social structure of the USSR; federalism and the nationalities; industry, agriculture, and trade unions; policy formulation; political power; factors of stability and instability.

333. Comparative Western Democracies. (3). Comparative studies of selected Western Political Systems. The student is assumed to have basic knowledge of the structure of prototypes of Western Democracies.

335 & 336. International Politics and Institutions. (3-3). First semester: An analysis of the controls governing the nation-state system; special consideration of such concepts as balance of power, collective security, propaganda and diplomacy. Second semester: Emphasis on international law and the development of international organizations. Either 335 or 336, but not both, will be accepted toward a major in history.

339. Government and Politics in Asia. (3). The breakdown of the "colonial" systems during and after World War II. Japan, China, India, Southeast Asia, Southwest Asia. Continuing political instability in Asia. (Formerly offered as Pol. Sci. 229.)

345. Classical and Medieval Political Theory. (3). An analytical study of the major offerings of the Greek, Roman, and Feudal Periods. The contributions of Plato, Aristotle, and the Stoics are emphasized in the early period; the works of Seneca, Cicero, and the Roman Lawyers during the second; and the juridical impact of the feudal system and the philosophic legacy of the ecclesiastical writers during the third. (Formerly offered as Pol. Sci. 343 & 344.)

360. Primitive Law and Government. (3). Same as Anthropology 360. (See for description.)

400. Ethnic Politics. (3). An intensive analysis of the literature and data on the role of ethnic groups in the political system. Attention will be given to the network of relationships which affect, and are effected by, ethnic groups. Participants in the course will be expected to develop and complete a research project for presentation and evaluation.

420. Politics of Developing Areas. (3). A survey of the political systems in Latin America, Africa, the Middle East, South and Southeast Asia. Special attention to colonialism as a system, the effects of colonialism and patterns of emerging nations.

423. Government and Politics of Latin America. (3). An examination of the political institutions and processes which currently exist in the Latin American republics. Emphasis will be on the social, economic and psycho-cultural factors which affect these institutions and processes. In addition, students will be given an opportunity to participate in an original research experience.

426. Comparative Politics of the Middle East. (3). An examination of the political institutions and processes of Middle Eastern governments. The social, economic and Islamic cultural factors which affects these institutions and processes will be studied.

433. Policy Development in Foreign Relations. (3). The process of foreign policy-making in the American structure of government. Particular attention will be given to the problems of federalism and separation of powers in foreign policy development.
434. Problems in Foreign Policy. (3). Analysis of the alternative courses of action open to the United States in the present international political system.

436. Soviet Foreign Policy. (3). The concept, content, and control of Soviet foreign relations; instruments and tools of Soviet diplomacy; "strategy and tactics"; change and continuity from Russia to Soviet foreign relations and policy aims; execution of foreign policy in selected areas.

440. American Political Behavior. (3). An intensive examination of the patterns of political behavior in the United States through primary and secondary analysis of existent data. Emphasis will be given to the development and presentation of an original research paper.

444. Modern Political Theory. (3). A description and analysis of the works of the principal political theorists of the modern state. Beginning with Machiavelli, the most persistent problems of early and modern nationalism are examined through the writings of Hobbes, Locke, Rousseau, Hegel, Burke, Marx, and others.

446. Seminar on Comparative Marxism. (3). An examination and evaluation of the ideas which have helped to shape the "ideologies" of the various parties-states. The contributions of Marx, Engels, Kautsky, Bernstein, Luxemburg, Lenin, Trotsky, Stalin, Mao, Khrushchev, Tito, Togliatti, etc.


449. Approaches to the Study of Political Science. (3). Scope and methods of political science and research techniques designed to prepare the student for either graduate work in political science or administrative research. Prerequisite: Senior standing.

450. Workshop. (1-4). Prerequisite: Consent of instructor.

451. Public Law. (3). An analysis of the role of appellate courts, and especially of the United States Supreme Court, in the American political system. Emphasis is placed upon judicial review of state and federal legislation, the separation of powers, federalism, the taxing power, and the commerce clause.

452. Public Law. (3). An analysis of the role of appellate courts, and especially of the United States Supreme Court, in the American political system. Emphasis is placed upon the guarantees of the Bill of Rights and the Fourteenth Amendment.

454. Judicial Process and Behavior. (3). Focuses upon the behavior and policy-making roles of courts and judges.

458. American Political Thought. (3). Consideration of selected topics in the development of political ideas in the United States.

464. Comparative Public Administration. (3). A study of the administrative systems of selected developed and developing countries with special attention to the various methods and approaches of comparative analysis and to the relationships between administrative institutions and their environmental settings.

477. Introduction to Urban Affairs. (3). An introduction to the study of the metropolis as a social, political and economic system. Prerequisites: Principles of Economics (Econ. 211) and a course in sociology or political science. An interdisciplinary approach. Same as Economics 477 and Sociology 477.

480. Administration and the Policy Making Process. (3). The problems of government encountered in the administration of public policy. The approach will be analytical rather than descriptive. May be repeated for credit.

487. Theory of Administration. (3). A study of organizational theory and the various approaches to the study of organization.
490. Special Topics in American Politics. (3). An analysis of selected topics in American Politics in a seminar setting. Content will vary depending upon the instructor, but will include problems of policy (civil rights, business and government, etc.) and of structure (federalism, the party system, etc.). May be repeated for credit.

499.* Directed Readings. (2 or 3). A course designed for the exceptional student to meet his needs and deficiencies. May be repeated for credit. Prerequisite: Senior standing and consent.

* Prerequisite may be waived by department consent.

Graduate Courses

500. Advanced Directed Readings. (1 to 3). Prerequisite: Department consent. May be repeated for credit.

501-502. Method and Scope of Political Science. (3-3). The first semester emphasizes philosophy of science and methodology (as distinguished from "method" and "technique"), and exposes the student to recent works of methodological import in the various subfields within the discipline. In the first semester, the student is required to produce an acceptable prospectus of a master's thesis. In the second semester, emphasis is placed upon generation of theories and hypotheses for testing, research design, and methods and techniques for data collection and analysis. Particularly in the second semester, members of the department will participate in discussions of research techniques and problems relevant to work which they and seminar members have in progress. Prerequisite: Department consent.

510. Seminar in Comparative Government. (3). The comparative study of selected aspects of the politics and institutions of foreign governments. Prerequisite: Department consent.

520. Seminar: The Administrative Process. (3). Consideration of the process and environment of administration, with special attention being given the role of the executive in policy formulation, organization, planning, budgeting, staffing, coordination, communications, and administrative responsibility. Prerequisite: Department consent.

521. The Budgetary Process. (3). Analysis of the development and utilization of the budgetary process in government administration, with special attention given to the budget in relation to its role in policy formulation. Prerequisite: Department consent.

535. Seminar in International Relations. (3). Analysis of special problems in, and approaches to, the study of international relations. Prerequisite: Department consent.

537. Seminar in Soviet Government. (3). An analysis and evaluation of approaches to the study of the Soviet political system, including in-depth examination of selected facets of the system. Prerequisite: Department consent.

541. Seminar in Local Government. (3). An analysis of the organization, functions, and processes of municipal, county, school and voluntary organs; original research and intensive study of particular problems of Greater Wichita or other communities or urban units. Prerequisite: Department consent.

544. Seminar in Political Theory. (3). Emphasizes topics selected for their significance in the development and content of political theory. Prerequisite: Department consent.

545. Seminar in Political Theory. (3). Detailed study of the relevant works of a major political philosopher and his contribution to contemporary thought. Prerequisite: Department consent.
551. Seminar in Public Law and Judicial Behavior. (3). Analysis of special problems in and approaches to the study of legal systems. Emphasis will be given to developing the student's awareness of research in the field. Prerequisite: Department consent.

556. Seminar in American Politics and Institutions. (3). Analytical study, with emphasis on individual research, of selected topics in American political behavior. Prerequisite: Department consent.

574. Internship. (2). For selected graduate students whose graduate emphasis is public administration. Prerequisite: Department consent.


PSYCHOLOGY

MAJOR: The major consists of a minimum of 26 hours and a maximum of 36 hours. Psych. 111 is a prerequisite for all other courses. All majors are required to take Psych. 111, 112, 211, and 212. Students who expect to enter graduate work in psychology should take Psych. 342 and 343. Other courses should be selected with the aid of the adviser.

MINOR: The minor consists of 15 hours and should be fitted to the individual needs with the help of the student's adviser.

60. Reading Improvement Techniques. (1). 2L. Designed for those students who seek to improve reading skills. Reading and study habits are diagnosed and practice toward improvement is provided. Prerequisite: Approval of instructor. (See Remedial Services, University College.)

Lower Division Courses

111. General Psychology. (3). An introduction to the general principles and areas of psychology.

112. General Psychology Laboratory. (2). 4L. Introduction to scientific method in psychology. Prerequisite: Psych. 111; concurrent enrollment preferred.

211 & 212. Advanced General Psychology. (3-3). A more intensive treatment of the topics of General Psychology. Prerequisite: Psych. 111.


246. Social Psychology. (3). A psychological study of the individual in the social situation. Prerequisite: Psych. 111.

260. Child Psychology. (3). The infant and child with special reference to their behavioral development. Prerequisite: Psych. 111.

275. Psychology of Personality. (3). Theoretical concepts, factors in development, and methods of assessing personality. Prerequisite: Psych. 111.

Upper Division Courses

342. Psychological Statistics. (3). Emphasizes basic quantitative techniques in measurement and evaluation of behavior. Prerequisite: Psych. 112, Math. 121 & 122 or Math. 141.

343. Experimental Psychology. (3). Laboratory study of behavior stressing experimental design and research techniques. Prerequisite: Psych. 112 and 342.
345. Psycholinguistics. (3). Survey of Psychological, Linguistic and Informational Analyses of Language. Prerequisite: English 215 or German 327 and Psych. 211.

346. Advanced Social Psychology. (3). An intensive review of a selected contemporary issue in social psychology. Prerequisite: Psych. 246 and consent of instructor.

350. Physiological Psychology. (3). Physiological factors in behavior. Prerequisite: Psych. 211.

351. Physiological Psychology Laboratory. (3). Instruction in laboratory methods. Each student must carry out his own research project. Prerequisite: Psych. 350.

360. Psychology Tutorial. (3). Selected topics in psychology. (May be repeated for a maximum of 6 hours credit.) Prerequisite: Average of B in psychology courses which must include Psych. 211 and 212 and consent of instructor.

370. Comparative Psychology. (3). Behavioral research and principles at different phylogenetic levels. Prerequisite: Psych. 112 and 211.

401. Introduction to Clinical Psychology. (3). Application of psychological principles to the field of problem behavior. Prerequisite: Psych. 275, 444, and 465.

410. History of Psychology. (3). Psychological theory and experimentation from ancient to modern times. Prerequisite: 10 hours of Psychology.

443. Operant Conditioning Laboratory. (3). Experimental laboratory stressing analysis of behavior by operant techniques. Prerequisite: Psych. 112 and 211.

444. Introduction to Psychopathology. (3). Individual differences and their relation to "normal" behavior. Prerequisite: Psych. 275.


456. Special Investigation. (1-3). Upon consultation with the instructor concerned, advanced students with adequate preparation may undertake original research in psychological problems. (May be repeated for a maximum of 6 hours credit.) Prerequisite: 10 hours of Psychology and consent of department.

460. Developmental Psychology. (3). Survey of theories of child development and applications to special aspects of the developmental process. Prerequisite: Psych. 260.


468. Human Factors. (3). Explores the impact of modern machines on man and the problems of performance, training, perception, and error resulting from man-machine confrontations. Surveys current literature and experimentation with some attention to industrial design criteria. Prerequisite: Psych. 342 and 343.

469. Human Factors Laboratory. (3). Applications of human factors principles and guidelines. Experimentation, measurement, equipment design, field studies and analysis of complex machines and equipment. Prerequisite: Psych. 468.


498. Introduction to Psychoanalytic Theory. (3). A consideration of the theory and practice of Freud’s system, its variants and derivatives. Prerequisite: Psych. 444.

* With sufficient reason a student may apply for consent of instructor to waive course prerequisite.

**Graduate Courses**

502. Seminar in Clinical Psychology. (2). Intensive study of clinical theory, research and practice. Prerequisite: Consent of instructor.

503. Clinical Psychology Laboratory. (2). 4L. Practical experience in observation, recording and interpretation of a wide range of behavior, introduction to structured interviewing, clinical research, and communication of observation. Prerequisite: Psych. 502 or concurrent enrollment in 502 and consent of instructor.


512. Cognitive Assessment Laboratory. (2). 4L. Practical experience in administration and scoring of different tools, and in the utilization of data in evaluating behavior. Prerequisite: Psych. 503 and 511 or concurrent enrollment in 511.

515. Clinical Research and Practice. (1). Designed to give the student further experience in clinical skills and clinical research. Each student concentrating in the clinical area is required to enroll in this course every semester, not to exceed 4 semesters. Prerequisite: Consent of instructor.

517. Personality Assessment. (2). Rationale and methods of personality assessment; personality inventories and projective methods, and critical review of research. Prerequisite: Psych. 502 and consent of instructor.

518. Personality Assessment Laboratory. (2). 4L. Practical experience in administration, scoring and communication of personality measures. Prerequisite: Psych. 503, 517 or concurrent enrollment in 517, and consent of instructor.

520. Graduate Research Seminar. (3). Advanced experimental procedures. Required of all graduate majors in psychology. Prerequisite: Consent of instructor.

525. Seminar in Psychotherapy. (3). A critical survey of theories and systems of individual and group psychotherapy. Prerequisite: Psych. 401 or 502, 444, and consent of instructor.

526. Techniques of Behavior Modification. (2). Different techniques of behavior modification, individual and group, survey of research. Prerequisite: Psych. 465 or equivalent, 503, 525, and consent of instructor.

527. Techniques of Behavior Modification Laboratory. (2). 4L. Practical experience with a variety of techniques. Prerequisite: Psych. 526 or concurrent enrollment in 526, and consent of instructor.

530. Seminar in Community Psychology. (3). Comprehensive overview of theory, research and practice in the emerging field of community psychology from the perspective of general systems theory. Prerequisite: Consent of instructor.
531. Research in Community Psychology. (3). Special topics and group field research projects in community psychology. Prerequisite: Consent of instructor.

542. Advanced Psychological Statistics. (3). Design, analysis, and evaluation of behavioral research data. Required of all majors. Prerequisite: Consent of instructor.

544. Seminar in Personality and Psychosocial Disorders. (3). Relationship of normal behavior development and maladjustment; a critical review of theory and research. Prerequisite: Psych. 444 and consent of instructor.

551. Seminar in Physiological Psychology. (3). Intensive study of theory and research in physiological factors in behavior. Prerequisite: Psych. 350 or equivalent and consent of instructor.

560. Systematic Psychology. (3). A critical survey of systems of psychology. Prerequisite: Consent of instructor.


570. Seminar in Current Developments. (3). Intensive study of current issues, techniques, research and application. May be repeated for different topics. Maximum credit 6 hours. Prerequisite: Consent of instructor.

572. Seminar in Comparative Behavior. (3). Intensive study of theories, methodology and research in laboratory and field investigations of behaviors of different species. Prerequisite: Psych. 370 and consent of instructor.

573. Seminar in Motivation and Emotion. (3). Intensive study of theory and research in motivational and emotional processes. Prerequisite: Psych. 473 or equivalent and consent of instructor.

575-576. Thesis. (2-2). Prerequisite: Enrollment only with written consent of the Graduate Student Committee.

585. Seminar in Perception. (3). Intensive study in theory and research in perceptual processes. Prerequisite: Psych. 485 or equivalent and consent of instructor.

RELIGION

The Department of Religion offers a wide range of courses, in order to enable the undergraduate major to acquire familiarity with the broad phenomena of the world’s religions and to become aware of the methods for studying religion.

MAJOR: The major consists of a minimum of 30 hours, 15 of which must be upper division. A maximum of 6 hours from cross-referenced courses will be accepted. Three hours must be completed from each of the following groups.

2. History of Religion (3) 336, 337.
3. Methodological and Phenomenological Studies (3) 301, 345, 480.
4. Constructive Studies (3) 342, 373, 383, 421, 480.

MINOR: The minor consists of 15 hours in Religion, selected in consultation with the department.
Lower Division Courses

111. Religion in America. (3). A survey of the beliefs, practices, and issues current in major American religious bodies with some attention to minor religious denominations such as the Black Church, Christian Science, and the Latter-Day Saints.


130. Introduction to Religion. (3). Designed to acquaint the introductory student with some major varieties of religious history, belief, practice and problems, Eastern and Western, with emphasis on the West.

201. Current Religious Issues. (3). A critical study of contemporary issues in the West with some attention to Non-Western religions. The relationship of religion to such topics as race, war, secularism, population explosion, and politics will be considered.


Upper Division Courses

300. Phenomenology of Religion. (3). An observation and analysis of the patterns found in the characteristic religious phenomena (e.g., myths, symbols, rites, institutions), with a view to a systematic understanding of man's religious life as it has expressed itself throughout his history.

305. New Testament Greek I. (3). The essentials of Greek grammar, elementary reading exercises and selected readings in Gospels and Epistles. Completion of two semesters required for credit.


321. Sociology of Religion. (3). (Same as Sociology 321.)

322. Historical Studies: New Testament Backgrounds. (3). A study of selected material from the Dead Sea Scrolls, the Apocrypha and the Pseudepigrapha as well as a consideration of Gnosticism and the Mystery Religions.

327. Primitive Religion. (3). (Same as Anthropology 327.)

336. Eastern Religions. (3). An examination of the major religious traditions of the East by means of an analysis of their classical writings—e.g., the Upanishadic literature and the Bhagavad Gita (Hinduism); the Dhammapada (Buddhism); the Analects (Confucianism); the Tao Te Ching (Taoism); others.

337. Islam. (3). The religion in its geographical, social, political and cultural context, both Arab and Non-Arab.

342. Modern Religious Thought. (3). A critical study of Western religious thought in the nineteenth and twentieth centuries including selections from such theologians as Schleiermacher, Kierkegaard, Barth, Buber, Rahner, and Tillich.

345. Modern Critiques of Religion. (3). An examination and evaluation of the seminal critiques of religion (e.g., Marx, Feuerbach, Freud, Strauss, Darwin, Nietzsche) produced by modern Western man.
373. Religion and the Future. (3). An examination of the ways world religions are responding to current technological, cultural and social trends and an indication of future issues which will call for a response. The relationship between religion and future developments in automation, population explosion, biological engineering, and arms control will receive special attention.

383. Religious Thought and Human Conflict. (3). A critical examination of the relationship between religion and human conflict as expressed in war, revolution, civil strife and interpersonal relationships. Special attention will be given to the ways Western and Eastern religions have justified, tried to limit, or ameliorate human conflict.

421. A Study of Religious Experience. (3). An interdisciplinary study of forms of religious experience such as conversion, mysticism, prayer, worship, and vision. Readings from such representative thinkers as James, Freud, Marx, Otto, Allport, and Maslow will be included.

424. The Reformation. (3). (Same as History 424.)

425. The Problem of Salvation. (3). A comparative analysis of the various answers mankind has given to the problem of the nature of evil and of man’s salvation from it, utilizing selections from both East and West, and from both within and outside the specifically religious traditions.

446. Philosophy of Religion. (3). (Same as Philosophy 446.)

475. Independent Work. (1-3). Designed for the student capable of doing independent study in a special area of interest. May be repeated for credit. Prerequisite: Consent of instructor.

480. Special Studies. (3). A concentrated study of a contemporary theologian, theological movement or religious issue announced by the instructor when the course is scheduled. May be repeated for credit. Prerequisite: Consent of the instructor.

ROMANCE LANGUAGES

French

Major A: A major in French consists of 24 semester hours beyond French 112 or its equivalent and must include French 220, 333, 334, 336, and an additional upper division French literature course, exclusive of Major Topics. In addition, it is strongly recommended that French majors: (1) Choose a minor in some other foreign language, and (2) elect, where possible, complementary courses in English, History, Philosophy, and Art History.

Minor: The French minor consists of a minimum of 11 hours beyond the 112 level and must include French 220, 221, 225 and one upper division French course, exclusive of Major Topics.

Major B: The teaching major in French in either Fairmount College of Liberal Arts and Sciences or in the College of Education consists of at least 50 semester hours chosen from the following categories: At least 24 hours in the language beyond the 111-112 level, as listed under Major A, and

(A) At least 21 hours in a second language as listed under Minor, or

(B) At least 15 hours from one or more of the following related
fields: History, English, Linguistics, Philosophy, Political Science (these will be chosen in consultation with the Teacher Education advisor), or

(C) A totally separate second major as prescribed by the catalog.

Note: It is strongly recommended that majors who plan to teach French should qualify to teach at least one other foreign language. They must have a 2.75 average in French and departmental approval in order to be admitted to the professional semester. It is further recommended that majors who are planning to teach take French 305 and 330. Secondary Education 442F and 447 are required of all majors and minors seeking a high school teaching certificate. Majors interested in teaching French in the elementary schools will consult the departmental professor in charge of teacher education.

Lower Division Courses

60. French for Graduate Reading Examination. (3). Open to upper division and graduate students only. A reading course designed to prepare students to fulfill department requirements of a reading knowledge of French for the M.A. or M.S. degrees. No previous knowledge of French required. Will not count toward a degree.

111-112. Elementary French. (5-5). Speaking, reading, writing, including grammar essentials. Daily classroom and laboratory work required. (In special cases where students with previous credit in high school French feel incompetent to continue with the next sequence course for reasons of a long lapse of time or poor preparation those with one year of high school French may request permission from the department to take 111 for credit and those with two years of high school French to take 112 for credit.)

200. Basic French Review. (3). Intensive review of elementary French using the conversational method. Primarily for students seeking greater proficiency in the understanding and speaking French. Not open to students with prior credit in 200-level courses. Prerequisite: Two units of high school French or French 112 with a grade of "C" or "D."

205. Basic French Phonetics and Pronunciation. (2). Introductory, practical course to improve individual pronunciation; intensive drill of vowels, consonants, and speech patterns. Prerequisite: French 112 or equivalent.

220. Intermediate French Grammar and Composition. (3). Prerequisite: French 112 or department consent.

221-222. Intermediate French Readings I and II. (3-3). Intensive reading of French literary works. Prerequisite: French 112 or equivalent for French 221, French 221 or equivalent for 222. May be used to meet the foreign literature requirement.

225. Intermediate French Conversation. (2). Oral assignments will involve some regular work in the language laboratory. Prerequisite. French 112 or equivalent.

232. French Civilization. (3). The background of history, art, and institutions. Prerequisite: 221 or department consent.

Upper Division Courses

Upper division courses are given on a rotating basis. French 222 is prerequisite for all upper division literature courses.

315 & 316. Major Topics. (1-2, 1-2). Directed studies in any field or period agreed upon. Total credit not to exceed 4 hours. Prerequisite: French 221 or department consent.

325. Advanced Conversation. (3). A course designed to increase fluency in speaking French, assignments to include oral reports, dialogues, and work in the language laboratory. Prerequisite: 225 or department consent.

330. Explication de textes. (2). Scrutiny of poetry and prose passages, with a careful study of the contents, style, author, and background. Prerequisite: French 222.


423. Seminar in French. (1-5). Special studies in (1) French language, (2) French literature, (3) French culture and civilization, or (4) methods of teaching French in the elementary and secondary schools. May be repeated for credit. Prerequisite: Department consent.

430. Medieval and Renaissance French Literature. (3).

431. Seventeenth Century French Literature. (3).

432. Eighteenth Century French Literature. (3).

433. Nineteenth Century French Literature. (3).

434. Contemporary French Literature. (3).

435. Introduction to Romance Linguistics. (3). An introduction primarily to the historical phonology and morphology of the Romance Languages, with particular emphasis on French and Spanish. Prerequisite: French 305 or Spanish 334 or department consent. (Same as Spanish 435).

436. Introduction to Literary Criticism. (3). An introductory course presenting the history and the methods of literary criticism in France. Analysis and discussion of important trends in French literary criticism. Prerequisite: 330, 333 and 334, or department consent.

Italian

There is no major in Italian. A minor in Italian will consist of 12 hours beyond the 112 level and must include Italian 331.


223-224. Selected Italian Readings. (3-3). Intensive reading of Italian literary works. Discussion in Italian, oral and written summaries. Prerequisite: Italian 112 or two units of high school Italian for 223; 223 or three high school units for 224.

225. Intermediate Conversation. (2). Prerequisite: Italian 112 or department consent.
230. Intermediate Italian Grammar and Composition. (3). Prerequisite: Italian 112 or equivalent.

331. Introduction to Italian Literature. (3). Prerequisite: Italian 224 or department consent.

**LATIN AND GREEK**

**MAJOR A**: The major in Latin consists of a minimum of 24 hours beyond Latin 112 or its equivalent, to include at least 9 hours of upper division courses. It is recommended that Latin majors take History 307, 308, 323, and 324.

A minor in Latin consists of a minimum of 11 hours beyond the 112 level, to include at least one 300-level course.

**MAJOR B**: The teaching major in Latin in either The Fairmount College of Liberal Arts and Sciences or in the College of Education consists of at least 50 semester hours to include:

At least 24 hours in the language beyond the 111-112 level, as listed under Major A and

(A) At least 21 hours in a second language as listed under Minor, or

(B) At least 15 hours from one or more of the following related fields: History, English, Linguistics, Philosophy, Political Science. (These will be chosen in consultation with the Teacher Education advisor.), or

(C) A totally separate second major as prescribed by the catalog. It is strongly recommended that majors who plan to teach Latin qualify at least one other foreign language. They must have a 2.75 average in Latin and departmental approval in order to be admitted to the professional semester. Secondary Education 442F and 447 are required of all majors and minors seeking a high school teaching certificate.

**Latin**

**Lower Division Courses**


221. Basic Latin Review. (3). Prerequisite: 2 units of high school Latin or equivalent.

223. Intermediate Latin. (3). Cicero’s orations, essays, and letters. Prerequisite: Latin 111-112 or two years of high school Latin or department consent.

224. Intermediate Latin. (3). Sallust’s Catiline and Livy’s Invasion of Hannibal. Prerequisite: Latin 223 or department consent.

**Upper Division Courses**

Latin 224 or consent are prerequisites to all upper division Latin literature courses, unless otherwise specified.

331. Advanced Latin. (3). Introduction to Latin verse. Prerequisite: Latin 223-224 or department consent.
332. Advanced Latin. (3). Vergil's Aeneid. Prerequisite: Latin 331 or department consent.
333. Roman Comedy. (3).
334. Roman Elegy. (3).
335. Roman Novel. (3).
336. Selected Latin Readings. (3). (a) Golden Age (b) Silver Age.
443. Medieval Latin and St. Jerome. (3). Prerequisite: two 300-level courses or department consent.
444. Latin Prose Composition. (3).
445. Advanced Selected Latin Reading. (3). (a) Golden Age (b) Silver Age.
446. Seminar in Latin. (3). (a) Golden Age, (b) Silver Age.

Greek

Lower Division Courses

223. Intermediate Greek. (3-3). Plato and Herodotus. Prerequisite: Greek 111-112.

Upper Division Courses

332. Advanced Greek. (3). Thucydides. Prerequisite: Greek 331.

Portuguese

60. Reading Portuguese. (2). Open to Latin American Studies majors and to upper division or graduate students who need to fulfill departmental requirements of a reading knowledge of a foreign language for the M.A. or M.S. degrees. No previous knowledge of Portuguese required. Will not count toward a degree.

Spanish

MAJOR A: A major in Spanish consists of a minimum of 24 hours beyond Spanish 112 or its equivalent and must include Spanish 224, 226, 230 and at least 9 hours of upper division Hispanic literatures, to include two Survey of Literature courses. Courses in Spanish or Spanish-American history, economics, or art are strongly recommended for all majors. All courses offered in the Spanish Department count toward the major in Spanish. With department approval, a maximum of four hours in courses in related fields taken in the WSU Summer Program in Mexico may count toward the Spanish major.

NOTE: Native speakers of Spanish normally will not be permitted to take courses at the 100-200 level and must take a minimum of 12 hours of Hispanic literatures in order to complete a major in Spanish. Students who have completed more than two units of high school Spanish and students who have spoken Spanish natively will con-
sult with a Spanish department counselor before enrolling in Spanish courses.

A minor in Spanish consists of a minimum of 11 hours beyond the 112 level, and must include 223, 226, 230, and one upper division course exclusive of 315 or 316.

Native speakers normally will not be permitted to take courses at the 100-200 level and must take a minimum of 6 hours of Hispanic literatures in order to complete a minor in Spanish.

MAJOR B: The teaching major in Spanish in either the Fairmount College of Liberal Arts and Sciences or in the College of Education consists of at least 50 semester hours to include: At least 24 hours in the language beyond the 111-112 level, as listed under Major A, and

(A) At least 21 hours in a second language as listed under Minor or

(B) At least 15 hours from one or more of the following related fields: History, English, Linguistics, Philosophy, Political Science. (These will be chosen in consultation with the Teacher Education advisor.) or

(C) A totally separate second major as prescribed by the catalog.

Students who wish to enter the student teaching program must pass Spanish 230 with at least a “B” grade and must have a 2.75 average in Spanish and department approval in order to be admitted to the professional semester. It is strongly recommended that majors who are planning to teach take Spanish 335 or 426. Secondary Education 442F and 447 are required of all majors and minors seeking a high school teaching certificate. Majors interested in teaching Spanish in the elementary schools will consult the departmental professor in charge of teacher education.

Lower Division Courses

111-112. Elementary Spanish. (5-5). Emphasis on the four fundamental skills in language learning: Understanding, speaking, reading, and writing. (In special cases where students with previous credit in high school Spanish feel incompetent to continue with the next sequence course for reasons of a long lapse of time or poor preparation, those with one year of high school Spanish may request permission to take 111 for credit and those with two years of high school Spanish to take 112 for credit.

221. Basic Spanish Review. (3). Mastery of Spanish verbs and basic structural patterns through intensive oral drill. Prerequisite: Spanish 112 or two or more high school units of Spanish.

223-224. Selected Spanish Readings. I & II. (3-3). Intensive reading of Latin-American and Spanish literary works. Outside readings and reports. Prerequisite: Spanish 112 or two high school units of Spanish for 223; Spanish 223 or three high school units of Spanish for 224.

226. Intermediate Conversation. (2). Prerequisite: 221 or department consent. Should be taken with Spanish 230.

230. Intermediate Spanish Grammar and Composition. (3). Prerequisite: Spanish 221 or department consent. Should be taken with Spanish 226.
Upper Division Courses

Spanish 224 is a prerequisite for all upper division literature and civilization courses unless otherwise specified.

315 and 316. Major Topics. (1-2, 1-2). Work taken may be in literary reports, pronunciation, commercial Spanish, use of the language laboratory, music, or problems in teaching Spanish. May be repeated for credit. Prerequisite: 224, or 226, or 230, or department consent.

324. Advanced Conversation. (3). Prerequisite: 226 or department consent.

326. Advanced Grammar and Composition. (3). Prerequisite: Spanish 230 or department consent.

331. Survey of Spanish Literature. (3). Main currents of Spanish literature from 1700 to the present.

332. Survey of Spanish Literature. (3). Spanish literature from the beginning to 1700. Prerequisite: Spanish 331 or department consent.

334. Contemporary Spanish Theatre. (3).

335. Spanish Phonetics. (2). Prerequisite: Any 200-level course or department consent.

336. Contemporary Spanish Novel. (3). Not open to students with prior credit in 424.

420. Great Themes of Spanish Literature. (2). Prerequisite: Any 300-level Hispanic literature course. Not open to students with prior credit in 333.

421. Main Currents of Spanish-American Literature. (3). Prerequisite: Any 300-level Hispanic literature course.

423. Seminar in Spanish. (1-5). Special studies in (1) Spanish language, (2) Spanish and Spanish-American literature, (3) Spanish and Spanish-American culture and civilization, or (4) methods of teaching Spanish in the elementary and secondary schools. May be repeated for credit.


426. Spanish Civilization. (3). Intensive study of Spanish culture, including historical and geographical factors in its development, and its contributions to world civilization. Portuguese civilization will also be considered.

427. Ibero-American Civilization. (3). Intensive study of Ibero-American culture, including the historical and geographical factors in its development, and its contributions to world civilization.

435. Introduction to Romance Linguistics. (3). An introduction primarily to the historical phonology and morphology of the Romance languages, with particular emphasis on French and Spanish. Prerequisite: French 305 or Spanish 335 or department consent. (Same as French 435.)

Graduate Courses

500. Introduction to Research. (1). A course designed to give graduate students basic tools for writing research papers. Includes the preparation of bibliographies, footnoting and basic techniques of literary interpretation.

Directed Readings. (1-2, 1-2). Readings vary according to the student's preparation. Preparation of reports, literary critiques, special projects in linguistics.

Grammar and Stylistics. (3). Intensive study of advanced grammar and stylistic usage.

Seminar in Spanish Literature. (3). (a) Middle Ages; (b) Renaissance; (c) Golden Age Theater; (d) Cervantes; (e) Modern Novel; (f) Generation of '98; (g) Contemporary Novel; (h) 20th Century Theater; (i) Spanish Romanticism; (j) 20th Century Poetry.

Seminar in Spanish-American Literature. (3). (a) Colonial Period; (b) Contemporary Novel; (c) Short Story; (d) Poetry; (e) Modernism; (f) Essay; (g) Theater.

SOCIOLOGY

Major: A major consists of at least 30 hours including Soc. 211, Soc. 310 and Soc. 445 or Soc. 446. Certain courses in related departments not to exceed 6 hours, when they meet the particular needs of the student and are approved by his advisor, may be counted on the major. Sociology 111 does not count for major credit. With the exception of S. W. 214-215, social work courses do not count toward the major.

Minor: At least 15 hours of Sociology, including Soc. 211, and a minimum of 6 hours of upper division courses. No social work courses may be counted on the minor. Sociology 111 does not count for minor credit.

Lower Division Courses

111. American Society. (3). An analysis of contemporary American society with emphasis on the problems of an urban society. Does not count for major or minor credit.

211. Introduction to Sociology. (3). Introduction to basic concepts, propositions and theoretical approaches of sociology including elementary methods of studying social phenomena. Serves as the basic course for students who intend to take additional courses in Sociology.

226. Race Relations. (3). The nature of race; ethnic groups confused with races; interrelations of ethnic groups in the United States and other countries; processes of change; action programs. Prerequisite: Soc. 211.

Upper Division Courses

310. Sociological Statistics. (4). Statistical application to sociological problems. Parametric measures including significance of differences and correlation. Nonparametric measures such as binomial expansion and chi-square. Prerequisite: Soc. 211; Math. 121-122 or 141.

314. Comparative Family Systems. (3). Ethnographic and historical studies of family systems; range of variation; vestiges of older systems in contemporary United States. Prerequisite: Soc. 211.

315. The American Family. (3). Analysis of American family behavior including the selection of marriage partners, the husband-wife, parent-child, relationships, and the relation of those patterns of behavior to other aspects of American Society. Prerequisite: Soc. 211.
320. The Normative Order and Social Control. (3). Analysis of the development of the normative system, the concept of social control and the breakdown of social order in collective and deviant behavior. Prerequisite: Soc. 211.

321. Sociology of Religion. (3). The function and role of religious belief and religious organization in human societies with special reference to American society. Relation of religious belief and organization to other aspects of the social structure and to social change. Prerequisite: Soc. 211.

322. Deviant Behavior. (3). The structure, dynamics, and etiology of those behavior systems which are integrated around systematic violations of the control norms. Competing theories are presented and evaluated within the context of the assumption that man is a social product. Prerequisite: Soc. 211.

323. Sociology of Law. (3). The study of law and legal institutions within their social context. Prerequisite: Soc. 211.

325. Formal Organizations. (3). Characteristics of complex organizations and factors related to their effectiveness. Emphasis on research methods and findings. Prerequisite: Soc. 211.

326. Political Sociology. (3). Social bases and consequences of political behavior; the study of power and authority; problems in the development and maintenance of viable democratic political structures; bureaucratic organization and power. Prerequisite: Soc. 211.

327. Violence and Social Change. (3). The analysis of the causal processes and functions of extreme and violent political behavior, i.e., revolutionary, insurrectionary and protest movements; includes analysis of consequences for social change. Prerequisite: Soc. 211.

330. Social Stratification. (3). An analysis of status, class, and caste in various societies, especially American society. The relationship of stratification to the various social institutions. Prerequisite: Soc. 211.


334. Urban Sociology. (3). Urban population, urban organization, urban institutions, and programs of city planning. Prerequisite: Soc. 211.

335. Industrial Sociology. (3). The work group as a social group, social organization of the work plant, and social factors affecting the worker. Prerequisite: Soc. 211.

338. Medical Sociology. (3). An analysis of social and cultural factors related to physical and mental illness; the dynamics of communication and role relationships among patients and medical personnel; and social research and theory relevant to the health professions. Prerequisite: Soc. 211.

339. Juvenile Delinquency. (3). The factors related to juvenile delinquency and the measures of treatment and prevention. Prerequisite: Soc. 211.

340. Criminology. (3). The extent and nature of criminal behavior and societal reactions to it. Prerequisite: Soc. 211.

341. Contemporary Corrections. (3). Historical and contemporary programs for the treatment of offenders, viewed as societal reactions to criminal behavior. Prerequisite: Soc. 339 or 340.

400. Selected Topics in Sociology. (3). Study in a specialized area of sociology with emphasis on student research projects. Areas covered will include deviant behavior, political sociology, the family, and others. May be repeated for a maximum of 6 hours credit. Prerequisite: Soc. 211, consent of instructor and substantive area course.
410. Introduction to Scientific Method in Sociology. (3). The development of the problem, techniques of data collection, analysis and presentation. Laboratory work in the form of a completed project required. Prerequisite: Soc. 310.

428. Social Interaction. (3). Group effects on the individual. Symbolic interaction theory in sociology with special emphasis on research and findings. Prerequisite: Soc. 211.


446. Principles and Concepts of Sociology. (3). Critical evaluation of major principles and concepts, their derivation and relationship to systematic theory. Prerequisite: 8 hours of sociology.

470. Independent Reading. (2-3). Designed for the advanced student capable of doing independent work in an area of special interest. Prerequisite: 15 hours of sociology and instructor's consent.

477. Introduction to Urban Affairs. (3). An introduction to the study of the metropolis as a social, political and economic system. Cross listed as Political Science 477 and Economics 477. Prerequisite: Econ. 221 and Soc. 211 or a course in Political Science.

* Prerequisite may be waived by department consent.

### Graduate Courses

500. Research Methods in Sociology. (2 or 3). The application of research methods to sociological data. Includes research design, collection of data, development of questionnaires, schedules and scales, interviewing methods, analysis of data, and summary. Prerequisite: Soc. 410 and department consent.

515. Seminar on the Family. (2). Review of recent research on the family and the theoretical implication thereof. Prerequisite: Soc. 315, 410, and department consent.

520. Seminar in Social Movements. (2). Analysis of the elements in social movements as factors in social and cultural change. Prerequisite: Soc. 320, 410, and department consent.

525. Seminar in Organizational Analysis. (2). Exploration of selected problems in organizational theory based on major theoretical and empirical approaches, both classical and contemporary. Prerequisite: Soc. 325, 410 or department consent.

534. Seminar in Urban Sociology. Independent research projects in Urban Sociology. Prerequisite: Soc. 334 and/or 492, 410 and department consent.

541. Advanced Seminar on Theories of Correctional Treatment. (3). Evaluation of the range of contemporary theories of individual and group techniques of Correctional Treatment with special emphasis upon the literature related to process research and outcome research. Prerequisite: Soc. 341 and 410.

547. Recent Developments in Sociology. (2). Major issues, new theories, new techniques of research, new areas of research, new applications. Prerequisite: 15 hours of Sociology including Soc. 410 and department consent. May be repeated for credit not to exceed 4 hours.

570. Independent Reading. (2). Advanced systematic reading in a topical area under the tutorship of a member of the graduate faculty. May be repeated for credit not to exceed a total of 4 hours. Prerequisite: Consent of department.

SOCIAL WORK

Major: A minimum of 33 hours consisting of the following: S. W. 214-215, 311-312, 421-422, Soc. 211 and 315, Psych. 444 and 3 additional hours selected from the following: Econ. 221, Pol. Sci. 121, Soc. 226 or 322, 334 and S. W. 411.

Minor: A minimum of 15 hours consisting of the following: S. W. 214-215 and 311-312 and 3 additional hours selected from S. W. 411, Soc. 315 or Pol. Sci. 121.

Lower Division Courses

214-215. The Social Welfare Institution. (3-3). Analysis of social welfare as a social institution including the social, cultural, political and economic factors affecting policies and programs. Prerequisite: Soc. 211.

Upper Division Courses


411. Methods of Social Work. (3). Exploration of the primary and secondary problem-solving methods in social work emphasizing casework, group work and community organization. Prerequisite: S. W. 311-312.

421-422. Social Welfare Field Experience. (4-5). Placement in community social welfare agencies for supervised periods of observation and direct service assignments. Prerequisite: S. W. 311-312, or 312 concurrent with 421.

* Prerequisite may be waived by department consent.

SPANISH (See Romance Languages)

SPEECH

Major: A minimum of 30 hours including Speech 111, 221, plus specialization in area (1), (2), (3), or (4) below:

(1) (Public Address): Speech 212, 213, 228, 335, 432, 3 hours from Theatre area, 3 hours from Radio-Television area, and 5-6 hours to be elected with consent of the area adviser from 412, 413, 415, 436, 437, 461.

(2) (Theatre): Speech 243, 244, 253, 259, 423, 424, plus at least 7 hours of electives to be chosen with consent of area adviser from other theatre courses. All Theatre majors will be expected to participate in some area in the production of the University Theatre plays, in consultation with the staff.


(4) (Speech Education): Speech 212, 213, 143, or 228, 243, 244, 259, 461, 465, and 3 hours to be elected with consent of the area adviser.

Students completing option (1) must participate in intercollegiate forensics for a minimum of two semesters prior to the senior year.
Students completing option (4) must complete three semesters of co-curricular activities. These may consist of two semesters of intercollegiate forensics and one semester of theatre; or one semester of intercollegiate forensics and two semesters of theatre.

Option (4) is strongly recommended for those preparing to teach, although option (1) or (2) may be acceptable upon approval of the department. Students not planning to seek qualification for teaching may substitute within option (4) with the consent of the department. Students planning to teach should also check state certification requirements.

**Broadcast-Journalism Combined Major:** Speech 111, 114, 214, 215, 224, 314 or 315, 325, 403, 405, 407, 437, and Journalism 115, 226, 330, 360.

**Minor:** A minimum of 15 hours selected with the approval of the Department of Speech.

**Lower Division Courses**

101 & 102, 201 and 202. Debate. (1-1). Research for debates, participation in 30 or more full length debates per year (15 of which must be intercollegiate competition), and debate squad meetings. Prerequisite: Department consent. Maximum credit in Debate 4 hours; not counted toward major.

111. Extemporaneous Speaking. (2). Analysis of audience, selection of subject, choice of ideas, finding and testing supporting materials, organization, and delivery.

114. Broadcasting and the Citizen. (3). Organization, structure, history, social implications of the broadcasting industry.

143. The Art of the Theatre. (3). An introduction to the theatre as an art form, with emphasis on critical appreciation from the viewpoint of the audience. (Not counted toward Theatre major.)

212. Persuasive Speaking. (2). Training in influencing human behavior in socially acceptable ways via the spoken word. Prerequisite: Speech 111.

213. Argumentation and Debate. (3). The principles of reasoned discourse. The practices of scholastic forensics for prospective secondary teachers. Prerequisite: Department consent.

214 & 215. Radio Workshop. (1-1). Relation of theory to application at KMUW-FM.

221. Oral Interpretation. (3). The development of the mental, vocal, and analytical techniques essential to the interpretation of literature.

223. Phonetics. (2). The physical properties of speech; the formation of sounds, combination of sounds into word patterns, dialectical variety and transcribing of sounds of American English by use of International Phonetic Alphabet.

224. Radio and TV Production. (3). Production and direction of radio and TV programs, laboratory work, KMUW-FM.

225. Business and Professional Speaking. (2). Prerequisite: Speech 111 or department consent. (Offered only at night.)

226. Parliamentary Law and Procedure. (1). The Parliamentary rules governing the order and conduct of meetings, methods of keeping and the writing of minutes and resolutions.
228. Principles of Group Discussion. (3). Development of reflective thinking, group leadership, and effective group participation. Prerequisite: Speech 111 or department consent.


243. Acting I. (3). Emphasis on the internal techniques of acting, on characterization, and on the actor's analysis of the play and the role.

244. Stagecraft. (3). R; L arr. Theory and practice of making, painting, and using scenery for the stage. Practical work on University Theatre productions.

253. Costuming for the Stage. (3). R; L arr. Basic principles of costume design and construction. Pattern making, material selection, wardrobe management and organization. Practical experience with University Theatre and Experimental Theatre productions.

259. Directing I. (3). R; L arr. Basic theories and principles of stage directing; problems of producing the play with practical experience gained by use of the project methods. Prerequisite: 243 or consent.

Upper Division Courses

301 & 302, 401 and 402. Debate. (1-1). Research for debates, participation in 30 or more full length debates per year (15 of which must be intercollegiate competition), and debate squad meetings. Prerequisite: Department consent. Maximum credit in Debate, 4 hours; not counted toward major.

314 & 315. Radio Workshop. (1-1). Relation of theory to application at KMUW-FM.

316 & 317. Playwriting I & II. (3-3). The writing of scripts for performance. Emphasis on both verbal and visual aspects of playwriting. If possible, the scripts will be performed. Prerequisites: English 324 and Speech 243 and 259; or consent of instructor. (Same as English 316 & 317.)


325. Radio and Television News. (3). (See Journalism 325.)

335. Survey of Rhetorical Theory. (3). From the Greeks to the Moderns.

343. Acting II. (2). Utilization in scenes of the method gained in 243, with emphasis on styles of acting and on comedy technique. Prerequisite: Acting 243.

344. Advanced Stagecraft. (3). R; L arr. Theory and practice of translating set designs and drawings to the physical stage. Practical experience with University Theatre productions. Prerequisite: Speech 244 with a grade of C or better.

359. Directing II. (2). R; L arr. Staging and rehearsal techniques, with emphasis on the problems of the period and stylized play. Prerequisite: Speech 259 or department consent.

403-404. Television Workshop. (2-2). R; L arr. The theories, tools, and techniques of television production; studio work as a member of a TV production crew.

405. Radio and TV Station Management. (3). The organization and management of radio and television station; administrative, programming, technical and sales problems, physical facilities. Prerequisite: Department consent.

407. Radio and TV Programming. (3). Planning, developing, scheduling, based upon audience and market analysis, program ratings, principles of evaluation and criticism.
412. Contemporary Theories of Oral Communication. (3). Conceptual models useful in the scientific study of speech and application from selected areas of psychology, sociology, anthropology, and other related fields.

413. Advanced Theories of Argumentation. (3). Intensive examination of the principles and problems of reasoned discourse.

415. Language and Symbolic Processes. (3). Application of the theoretical framework of general semantics, linguistics, and psycholinguistics to the analysis of oral language behavior. Analysis of language usage which leads to conflict, confusion, and misdirection, and development of methods of accuracy and precision in language usage.

421. Advanced Oral Interpretation. (3). Intensive study and analysis of various forms of literature, the techniques of effective oral communication, and the building of the individual or group concert recital. Prerequisite: Speech 221.

423. Development of the Theatre I. (3). The history of theatrical activity as a social institution and an art form, from the beginning to the seventeenth century. Representative plays, methods of staging, and theatrical architecture of various periods.

424. Development of the Theatre II. (3). From the seventeenth century to the present.

425. Dramatic Theory. (3). Critical examination of selected esthetic theories of the theatrical arts; relationship of the theories to major dramatic works and theatrical periods. Prerequisite: Speech 423 or 424 or consent.

432. American Public Address. (3). A detailed study of notable American speakers and their public utterances; their impact on the political, economic, and social history of this nation from colonial times to the present.

436. Advanced Public Speaking. (3). Theory and practice in the various forms of platform speaking for the academically mature student. Includes such special forms as the after-dinner speech, speeches of goodwill, tribute, keynote, and courtesy. Prerequisite: Speech 212.

437. Theory of Mass Persuasion. (2). An analysis of the techniques used in the mass media with special emphasis on the use of spoken language.

444. Scene Design. (2). R; L arr. Fundamentals of scene design. Practical work on University Theatre productions. Prerequisite: 244 with grade of C or better; also Engr. Graphic 250, or consent.

445. Stage Lighting. (3). R; L arr. Lighting equipment; light design and its relation to scenery design; emphasis upon the problems in the high school, college, church, etc. Practical work on University Theatre productions. Prerequisite: Speech 244 with a grade of C or better.

450. Workshops in Speech. (2-4). (See Sec. Ed. 450.)

453. History of Costume. (3). R; L arr. Historical survey and individual research of dress from ancient Egypt to present day period. Theory and practice of adapting period styles to the stage. Practical experience on University and Experimental Theatre productions. Prerequisite: Speech 253 or consent.

461. Directing the Forensics Program. (2). A study of the problems and techniques of administering secondary school and college forensics activities.

465. Communication Disorders. (3). Problems of the speech defective relative to emotional handicaps, pedagogical retardation, etc. Methods for classroom teacher. Also listed as Logopedics 421.
470. The Audience. (3). Analyses of speech audiences, including those of radio, television, public address, and theatre. Demographic and psycho-social dimensions and characteristics. Quantitative and qualitative techniques of audience measurement and evaluations thereof.

472. Practicum in Audience Measurement. (3). Application of research techniques to practical problems in audience measurement. Identification of specific problems. Constructions of measuring instruments (e.g., questionnaires), sampling techniques, collection of data, tabulation, analysis, and reports of findings. Prerequisite: Speech 470 or department consent.

475. Directed Study. (1-4). Individual study or projects. Prerequisite: Department consent. May be repeated for credit with department consent.

Graduate Courses

500. Introduction to Graduate Study in Speech. (3). Major emphasis is placed upon the principles of research, bibliographical data, and historical, descriptive, and experimental research methods useful in speech, broadcasting, and drama. This course should be taken at the beginning of the graduate program.

503. Educational and Instructional Broadcasting. (3). Investigation of the methods of producing and using educational and in-school instructional radio and television programs.

506. Regulation and Responsibility in Broadcasting. (3). Government and broadcasting relations; review of basic radio and television law; emphasis on responsibilities of broadcast licensee.

520. Investigation and Conference. (1-3, 1-3). Directed research and experimentation for graduate students in some phase of (a) public address, (b) theatre history and production, (c) radio-television or (d) the teaching of speech. May be repeated for credit up to a total of 6 hours.


524. Development of Modern Theatre Styles. (3). An examination of the major movements in the modern theatre since 1850. Emphasis is on both literary and physical elements of styles.

530. Theories of Rhetoric: Classical. (3). An intensive study of the rhetorical theories of classical writers from 466 B.C. to the decline of Roman oratory. Principal emphasis will be on Isocrates, Plato, Aristotle, Quintilian, Cicero, and Longinus.

531. Theories of Rhetoric: Medieval, Renaissance, and Modern. (3). A study of the emerging patterns of rhetoric from the Second Sophistic to modern times. Analysis of the rhetorical systems associated with such figures as Augustine, Fenelon, Bulwer, Sheridan, Steale, Rush, John Quincy Adams, Blair, Campbell, and Whately.


567. Trends in Speech Education. (3). To provide advanced speech students with a background for a philosophy of speech education. Readings and seminar discussions of the philosophical rationales which underlie speech and drama as academic disciplines. History of speech education. Analysis of theories and methods. A comparative study of speech curricula today and projectives to the future.
OBJECTIVES AND PROGRAMS

Objectives

The College of Business Administration has as its primary objective the preparation of young men and women for active, intelligent, and responsible participation in business and community life. Such participation requires that the graduate have an understanding of the world and society in which we live, an understanding of our business and industrial community, and an understanding of the role of the business administrator.

The objectives of the College of Business Administration are, then:

1. To provide the student with some understanding of our world and society, to develop the student’s intellectual capacities, and to develop an understanding of his rights and responsibilities as an active member of society.

2. To encourage in the student the habit of orderly thinking and to foster creativity.

3. To equip the student with the fundamental business skills and to develop his understanding of the business process.

4. To prepare the student to make valid business decisions and to increase his ability to communicate with others in the execution of those decisions.

5. To provide the student with a degree of specialized skill or knowledge in a selected area of business.

6. To develop within the student an understanding of and an appreciation for research methodologies.

Undergraduate Programs

The undergraduate curricula of the College lead to the degrees of Bachelor of Business Administration and Bachelor of Science in Business Administration. A two-year program in secretarial training leads to a Certificate of Applied Science in Secretarial Training.

The College is divided into the Departments of Accounting, Administration, Business Education, and Economics.

Graduate Programs

In recent years additional resources have been devoted to the
various graduate programs of the College of Business, paralleling the widening scope and changing characteristics of the research efforts of both graduate students and faculty. The College continually attempts to expand and improve its research effort and to provide a climate for effective graduate study.

The College of Business Administration offers a course of study leading to a Master of Business Administration degree. This program is designed primarily for students with undergraduate degrees other than the Baccalaureate degree in Business Administration.

In addition, the Departments of Accounting and Administration each offer a course of study leading to the Master of Science Degree. The Economics Department offers courses of study leading to the Master of Science Degree and to the Master of Arts Degree.

For graduate programs, see the Graduate School Bulletin.

Other Programs

The College of Business recognizes that its urban environment offers many advantages to students interested in the research and study of business problems. The College is also aware that this urban setting imposes many responsibilities. The accelerating technological changes in industry in recent years have been accompanied by social demands which, in part, are a reflection of these changes.

The College feels a responsibility for adding to the total body of knowledge about business and economics. Further, as an urban, state-supported institution, the College feels a responsibility to provide educational programs and specialized services for members of the community and the state who are not full-time students.

In response to community needs, the College maintains an active program of continuing education. Through the Center for Management Development, seminars and other programs are developed to enable businessmen to keep abreast of current developments in specialized areas of the business environment.

Other activities under the auspices or joint sponsorship of the College include the Center for Business and Economic Research, the Center for Economic Education, and the Center for Human Appraisal. In addition, the College publishes the Business Journal which periodically reports current developments of interest to the business community.

Accreditation

The College is a member of the American Association of Collegiate Schools of Business and its undergraduate program is accredited by the organization.
REGULATIONS

ADMISSION

Entering freshman interested in business administration are admitted to the University College and must meet the general entrance requirements of the University, page 42. The program of high school preparation recommended for students entering the University College is given on page 98.

Students may enter the College of Business Administration from the University College, other degree-granting colleges within the University, or other universities and colleges, provided they have completed 24 semester credit hours and have earned a credit point index as follows: 24-63 hours, 1.700; 64 or more hours, 2.000, and are not on academic probation.

PROBATION

A student will be placed on probation at the end of any semester in which he does not have a cumulative grade point index of 1.700 for 24-63 credit hours and 2.000 for 64 or more credit hours. A student on probation may not enroll for more than 12 semester hours. Probation is removed when the cumulative grade point index reaches the required level. The student remains on probation if he earns at least a 2.000 index in the term during which he is on probation and his cumulative grade point index does not yet meet the minimum standards.

A student on probation shall be dismissed from the College of Business Administration if he fails to meet either of the requirements of his probationary status. When dismissed, a student will not be permitted to re-enroll in the College of Business Administration for a period of 18 weeks. Readmission after a lapse of 18 weeks is not automatic. Students must apply to the College of Business Administration Exceptions Committee to be considered for readmittance on a final probationary status.

GRADUATION REQUIREMENTS

In addition to fulfilling the general requirements of the University for graduation, each student shall elect at least 6 hours from the departments represented in Groups I through IV of the prescribed fields of study exclusive of courses in economics.

Candidates for either of the two baccalaureate degrees offered by the College shall complete at least 56 semester hours of courses offered outside the College (Economics 221 and 222 may count as courses outside the College. History 336, 337, 338 and Pol. Sci. 453 may not count as courses outside the College.) In addition, such students shall complete at least 50 semester hours of courses offered by the College.

COLLEGE OF BUSINESS ADMINISTRATION
A grade point index of 2.000 or better must be earned: (1) on all college work; (2) on all work taken at this University; (3) on all business and economics courses; and (4) on all business and economics courses taken at this University which could be applied to the degree sought.

Not more than 6 hours of the last 30 or 10 hours of the total number of hours required for graduation may be extension or correspondence courses. Permission of the Dean must be secured before taking such courses. No extension or correspondence courses will be allowed that duplicate courses required for any degree granted by the College, courses required for any emphasis within the College, or any junior or senior level courses offered in the College.

A student whose college program has not been interrupted by more than two consecutive calendar years may graduate under the requirements in effect in the College on the date he first entered Wichita State University or the requirements of any subsequent catalog. If his college program has been interrupted by more than two consecutive years, a student will be subject to the catalog requirements in effect when he re-enters, or if he elects, the requirements of a later catalog.

RESTRICTIONS

A. Credit/no credit. The following restrictions pertaining to courses taken for credit/no credit shall apply to students enrolled in the College of Business Administration:

(1) No more than six hours of courses taken in the College of Business Core may be taken for credit/no credit.

(2) No more than 12 hours of courses offered in the College of Business may be taken for credit/no credit.

(3) No more than six hours may be taken for credit/no credit in any department in the College of Business.

B. Maximum hours in any one department. No student may take more than 40 hours of the 124 required for graduation in any one department, including any courses that may be cross-listed with any other department.

BACHELOR OF BUSINESS ADMINISTRATION DEGREE

All students in the College of Business Administration will design their own course of study from the courses listed in the four major areas below:

(1) Environment of Business.
Choose A or B below.

(A) 9-12 hours * in at least three of the four subdivisions, of which a minimum of nine hours must be in Economics and of the 9 hours, three must be Eco. 221.
(1) General macro: Eco. 221, 424.
(2) General micro: Eco. 222, 320, 421.
(4) Legal, political, social: Adm. 332, 334, Eco. 414, 462.

(B) BA 211-212. (3-3).
BA 317. (3).

(II) Business Functions.
Choose A or B below.

(A) 6-9 hours * in at least 2 of the 3 subdivisions.
(1) Production: Adm. 351, 455.
(3) Finance: Adm. 343, 441, 442, 443.

(B) BA 321. (5).

(III) Quantative Studies.
Math. 140 and 245. (3 & 3). Required of all students.
(Math. 142 will be accepted in lieu of Math. 245.)
Choose A or B below.

(A) 9-12 hours * with at least 3 hours in each subdivision (3 hours of which must be Acctg. 213).
(1) Statistics: Eco. 238, 438; Adm. 370, 376.
(2) Operations research: Adm. 371, 456.
(3) Accounting: Acctg. 213, 214, 335, 345.
(4) Information systems: Adm. 375, 471, Acctg. 433.

(B) BA 231-232. (3-3).
BA 233. (3).

(IV) Administrative Processes.
Choose A or B below.

(A) 9-12 hours * in at least 3 of 4 subdivisions and of this 3 hours must be Adm. 260.
(3) Special fields: Adm. 361, 462, 464, 466; Eco. 461.

(B) BA 341-342. (4-4).

* If a student elects the “A” option in one or two of the four major areas, he must take the maximum number of hours required in those areas. If he also elects to take the “A” option in a third and/or fourth area(s), he may take the minimum number of hours in those areas.

Each candidate for the B. B. A. degree shall satisfy the additional specific requirements of one of the following curricular emphasis:

ACCOUNTING

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acctg. 214, Introduction to Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. 335, Cost Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. 345, Income Tax and Managerial Decisions</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. Electives *</td>
<td>9</td>
</tr>
<tr>
<td>Adm. 334, Law and Business</td>
<td>5</td>
</tr>
</tbody>
</table>

* Elective courses should be selected on the basis of the student’s career objective in professional accounting. Consultation with a faculty advisor in the Department of Accounting is strongly recommended.

ADMINISTRATION

Students must elect an additional 21 hours beyond the College core from upper division courses (300 and 400 level) in the College of Business Administration. A minimum of 15 upper division hours must be taken within the Administration Department, and the re-
remaining 6 hours may be elected from upper division courses in Accounting, Administration, or Economics.

ECONOMICS

Within the 124 hours required for graduation, a minimum of 30 hours in Economics is required and a maximum of 40 hours in Economics is allowed.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eco. 414, Gov't Regulation of Economic Activity</td>
<td>3</td>
</tr>
<tr>
<td>Electives in Economics (12 hours upper division courses, including not more than six hours from among Eco. 305, 307, and 406)</td>
<td>12-22</td>
</tr>
</tbody>
</table>

BUSINESS EDUCATION

Students emphasizing secretarial training shall complete a total of sixty-two semester hours of Liberal Arts courses. The maximum lower division credit from the Department of Business Education shall be 28 hours. Required courses for the secretarial emphasis are:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus. Ed. 133, 138, 237, Typewriting</td>
<td>6-8</td>
</tr>
<tr>
<td>Bus. Ed. 201, Secretarial Office Machines</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 202, Calculating Machines</td>
<td>1</td>
</tr>
<tr>
<td>Bus. Ed. 231, 234, 240, Shorthand</td>
<td>6-9</td>
</tr>
<tr>
<td>Bus. Ed. 136, 203, Records Management and Office Procedure</td>
<td>4</td>
</tr>
<tr>
<td>Bus. Ed. 248, Written Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 345, Transcription</td>
<td>3</td>
</tr>
</tbody>
</table>

CERTIFICATE OF APPLIED SCIENCE IN SECRETARIAL TRAINING

The Certificate of Applied Science in Secretarial Training provides an opportunity for secretarial preparation of a high quality in a college atmosphere with a view to attaining the Certified Professional Secretary status.

The requirements for the certificate are as follows: Engl. 111; Eco. 221, 222; Acctg. 213, 214; Adm. 120, or 260, or 332; Bus. Ed. 136, 138, 201, 202, 203, 231, 234, 237, 240 or 345 (138, 231, and 234 may be taken in high school), and 248; science or Math. 121; six hours of humanities; nine hours of general university requirements as outlined on page 58, plus sufficient free electives to equal 64 hours. Thirty hours and 60 credit points shall be earned in residence. Twelve of the last 15 hours must be taken in residence. Of the required 64 hours, not more than one fourth of D work will count on the Certificate of Applied Science in Secretarial Training. If taken in high school, no credit is given for Bus. Ed. 133 or Bus. Ed. 231; business electives shall be substituted for these courses.
BUSINESS TEACHER EDUCATION DEGREE

Students interested in preparing to teach business subjects in high school enroll the first year in University College and then transfer to the College of Education. All students in the University who receive a certificate to teach must meet the requirements as outlined on page 213.

Integrative Core Courses

The following descriptions represent the courses that students may take if they select the "B" option for any of the areas in the College of Business requirement on page 188.

BA 211-212. Economics I-II (3-3). Study and analysis of the environment of business, labor, government, banking, and other economic institutions. Prerequisite: Closed to students with credit in Economics 221-222.

BA 231-232. Quantitative Methods I-II (3-3). Emphasis on development of a strong conceptual understanding of statistical methodology and a survey of model building and techniques of operations research. Prerequisite: Math. 245. Closed to students with credit in Eco. 238 or Adm. 370.

BA 233. Concepts and Uses of Accounting Information. (3). Underlying concepts, processing and utilization of financial accounting information as a part of a managerial information system. Emphasis is on revenue and expense recognition and measurement, asset valuation, and measurement of management’s profitability performance. Prerequisite: Sophomore standing. Closed to students with credit in Acctg. 213 or 113 and 114.

BA 317. Social Environment of Business (3). Analysis of the social environment of business in its broadest context, including the legal-political system, the social and cultural setting, and the responsibilities of businessmen within this setting. Prerequisite: Closed to students with credit in Adm. 332.

BA 321. Business Functions (5). Description, analysis, and integration of all the processes involved in the internal operation of a business, including manufacturing, marketing, and finance. Prerequisite: Closed to students with credit in Adm. 300, 343, or 351.

BA 341-342. Administrative Behavior I-II (4-4). Analysis of behavioral concepts from the standpoint of the individual, intra- and inter-group processes, organizations (including strategies for selecting and implementing goals), and the relationships of organizations to cultural systems. Prerequisite: Closed to students with credit in Adm. 290 or 261.

ACCOUNTING

An emphasis in Accounting may be taken only in the College of Business Administration. The requirements for an emphasis in accounting are listed on page 189.

MINOR: A minor in Accounting may be taken in the College of Liberal Arts and Sciences. A minimum of 15 hours must be taken, including Acctg. 213-214, and 315-316.

CERTIFICATE OF CERTIFIED PUBLIC ACCOUNTANT

The designation “Certified Public Accountant” is available to those individuals who are able to demonstrate basic competence
of professional quality in the discipline of accounting. This basic competence is demonstrated by acquiring the body of knowledge common to the professional and passing the C. P. A. examination.

Eligibility requirements for candidates who wish to take the C. P. A. examination are established by Kansas law as follows: (1) Beginning in August, 1970, new candidates must possess a baccalaureate or higher degree with a major or concentration in accounting, or what the State Board of Accountancy determines to be substantially the equivalent thereof. After August, 1976, this requirement will apply to all candidates who wish to sit for the C. P. A. examination. (2) Candidates who were eligible to take the C. P. A. examination prior to the enactment of the educational requirement in (1) above have until August, 1976, to do so. The prior Kansas law specified any one of three admission requirements: (a) proof of college degree, including 30 or more semester hours of accounting, business law, economics, business, and finance, of which at least 20 semester hours must be in accounting; (b) proof of college degree and completion of three years of public accounting experience; or (c) proof of graduation from high school, or an equivalent education and completion of three years of public accounting experience.

The C. P. A. Certificate is issued upon (1) successful completion of the C. P. A. examination and (2) completion of two years of public accounting experience. The experience requirement is waived for those candidates who possess a masters or higher degree with a major or concentration in accounting.

Graduates with an Accounting emphasis qualify to sit for the Kansas C. P. A. examination; however, the department strongly recommends graduate work leading to the M. S. Degree in Accounting to best prepare the student to enter the profession as well as to pass the examination.

**Lower Division Courses**

213. **Introduction to Financial Accounting.** (3). The study of accounting as a means of communicating financial information about the activities of business enterprises. Emphasis is on concepts and principles underlying the measurement of income and financial position, and how this information may be used to evaluate the progress of a firm. Prerequisite: Sophomore standing or department consent.

214. **Introduction to Management Accounting.** (3). The study of accounting in terms of management's information requirements. Emphasis is on the use of accounting in planning and controlling a firm's activities. Prerequisite: Accounting 213 and sophomore standing.

**Upper Division Courses**

335. Cost Accounting. (3). The study of accounting for manufacturing operations, with emphasis on the processing, analysis, and interpretation of cost data for income determination, inventory valuation, and internal management use. Prerequisite: Accounting 214.

345. Income Tax and Managerial Decisions. (3). An examination of the federal income tax law relating to business income taxation. Primary emphasis is upon the income tax results of alternative courses of action taken in a business. Prerequisite: Accounting 213.


413. Principles of Auditing. (3). A study of the accountant’s attest function. Emphasis is on the role of the independent auditor, his legal responsibilities, his code of ethical conduct, and auditing standards, together with technical aspects of attesting to the reliability of financial and other data. Prerequisite: Accounting 316.

423. Selected Topics in Financial Accounting. (3). Accounting topics associated with revenue recognition under specialized sales situations, financial statement presentation on a non-historical cost basis, financial statement preparation from incomplete records, and businesses in distress. Course content will change as financial accounting problems facing the accounting profession evolve. Prerequisite: Accounting 316.

433. Electronic Data Processing and Accounting Systems. (3). A study of the format and content of accounting systems, reflecting the application of electronic computers to the processing of business data. Includes basic computer programming. Prerequisite: Accounting 214 or department consent.

445. Advanced Income Tax. (3). Study of the federal income tax law and its relation to individuals and other entities. Designed primarily for those students who wish to work with income tax as part of a career objective. Prerequisite: Accounting 345 or department consent.

453. Advanced Managerial Accounting. (3). Advanced study of the use of accounting information in financial policy decisions, profit planning and control, quantitative analysis of financial data, and capital budgeting. Includes the application of selected quantitative methods in accounting. Prerequisite: Accounting 214 or equivalent.

Graduate Courses (courses have been changed, please refer to Graduate Bulletin)

501. Financial Accounting. (3). The basic structure of accounting, income determination, asset valuation, liability recognition, accounting for ownership equity, and the interpretation and analysis of financial statements. Prerequisite: Open only to students without previous credit in accounting or by department consent.

502. Managerial Accounting. (3). Use of accounting data to analyze management problems; concepts of cost analysis, return on investment analysis, operations and capital budgeting. Prerequisite: Account 501 or its equivalent.

511. History of Accounting. (3). Accounting methods and theories from the viewpoint of their historical development through the centuries in various parts of the world. The interrelationship between accounting procedures and social-economic conditions is stressed. Prerequisite: 15 hours of accounting.

512. Contemporary Accounting Theory. (3). An advanced discussion of the framework of theory underlying current accounting thinking and procedures; a study of its development and the influence of professional organizations in this development. Areas of theoretical controversy are emphasized. Prerequisite: 15 hours of accounting.
533. Professional Auditing Techniques and Practice. (3). Professional aspects of auditing practice and procedures. Techniques of working paper preparation, report writing, and professional ethics are stressed. Prerequisite: Acctg. 413.

550. Accounting Research and Writing. (3). An advanced seminar offering opportunity for oral discussion and written reports on matters of current interest in diverse areas of the accounting field. A major course objective is to develop the student's ability for independent research as well as presentation and defense of his findings. Prerequisite: 24 hours of accounting.

563. Seminar in Taxation. (3). An advanced review and discussion of current problems in federal income taxation and tax practice. Prerequisite: 3 hours of federal taxation.


ADMINISTRATION

The requirements for an emphasis in Administration on a Bachelor of Business Administration degree are listed on page 188.

Lower Division Courses

120. Introduction to Business. (3). The concept and function of business management in the capitalistic economic system. Includes the development of concepts of management analysis and action. Not open to upper division students in the College of Business Administration.

161. Decision Making and Society. (3). Deals with the decision making process in our society, both at a theoretical level and as applied in various social institutions.

170. Introduction to Computers. (3). The development, present applications and future uses of computers in business, education, government, and science. Analysis of the social, political, and economic significance of computers.

260. Behavioral Concepts in Business. (3). Emphasizes the application of behavioral concepts to business including: learning, cognitive processes, needs and need satisfaction, attitudes and values, language and communication, group dynamics, social structure, and culture. Prerequisite: Sophomore standing.

Upper Division Courses

300. Marketing. (3). A description and analysis of our marketing system and an investigation of the factors affecting management of the major policy areas of marketing in the firm. Prerequisite: Closed to students with credit in BA 321.

303. Marketing Research. (3). Design of marketing information systems and marketing research procedures. Prerequisite: Adm. 300 or BA 321 and Eco. 238 or BA 331. (Formerly Adm. 403.)

305. Consumer Behavior. (3). Study of variety of concepts in the behavioral sciences related to specific topics in consumer behavior, e.g., mass communications, reference groups, and sociological, psychological and economics aspects of consumer behavior. Prerequisite: Adm. 300 or BA 321. (Formerly Adm. 405.)

332. Law and Society. (3). An analysis of our legal system in operation. Includes legal philosophy and the ends of law, the basic characteristics and subject matter of law, and legal reasoning and process. The role of the legal system in society is examined through study of the concept of freedom of contract. Prerequisite: Closed to students with credit in BA 317.
334. Law and Business. (5). The framework of private and public law within which business operates, including contract law, the Uniform Commercial Code, corporation law, regulatory aspects, and special topics. (Formerly Adm. 434.)

343. Finance. (3). Corporate organization, types of securities, obtaining short and long term capital. Includes financial planning and control, forecasting and budgeting. Prerequisite: Acctg. 213 or BA 233. Closed to students with credit in BA 321.

351. Industrial Management. (3). The concepts and procedures involved in industrial management. Prerequisite: Closed to students with credit in BA 321.

361. Administrative Process. (3). An analysis of the administrator and the environment in which he operates. Prerequisite: Adm. 260. Closed to students with credit in BA 341.


363. Organizational Motivation. (3). Theories of human motivation and adaptation of these theories to programs of motivation for complex organizations. Prerequisite: Adm. 260 or BA 341.

364. Organizational Communication. (3). Design of organizational communication systems. Introduction of communication models, and analysis of the interpersonal communication process. Prerequisite: Adm. 260 or BA 341.

365. Organizational Conflict and Change. (3). Explores conflicts in organizations and management's task of stimulating innovation and implementing change. Prerequisite: Adm. 260 or BA 341.

367. Organizational Design. (3). Includes inter-relationships of organization goals, structure hierarchies, and roles. Prerequisite: Adm. 260 or BA 341.

370. Quantitative Methods and Research. (4). A combination of quantitative tools of analysis and research methods in business. Concerned with elementary research procedures, statistics, and modern quantitative methods from the point of view of the management's direction and use of these methods. Prerequisite: Eco. 238. Closed to students with credit in BA 231.

371. Operations Research and Systems Analysis. (3). Operations research and systems analysis as management science. Examination of the theoretical basis of quantitative models of operating systems. Emphasis on the logic of techniques of analysis. Prerequisite: Eco. 238 or BA 231.


376. Administrative Decision Making. (3). Analysis of decision making under conditions of uncertainty with particular emphasis on Bayesian decision processes. Prerequisite: BA 231 or Eco. 238.

401. International Marketing. (3). Problems and procedures of marketing in foreign countries, including effects of foreign cultures and marketing systems on the design of marketing programs. Prerequisite: Adm. 300 or BA 321.

404. Distribution Management. (3). Study of retailing and wholesaling as elements of a distribution system, management of channels of distribution, and physical distribution. Prerequisite: Adm. 300 or BA 321.

406. Creative Marketing Strategy. (3). In conjunction with local firms, groups of class members work as consulting teams to help a particular company study
and develop an operable plan or program to handle a specific marketing problem. Prerequisite: Adm. 300 or BA 321.

407. Promotional Management and Market Communication. (3). Establishing objectives and budgets for sales promotion activities. Advertising and sales strategy. Advertiser-agency relationships. Measuring the effectiveness of sales promotional activities. Social and ethical implications of sales promotion, mass communication techniques, and research studies from the social sciences. Prerequisite: Adm. 300 or BA 321.

408. Selling and Sales Force Management. (3). An analysis of current behavioral concepts of personal selling and the problems and policies involved in managing a sales force. Prerequisite: Adm. 300 or BA 321.

409. Price Problems and Policies. (3). An examination of the pricing problems confronting a marketer and an analysis of the policies and decision processes used by manufacturers and middleman in pricing. Prerequisite: Adm. 300 or BA 321 and Eco. 222 or BA 212.

410. Marketing Programs. (3). An integration of all the aspects of the marketing mix into an effective and coordinated marketing program. Prerequisite: Adm. 300 or BA 321 and 3 additional hours of marketing.

441. Investments. (3). Analysis of investment risks, financial information, and industry characteristics. Examination of corporate, government, municipal, and financial institution securities and of other investment types. Personal portfolio construction, supervision, and management. Prerequisite: Adm. 343 or BA 321.

442. Financial Management. (3). The problems and operations for which the financial officer is responsible, emphasizing controversial aspects of financial analysis. Prerequisite: Adm. 343 or BA 321 and 6 hours of accounting or department consent.

443. Capital Markets and Financial Institutions. (3). Introduction to the capital markets system. The management and operations of financial institutions. Each major type of financial institution is viewed in the context of its competitive environment with respect to both asset and liability management. Prerequisite: Adm. 343 or BA 321.

444. Commercial Bank Management. (3). Bank asset and liability management; internal organization of commercial banks; current problems and recent innovations in commercial banking. Prerequisite: Adm. 443.


446. Financing International Operations. (3). Aspects of financial planning for corporations with overseas operations; analysis of sources and uses of corporate funds abroad; effects on international financial administration of the characteristics of foreign money and capital markets and foreign financial institutions. Prerequisite: Adm. 343 or BA 321.

450. Workshop in Administration. (1-6).

455. Materials Management. (3). A consideration of the factors of procurement, inventory control and materials handling in the factory environment. Prerequisite: Adm. 351 or BA 321.

456. Production Analysis. (3). Applications of probability theory and simulation to problems of inventory control, queuing, scheduling, and allocation. Prerequisite: Adm. 371.


196 COLLEGE OF BUSINESS ADMINISTRATION
462. Personnel Management. (3). Analysis of the functions of personnel management including selection procedures, evaluation of personnel, training, motivation, job evaluation, discipline, and personnel research. Prerequisite: Adm. 361 or BA 342 or concurrent enrollment.

463. Small Group Processes. (3). Effects of small group processes on individuals and organizations. Interaction of work group processes and organizational performance. Leadership and follower roles. Conflict and cooperation within and between groups. Prerequisite: Adm. 361 or BA 342 or concurrent enrollment.

464. Labor Relations. (3). Designed to present the philosophy underlying labor legislation, and the function of collective bargaining in labor-management relationships. Prerequisite: Adm. 361 or BA 342 or concurrent enrollment.

466. Selection, Training, and Placement. (3). Analysis of advanced programs of employee selection, training, and placement. Includes testing, interviewing, counseling, appraisal, job analysis, job design. Prerequisite: Adm. 261 or BA 342 or concurrent enrollment.


481-482. Administrative Policy I-II. (3-3). An integration of all aspects of business administration in the analysis of and making decisions for policy development. Prerequisite: BA 321 or any two of the following: Adm. 300, 343, 351.

490. Seminar in Selected Topics. (1-5). May be repeated by department consent.

491. Independent Study. (1-5).

Graduate Courses

500. Marketing Systems. (3). An intensive analytical introduction to the combination of institutions which comprise the overall marketing system and to the marketing function as a major subsystem within the individual business firm.

501. Marketing Management. (3). The development of marketing programs or "mixes" to obtain sales and profits under a variety of operating conditions. Concerned with the management of specific problem areas such as product, channels, promotion and pricing.

502. Marketing Strategy. (3). Integration of long-range marketing and corporate policies. Budgetary control and evaluation of the effectiveness of marketing systems. Organization of the marketing department and its relation to the total organization. Prerequisite: Adm. 501 or consent.

503. Marketing Analysis. (3). Application of the scientific method to the solution of marketing problems. Prerequisite: Adm. 501 or consent.

505. Consumer Decision Processes. (3). An examination of different aspects of the behavior of consumers and of the factors that help explain that behavior. Includes an analysis of current concepts and models. Prerequisite: Adm. 501 or consent.

509. Marketing Theory. (3). Utilization of marketing research findings to analyze current marketing theory. Development of conceptual and theoretical frameworks for marketing analysis. Prerequisite: Six hours of marketing, including Adm. 501.

532. Law and Society. (3). An analysis of our legal system in operation. Includes legal philosophy and the ends of law, the basic characteristics and
subject matter of law, and legal reasoning and process. The role of the legal system in society is examined through study of the concept of freedom of contract. Prerequisite: Consent.

533. Political and Social Environment of Business. (3). An examination of the political and social environment within which business operates. A consideration of how business interacts with society, including the role of governmental and legal constraints, changing social patterns and forces, and competing ideas and values. Prerequisite: Adm. 532 or consent.

540. Financial Systems. (3). An intensive analytical introduction to finance from a management viewpoint, including theory of financial management, the financial institutional structure, and an analysis of a variety of practical problems of business finance. Prerequisite: Consent.


542. Structure and Policies of Financial Institutions. (3). The development, management, and impact of policies of financial institutions including planning, measuring, and achieving financial goals. Prerequisite: Adm. 541 or consent.


545. Security Analysis. (3). Analysis and valuation of investment securities issued by corporations and governmental agencies. Prerequisite: Adm. 441 or consent.

546. Capital Budgeting. (3). Organization and operation of the capital budgeting system; problems in partial decentralization and in comparability of estimates of funds flow. Contemporary methods of treating uncertainties and constraints; application of programming techniques. Determination of appropriate discount rates. Prerequisite: Consent.


560. Behavioral Science in Business. (3). Analysis of concepts and tools of psychology, social psychology, sociology, and anthropology that have greatest relevance for business administration.

562. Human Elements of Administration. (3). Study in individual behavior in an organizational setting. Analysis of the human variables in business from the standpoint of job placement, performance, and individual development. Topics covered include behavioral development, motivation, and learning in human relations. Prerequisites: Adm. 561 or consent.

565. Communication. (3). Analysis of communication models with emphasis on their applications to communication problems in organizations. Social-psychological processes underlying persuasion in interpersonal relations and through the mass media. Critical analysis of communication systems and techniques within formal organizations. Prerequisite: Adm. 561 or consent.

566. Organizational Conflict and Stress. Studies in flexibility and rigidity. Review of research and thinking in the areas of innovation, conflict, resolution, stress, and anxiety as relevant to organizational structures and behaviors. Prerequisite: Consent.

569. Research in Behavioral Science. (3). Analysis of some of the concepts and tools in behavioral science that are relevant to research in organizations. May take one or two areas such as motivation, cognitive processes, attitudes and values, etc., and analyze in depth. Prerequisite: Adm. 562.
570. Statistical Methods. (3). Intensive examination of statistical methodology applicable to research and decision making.

571. Quantitative Decision Theory I. (3). Probability concepts used in modern decision theory. Topics treated will include: Probabilities as decision data; preposteriori analysis; estimation theory; and statistical significance tests.

572. Quantitative Decision Theory II. (3). Topics such as sample design, Chi-square, variance analysis, and correlation and regression analysis are approached from conceptual and decision-making points of view. Prerequisite: Adm. 571.

574. Computer Systems and Procedures. (3). Planning, development, and operation of business computer systems. Emphasis given to information handling and development of real-time management information systems. Study of computer applications in the areas of marketing, production and finance. Consideration of human factors in a man/machine communication system. Prerequisite: Adm. 471 and consent.

575. Management Science. (3). Provides quantitative bases from which the student may develop his analytical abilities for use as a decision-maker. Areas of study include: mathematical programming, game theory, forecasting, queuing theory, and simulation. Prerequisite: Adm. 571 or consent.


581. The Philosophy of Management. (3). Concentrated readings and research to define the relation of management leadership to our society. Prerequisite: Consent.


586. Seminar in Research Methodology. (3). Study of concepts and procedures in the design and performance of research.

590. Seminar in Special Topics. (1-3). May be repeated by consent.

591. Directed Studies. (1-5). Prerequisite: Consent. May be repeated by consent.

595-596. Thesis. (2-2).

BUSINESS EDUCATION

Major: The department offers courses of study leading to a major in Business Education. This degree is granted by the College of Education. (See page 213.) The department also offers courses in Business Education that count on a major for the secretarial emphasis in the College of Business Administration. (See page 190.)

Minor for Students Planning to Teach Business Education as a Second Subject in Secondary School: The teaching-minor requirement is 24 hours, including the following: Accounting 213, 315; Economics 221; Business Education 138, 237; and 9 hours from Accounting, Administration, Economics, or Shorthand, of which one course must be upper division.
Two-Year Program: A two-year secretarial program leading to a Certificate of Applied Science in Secretarial Training is offered by this department. (See p. 190.)

Students who are enrolled for less than 9 hours may not enroll in business education courses until the last day of final registration. However, business education courses are open to all University students upon the approval of the Business Education Department. A college graduate is permitted to enroll for shorthand and typewriting with the consent of the department and the dean. For exception to these rules, a written application must be made to the chairman of the department for consideration with the dean of the college concerned. The facilities available determine the enrollment. The decision as to the availability of equipment is made by the chairman of the department and the Dean of the College of Business Administration.

Although students may audit courses in business education, available space in the classrooms is a major factor in the number of auditors. No credit is given toward graduation for repetition of first-year shorthand or typewriting taken in high school even though a grade is recorded in the course.

Lower Division Courses

133. Beginning Typewriting. (2). 3R. Correct fingering, mechanical operation of a typewriter, and introduction to business forms. No credit is given to students with a unit in high-school typewriting. (Credit earned in this course does not apply on the Bachelor of Science in Business Administration Degree or the Certificate of Applied Science in Secretarial Training.) In enrolling for this course, preference is given to students specializing in business or pursuing a teacher-training program.

136. Records Management. (2). All basic filing systems. Prerequisite: Bus. Ed. 133 or one year high-school typewriting, or department consent.

138. Advanced Typewriting. (3). Stress is placed on business, letter, and manuscript forms; tabulation; and timed production problems. Prerequisite: Bus. Ed. 133 or one year of high-school typewriting, or department consent.

201. Secretarial Office Machines. (3). 3L. Designed to familiarize students with office machines, including transcribing machines, executive typewriters, duplicating machines, copying machines, and other secretarial office equipment. Some part-time office experience. Prerequisite: Bus. Ed. 237, or department consent.

202. Calculating Machines. (1). 2L. Designed to familiarize students with adding machines, rotary calculators, and printing calculators. Prerequisite: Department consent.


231. Elementary Shorthand. (3). 5RDL. Theory of Gregg Diamond Jubilee Shorthand. No credit given to student with one unit of high-school shorthand. Prerequisite: Bus. Ed. 133 or concurrent enrollment, or one unit of high-school typewriting, or department consent.

237. Technical Typewriting. (3). Letter forms used in business, difficult tabulating projects, legal typewriting, and advanced timed production problems. Emphasis is placed on accuracy at a high rate of speed to meet office standards. Prerequisite: Bus. Ed. 138 or two units secretarial training in high school, or department consent.

240. Technical Shorthand. (3). 3R; 1L. Advanced dictation with emphasis on technical vocabularies. Prerequisite: Bus. Ed. 234 with a grade of C or better, and Bus. Ed. 237, or department consent.

248. Written Business Communications. (3). Principles and techniques of effective written business communication. Prerequisite: English 111 and department consent.

Upper Division Courses

300. Office Practice. (3). 2R; 1L. Advanced office duties, techniques, and procedures. Also includes various methods of teaching office machines and the functional use of selected machines as well as a survey of available equipment. Prerequisite: Bus. Ed. Major or Minor with credit in Bus. Ed. 237.

345. Transcription. (3). 2R; 2L. Emphasis on transcribing advanced shorthand notes with speed, accuracy, and correct form. Prerequisite: Bus. Ed. 240 with a grade of C or better, or department consent.

450. Workshops in Business Education. (1-4). Selection of one major area of Business Education for study in terms of methods, materials, research, and curricular problems. Instructor assisted by guest lecturers. May be repeated for credit. Prerequisite: Teacher certification or department consent.

460. Directed Studies. (1-5).

ECONOMICS

Lower Division Courses

100. Business, Economics, and Society. (3). Study of basic factors of business and economic changes, the role of business leaders, the relationship to the social environment; emphasis on United States development. Not open to upper division students in the College of Business Administration.

175. Economics of Environmental Quality. (3). An introduction to the scientific, engineering, and economic principles needed for the enhancement of the quality of man's total environment. Discussion of air and water pollution, solid waste disposal, water resources and conservation. Course will emphasize various principles of economics such as marginal analysis, benefit-cost analysis, systems approach, externalities as appropriate.

190. Consumer Economics. (3). Consumers role in the economy; market organization and its impact on consumers; discussion of information sources for consumers; analysis of the programs for consumer protection. Not open to upper division students in the College of Business Administration.

211-212. Economics I-II. (3-3). Study and analysis of the environment of business, labor, government, banking, and other economic institutions. Closed to students with credit in Economics 221-222.

222. Principles of Economics II. (3). An introduction to price and distribution analysis; market structure and performance, contemporary issues and public policy. Prerequisite: Eco. 221. Closed to students with credit in BA 211-212.

233. Introductory Business Statistics. (3). An introduction to the use of statistical methods in economics and business including measures of distribution, elements of statistical inference, simple regression and correlation, index numbers, and time series analysis. Prerequisites: Math. 122 or 141.

Upper Division Courses

305. Economic History of Europe. (3). (History 337.) An analysis of the development of economic institutions; the rise of capitalism and its influence on overseas expansion, technology, precious metals, politics and war; changes in economic ideologies; cultural effects of economic change. Prerequisite: Eco. 221 or BA 211.

307. Economic History of the United States. (3). (History 338.) An analysis of the basic factors in economic growth; agriculture, trade and commerce, industrial development, and the changing role of government in economic activity. Prerequisite: Eco. 221 or BA 211.

320. Managerial Economics. (3). Applications of micro-economic theory to the solution of business problems. Prerequisite: Eco. 222 or BA 212.


360. Labor Economics. (3). Survey of the field of labor economics; labor markets, trade unionism, collective bargaining; wage determination, employment, unemployment, and labor legislation. Prerequisite: Eco. 222 or BA 212.


370. International Economics. (3). A study of the foundations of international trade, tariffs, and other barriers to trade, customs, unions, balance of payments, problems and policies, the foreign exchange market, and the functioning of the international monetary system. Prerequisite: Econ. 222 or BA 212.

400. Seminar in Social Sciences. (3). An interdisciplinary course participated in by staff representatives of the departments of Economics, Political Science, Psychology, and Sociology. Following a study of the development of the social sciences, an interdisciplinary analysis of a contemporary social problem or institution will be undertaken. Prerequisite: Consent of instructor.


406. Age of Enterprise and Economic Consolidation. (3). (History 436.) Economic development of the United States from the Civil War to the present. Prerequisite: Eco. 221 or BA 211.

414. Government Regulation of Economic Activity. (3). A critical appraisal of the objectives and results of government policy and practice in controlling economic activity. Prerequisite: Eco. 222 or BA 212.

415. Economics of Transportation. (3). Study of economic characteristics of transportation modes, problems and policies. Prerequisite: Eco. 222 or BA 212.
416. Economics of Air Transportation. (3). Study of economic characteristics of air transportation. Prerequisite: Eco. 222 or BA 212.

417. Economics of Public Utilities. (3). Study of general economic characteristics and regulation of water, gas, electric, communications, and related industries, including atomic power. Prerequisite: Eco. 222 or BA 212.

421. Production, Price and Distribution Analysis. (3). Analysis of production and pricing by firms and industries and distribution of income to factors of production. Prerequisite: Eco. 222 or BA 212.

424. National Income Analysis. (3). Aggregate economic analysis and examination of policies affecting the level of income and employment. Prerequisite: Eco. 222 or BA 212.

425. History of Economic Thought. (3). A critical analysis of economic thought, the factors which influence this thought, and its impact upon the social and economic development of the modern world. Prerequisite: Eco. 222 or BA 212.

427. Readings in Current Economic Literature. (3). Reading, study, and discussion of contemporary, non-technical economic literature. Student participation in classroom discussion will be emphasized. Prerequisite: Eco. 222 or BA 212.

438. Intermediate Business Statistics I. (3). Statistical inference, problems of estimation and tests of hypotheses, linear correlation and regression and index numbers to be used as tools of analysis in economics and business. Prerequisite: Eco. 238 or BA 232.


450. Workshop in Economics. (1-6).

453. Public Finance. (3). Analysis of fiscal institutions and decision-making in the public sector of the American economy; budget planning and execution; taxation, debt, and fiscal policy. Prerequisite: Eco. 222 or BA 212.

454. Fiscal Policy. (3). The economics of government spending and taxation; analysis of the fiscal role and instruments of government and their effects on the economy. Prerequisite: Eco. 222 or BA 212, and 453.


461. Collective Bargaining and Wage Determination. (3). Economic and legal aspects of collective bargaining, emphasizing the techniques and procedures used, and the major issues and problems inherent in the bargaining process. Manner in which wages are determined under various institutional relationships. Prerequisite: Eco. 222 or BA 212.

462. Public Policy Toward Labor. (3). An examination of federal and state legislation, judicial action and administrative practice directed toward controlling or mitigating problems arising from the labor-management relationship. Regulations in the private sector and employment practices in the public sector will be studied. Prerequisite: Eco. 222 or BA 212.

463. Economic Insecurity and Social Insurance. (3). An examination of the impact of social insecurity and of alternative policies related thereto. Costs and benefits of security programs for the aged, unemployment compensation, workers' compensation, non-industrial disability compensation, and other relevant public policy. Prerequisite: Eco. 222 or BA 212.

COLLEGE OF BUSINESS ADMINISTRATION
470. International Trade. (3). Study of the theory of international trade and its empirical foundations. An analysis of private and public barriers to trade, within the context of theory and contemporary events. Prerequisite: Eco. 421 or consent of instructor.

471. Economic Growth and Development. (3). Survey of leading growth theories with an emphasis on the processes of development and capital formation in developed and underdeveloped economies. Determinants of real income, resource allocation, investment criteria, balance of payment problems, national policies, and related topics analyzed within this framework. Prerequisite: Eco. 222 or BA 212.

472. International Finance. (3). Concepts and theories of balance of payments equilibrium, foreign exchange rate determination, and capital movements; current problems and policies related to balance of payments disequilibrium, international liquidity, and the functioning of the international monetary system. Prerequisite: Eco. 421 or consent of instructor.

475. Natural Resources and Regional Planning. (3). A study of the approaches to the optimal allocation of natural resources. Criteria for policy decisions; evaluation of the social and economic benefits and costs of the use of resources through time. Prerequisite: Eco. 222 or BA 212.

477. Introduction to Urban Affairs. (3). An introduction to the study of the metropolis as a social, political and economic system. Prerequisites: Econ. 222 or BA 212 and a course in Sociology or Political Science.

480. Risk and Insurance. (3). Economic theory of risk, its significance and treatment; theory and practice of property, liability, life and health insurance. Prerequisite: Eco. 222 or BA 212.

490. Business Forecasting and Demand Theory. (3). An examination of the factors affecting demand with emphasis on changes over time. Prerequisite: Eco. 238 and 222 or BA 232 and BA 212.

491. Directed Study. (1-3). Individual and group study of various aspects and problems of economics. Repeatable. Prerequisite: Department consent.


Graduate Courses


515. Seminar in the Regulated Industries. (3). An intensive analysis of the economic characteristics of the regulated industries; i.e., transportation and public utilities, with emphasis on problems, issues and public policy in these industries. Prerequisite: Economics 415, 416, or 417.

521. Micro-economic Analysis. (3). An intensive analysis of contemporary literature and problems in the area of production, pricing and distribution. Prerequisite: Eco. 421 or 520 and one course in calculus. (Repeatable with department consent.)

522. Macro-economic Analysis. (3). An intensive analysis of contemporary literature and problems of national income analysis. Prerequisite: Eco. 424 and one course in calculus. (Repeatable with department consent.)

530. Analysis of Economic Theory. (3). An intensive analysis of micro- and macro-economic principles. Prerequisite: Department consent.

531. Analysis of Business Conditions. (3). Economic forecasting and its relationship to macro-economic analysis. Prerequisite: Eco. 530 or equivalent.
534. Managerial Economics. (3). A survey of theoretical and analytical tools of economics which are useful in decision making by managers. Prerequisite: Eco. 222 or B. A. 212 or Eco. 530.

539. Introduction to Econometrics. (3). Analysis of time series, multiple regression, multiple and partial correlation, analysis of variance and introduction to econometric techniques. Prerequisite: Eco. 438 and one course in calculus.

540. Seminar in Monetary Theory. (3). An examination of neo-classical and contemporary monetary theories. An analysis and evaluation of current monetary problems. Prerequisite: Eco. 222 and 340. (Repeatable with department consent.)

554. Seminar in Public Finance. (3). Analysis of theoretical and applied aspects of public finance in the American and foreign economies. Selected topics of current and permanent importance. Prerequisite: Eco. 454 or 453. (Repeatable with department consent.)

561. Seminar in Contemporary Issues. (3). Intensive analysis of contemporary problems in the field of labor. The specific nature of the problems will be determined by the interest of those enrolled in the course. Prerequisite: Eco. 360. (Repeatable with department consent.)

570. Seminar in International Economics. (3). An intensive study of the pure theory of international trade, resource allocation, balance of payments adjustments, and economic integration. Considerable analysis is devoted to recent publications on selected topics. Prerequisite: Eco. 470 or 472. (Repeatable with department consent.)

590. Introduction to Research in the Social Sciences. (3). Philosophy of research, collection and organization of material, and technique and style in writing, with emphasis on the relationship of economics to the social sciences. Prerequisite: Department consent.

591. Directed Study. (1-3). Individual and group study of various aspects and problems of economics. Prerequisite: Graduate standing and department consent. (Repeatable with department consent.)

592. Group Studies in Economics. (1-3). (Repeatable. Prerequisite: department consent.)


596. Thesis. (2).
The principal purpose of the College of Education is to provide professional programs appropriate for the development of competent teachers, administrators, supervisors, and counselors for schools. In addition to preparing broadly educated professionals, the College faculty provides leadership in professional service and research designed to contribute to the improvement of both the schools and teacher education at local, state, and national levels.

The curricula listed in the sections that follow offer an organization of courses which gives opportunity for systematic study. They are oriented from the notion that understanding of self and one's world are necessary bases for professional growth and are arranged to permit the development of (a) understanding of the culture characteristic of a democratic society and education's place within it; (b) a philosophy of education consistent with living within this society; (c) an adequate professional preparation and the opportunity to relate content to the problems of living; (d) knowledge of human growth and development; and (e) skills in the application of principles of human learning and adjustment.

ACCREDITATION AND CERTIFICATION

The College of Education is accredited by all the pertinent agencies which accredit the University. Its accreditation by the State Board of Education permits it to recommend to that body the awarding of appropriate teachers' certificates without examination.

Within the college, programs are available leading to the baccalaureate degree and to state teachers' certificates at either the elementary or secondary level. Through the departments within the school of graduate studies, there are course sequences leading to the Master of Arts in Education, the Master of Education, the Master of Science Education degrees, and the Specialist in Education degree. Through the Department of Logopedics, the Master of Arts and the Doctorate in Philosophy can be earned. Included in these graduate programs are the requirements for Certification for Elementary Principals, Secondary Principals, Supervisory Personnel, Educational Administrators, School Counselors and other specialists. (For specific graduate programs, see the Graduate Bulletin.)

The State Board of Education regulates the standards for all teaching certificates. As the minimum requirements change, the curricula provided in this catalogue change accordingly.
REQUIREMENTS

ADMISSION TO THE COLLEGE

Candidates for admission to the College of Education must have met the general entrance requirements of the University, see page 42, and have fulfilled conditions for transferring from the University College:

(1) The completion of 24 hours.
(2) A cumulative grade point index of 2.000.
(3) A grade of C or higher in English 111 or a statement of proficiency from the Department of English.

Probation and Dismissal Standards

It is expected that students will make satisfactory progress in their studies. A student who fails to do so may be placed on probation at any time and ultimately dismissed from the University.

Students in the College of Education, not on probation, who fail to earn a Grade Point Average of 2.000 in a semester will be placed on probation for the following semester. At the end of the semester in which the student has been on probation, he will be continued on probation if his Grade Point Average for the semester is at least 2.000 and until he reaches a cumulative Grade Point Average of 2.000. If he fails to earn at least 2.000 for any semester on probation, he will be dismissed for poor scholarship.*

A student who has been dismissed for poor scholarship may enroll only with special permission of the Committee on Admissions and Exceptional Programs.

* Note: No student on probation who enrolls in fewer than 7 hours shall be placed on academic dismissal for failure to raise the cumulative Grade Point Index to the required level; however, if such a student has earned 7 or more hours in two or more terms, he must achieve a Grade Point Average of 2.000 or better in those terms to be continued on probation.

ADMISSION TO THE TEACHER EDUCATION PROGRAMS

Admission to this college, however, is tentative, and is not to be construed as approval for one of the teacher education programs. To be admitted as a candidate for a state teacher's certificate approval by the Admissions Committee of the College of Education must be gained. Application to this committee and qualification by it must be accomplished during enrollment in the course Fd. Ed. 232, Introduction to the Study of Education. Eligibility to enroll in subsequent courses of the professional sequences is determined in this course. These provisions and the requirements below apply as well to teacher candidates enrolled in any other college of the University.

BACCALAUREATE REQUIREMENTS

There are several sets of requirements that must be met to achieve
graduation. These apply not only to undergraduates in the College of Education who are seeking the degree Bachelor of Arts in Education but to all who seek the institution’s recommendation for a teaching certificate. There are certain differences planned for those who would teach the Fine Arts and these differences are described in the Fine Arts section of this catalogue.

A student enrolled in the College of Education must maintain at least a 2.000 grade average. Admission into the student teaching semester requires a grade point average of 2.25 and a 2.5 average in the major field as well as a grade of C or higher in Speech 111 or its equivalent and recommendation of the major department. The requirements for admission to student teaching for Logopedics students are listed in the department's program description.

Prospective teachers in the specialized fields of art, music, and special education are subject to certain departmental requirements. Majors in these curricula must also complete general and professional education requirements listed under secondary education. School Psychology requires five years.

ELEMENTARY EDUCATION

I. The following general program is required of all elementary education candidates:

General Education

(66 + 4 hours minimum.) (Must meet minimum requirements in first five areas.)

Area I. SCIENCE-MATHEMATICS .................................. 15-17 hours
       (2 or more divisions—4 hour Lab. required)
       (a) Chemistry, Geology, Biology, Physics
       (b) Mathematics 373-374 (6 hours required)
       (c) Engineering 300
       (d) Geography (Physical)
       (e) Other

Area II. COMMUNICATIONS ....................................... 8-12 hours
       (a) English Composition (6 hours)
       (b) Speech 111
       (c) Other

Area III. HUMANITIES ........................................... 15-27 hours
       (4 or more divisions—12 hours other than Modern Languages)
       (a) Literature (6 hours required)
       (b) History (all)
       (c) Art-Music (No skill courses)
       (d) Philosophy-Religion
       (e) Modern Languages
       (f) American Studies
       (g) Humanities 102
       (h) Other

Area IV. SOCIAL SCIENCE ..................................... 15-27 hours
       (4 or more divisions)
       (a) Psychology 111, 112, 211, 212, 246, 260, 275 (6 hours required)
       (b) Sociology

COLLEGE OF EDUCATION 209
Area V. PHYSICAL ACTIVITIES (Elective) ...................... 4 hours
(a) Air or Military Science
(b) Physical Activities (101 Series)
(c) Marching Band

Area V. ELECTIVES ................................................... 1-13 hours
(As approved by Advisor)

II. The following professional program is required of all elementary education candidates:

PROFESSIONAL EDUCATION

Area I. FOUNDATIONS OF EDUCATION .............................. 8 hours
(a) Introduction to Education 232
(b) Educational Psychology 233

Area II. MAJOR IN ELEMENTARY EDUCATION .................... 28 hours
(a) Reading 320A or 320B
(b) Science in Elem. School 321
(c) Social Studies in Elem. School 406
(d) Math in Elem. School 344A or 344B
(e) Language Arts in Elem. School 319
(f) Teaching the Kindergarten Child 318
(g) Student Teaching 447
(h) Seminar in Student Teaching 448

Area III. ALLIED FIELDS ............................................. 15 hours
(Hours used here cannot be used to meet requirements in General Education.) (Student must have three divisions from a, b, c, d, e. Two divisions from f, g, h, i, j, k, l, m, n)
(a) Art 240
(b) Children's Literature 216
(c) Music 251 and/or 252, 305
(d) English 215
(e) Physical Education 115, 117, 210, 225
(f) Individual Studies 322
(g) Anthropology 124, 202
(h) Economics 221, 222, 203, 307, 310
(i) Geography 125, 210, 342, 364, 402, 422
(j) Kansas History 441
(k) Political Science 121, 211, 219
(l) Sociology 111, 210, 226, 315, 320, 322, 334
(m) U. S. History 131, 132, 314, 432, 433, 444
(n) Logopedics 421

RELATED FIELDS OF STUDY IN EDUCATION ...................... 1-13 hours
(Not required on Elementary Major.) May be used in lieu of Electives in Area VI.

Area I. Logopedics
Area II. Physical Education
Area III. Library Science
Area IV. Early Childhood Education

TOTAL HOURS .......................................................... 124 hours
UPPER DIVISION ..................................................... 40 hours

* Specific requirements.
SECONDARY EDUCATION

All prospective secondary education graduates must satisfy the general requirements of the University as they are distributed in section I below; must complete one of the professional sequences as set out in sections II and III below; and must fulfill the teaching specialty emphasis of a program as specified in the Teaching Field section which follows: Only those specialties listed among the combined curricula and departmental majors and minors in that section may be counted.

I. The following general program is required of all secondary education candidates:

   Area I. **MATHEMATICS AND NATURAL SCIENCES** ............... 12 hours
   A minimum of four hours must be a laboratory science. Must include courses from two of the four areas of biological science, physical science, mathematics and Engineering 127, 225, or 300.

   Area II. **COMMUNICATIONS** ........................................ 8 hours
   (a) English 111, 211, 225, 311, 312, 313, 314 (6 hours)
   (b) Speech 111 (2 hours)

   Area III. **HUMANITIES** ............................................ 12 hours
   (a) Literature (English or Foreign) (6 hours)
   (b) Options (2 divisions)
       1. History 101, 102, 103, 104, 113, 114, 131, 132, all upper division courses except 300 and 498
       2. Art—All Art History courses except 407g and 463; Music—113, 114, 161, 315, 316, 331, 332, 493; ensembles and applied music where background justifies; Speech 143
       3. Philosophy all courses; Religion all courses
       4. Humanities 102
       5. American Studies—all courses except 498 and 499

   Area IV. **SOCIAL SCIENCE** ........................................ 12 hours
   (Courses must be taken in at least 3 of the 5 divisions.
   Psych. 111 is required.)
   (a) Psychology 111, all other courses
   (b) Economics 221, 222 and any upper division course
   (c) Political Science 121, 211
   (d) Sociology 111; all others after first course
   (e) Anthropology; all courses
   (f) (History may be added for 3 hours credit)

   Area V. **ELECTIVES** (may include courses in the major) ........ 6 hours

   Area VI. Four hours of electives in courses offered by any department except the student’s major department. (Exception: Music majors may take marching band, and physical education majors may take physical education in the 101-108 series under this section.) These electives may include courses in aerospace studies, military science, physical education, and marching band.

II. The following program is required of all who plan to qualify for the standard secondary teaching certificate, except those enrolling in III below:

   (A) Study in a major field normally taught in secondary schools.
   (B) Study in at least one minor field. In no case will the minor consist of less than 15 semester hours. No minor is required if an area major of 50 hours is elected.

COLLEGE OF EDUCATION 211
(C) Complete the following sequence in professional education:

Area I. **Educational Psychology** ........................................ 6 hours
          Ed. Psych. 333 and 433 *

Area II. **Foundations of Education** .................................. 6 hours
          Fd. Ed. 232 and 428 †

Area III. **Secondary Education** ....................................... 11 hours
          Sec. Ed. 442 * and 447 *
          * Taken in the professional semester
          † May be taken during the professional semester or student may elect Fd. Ed. 427 outside the professional semester.

(D) Electives to complete the minimum program of 124 hours.
(See p. 58 for regulations concerning upper division courses.)

III. Those planning to teach in the junior high school will qualify for the standard secondary teaching certificate as follows:

(A) Study in the “Junior high school core” in lieu of a major field and (B) of Area II, above.

GROUP 1

The American Culture .................................................... 40 hours
(Including 10 upper division hours.)
          English 215, 251, 252, 262; Speech 221 and 228; History 102;
          Soc. 111; Art 165 or 303; Pol. Sci. 121; History 131-132 or 313-314,
          or 431-432; and elect from Phil. 356; English 301, 302, 303, 461;
          History 433, 436, 437, 444, 447, 448; Anthropology 309, 310, 323,
          336, 337; Pol. Sci. 458, 459.

GROUP 2

The Physical World ....................................................... 22 hours
          Intermediate algebra, and geometry completed on high school
          or college level; Math. 121 and 122, or Math. 373 and 374; Sci.
          Sur. 101 and Biology 100; one laboratory science course of no
          fewer than 4 hours, though the total shall be 15 hours—from the
          sciences; P. E. 212 or 225, and 210 or 400. (These may overlap I
          above.)

IV. **TEACHING FIELDS**

The major is generally made up of not fewer than 30 semester
hours. (For specific exceptions see mathematics, language, and the
combined curricula programs.) The student may elect one of the
majors or minors listed on page 215 which are offered in the Fairmount
College of Liberal Arts, College of Fine Arts, College of Business Administration, or the College of Education. The student
must meet the specific course requirements of the department in
which the major is offered. For example: A student may elect to
major in history because he wishes to become a high school history
teacher. To do so he must complete the History major as pre-
scribed by the History Department in Fairmount College of Liberal
Arts. In addition he will complete university core curriculum
requirements (the same courses may be used both to develop a
major and to satisfy core requirements), the Professional Education
sequence, and other requirements for the teacher’s certificate prior
to graduation. Each student should work closely with a College of Education advisor to be sure that he meets certification requirements. A check sheet of all requirements is available from the College of Education in the Dean’s office.

COMBINED CURRICULA

The teaching assignment after graduation often involves a combination of subjects more or less closely related. For this reason intensive study in the combined disciplines listed below is offered in lieu of a departmental major and minor. Students should work closely with advisors to insure proper course selection for certification.

BUSINESS EDUCATION

Major: Teachers of the business subjects in high schools of Kansas are required to have 24 semester hours in the field with the equivalent of 6 semester hours in each subject taught, of which at least two semester hours must be resident college credit in other than the beginning course.

Business Education (College of Business) ........................................... 50 hours
Accounting 213 and 315 † ......................................................... 6
Administration ........................................................................... 9
   Behavioral Concepts in Business 260 ........................................ 3
   Marketing 300 ......................................................................... 3
   Law and Society 332 ............................................................... 3
* Economics 221-222 ................................................................. 6
Acctg. 316 or Admin. 343 or Eco. 340 ........................................ 3
Business Education ................................................................. 23
   Typewriting ............................................................................. 6
   † Shorthand ............................................................................. 6
   Office Practice ......................................................................... 3
   Business Communications ....................................................... 3
   Office Machines 201 ............................................................... 2
   Calculating Machines 202 ....................................................... 1
   Records Management .............................................................. 2
Electives: One upper division business course in any area .......... 3

124 hours

* Economics 221 and 222 fulfill 6 hours of the Social Science requirement and the business requirement as well.
† Accounting 235-236 and Accounting 316 may be substituted for shorthand.

Minor: Accounting 213, 315; Economics 221, Business Education 138, 237; and 9 hours from Accounting, Administration, Economics or Shorthand, of which one course must be upper division.

NATURAL SCIENCES—BIOLOGICAL

Teachers in Kansas schools are required to have 24 hours in the field of science with 12 hours in each subject taught. A teacher qualifying under this provision may also teach general science. Requirements for the major listed below include the general graduation requirements 1 and 5 of the College of Education.
MAJOR: Required—Biol. 111, 112, 201, 309, or 310, 329 or 330, plus 7 hours of upper division Biology. Chem. 111, 112, 231, 232 or the equivalent, and either a Physics or Geology option (Physics 123 and 124 or Geology 111 and 112).

MINOR: Biol. 111, 112, 201, and at least 4 hours of upper division Biology; and 5 hours of Chemistry or Physics. Students should not elect this minor if they are majoring in one of the sciences. Those who do may use the same course for both major and minor requirements only if they select additional hours equal to those taken to satisfy both the major and minor requirements.

NATURAL SCIENCES—PHYSICAL

The teaching requirement set forth in the Biological Science field applies to the physical sciences as well. Requirements for the major listed below include also the general graduation requirements 1 and 5 of the College of Education.

MAJOR: Required—Biol. 111, 112; Chem. 111, 112; Geol. 111; Phys. 123, 124; and 10 hours from the following, including at least 5 hours from one department (specific course prerequisites must be met): Chem. 231, 232, 302, 304, 323, 324, 411, 412; Geol. 331, 335, 336, 337, 446; Physics, any of the upper division courses.

MINOR: The minor shall consist of at least 15 hours beyond the general graduation requirements, including 3 hours of upper division credit from Chemistry, Geology, or Physics. Students should not elect this minor if they are majoring in one of the sciences. Those who do may use the same course for both major and minor requirements only if they select additional hours equal to those taken to satisfy both the major and minor requirements.

SOCIAL STUDIES

To teach any of the social sciences, 36 hours in the field of social studies are required for certification with a minimum of 6 hours preparation in each specific subject taught, with the exception of American History, Political Science and other courses in history which require a minimum of twelve hours in the specific field taught. Requirements for the major may overlap general graduation requirements 3, 4, and requirement 5 of the College of Education.

MAJOR: Required—Eco. 221 and 222, and 3 hrs. upper division Eco.; Hist. 101, 102, 131, 132 or Hist. 311, 312, 313 and 314; Pol. Sci. 100, 121, 211 and 336; Soci. 111; Anthro. 124 or 202; Psych. 246 or Soci. 320; Geography 125 and 201 or 210. In addition to these courses a minimum of 9 semester hours shall be selected from one of the four options:

Options

(A) Hist. 432, 433, 438, 448.
(B) Hist. 331, 333, 431, 437.
(D) Courses listed in the Afro-American Studies section of the College of Liberal Arts portion of the catalog. See page 113.

MINOR: Eco. 221, and 3 hours upper division Eco.; Hist. 131, 132; Pol. Sci. 100, 121; Soc. 111; Anthro. 124 or 202; and one course from Option (A), (B), or (C) above. Students majoring in History or Political Science should not elect this minor. Those who do may use the same courses for both major and minor requirements only if they select additional hours equal to those taken to satisfy both the major and minor requirements.

V. DEPARTMENTAL MAJORS AND MINORS

Selection of teaching fields for the junior or senior high school must be made with an academic counselor representing the College of Education. The teaching field or major should be declared not later than the beginning of the junior year.

The student who wishes to become a secondary teacher may elect his major and minor from the following fields. Only those marked with an asterisk (*) will be accepted as a major by the College of Education. Any of the following fields is suitable as a supporting minor. The specific course requirements of the department from which the major work is taken will prevail:

- Accounting
- American Studies
- Anthropology
- *Art
- *Biology
- *Business Education
- *Chemistry
- *Classical Languages
- *Economics
- *English Language and Literature
- *French
- Geology
- Geography
- *German
- *History
- *Industrial Education
- Journalism
- *Logopedics
- *Mathematics
- *Music
- *Natural Sciences—Biological
- *Natural Sciences—Physical
- Philosophy
- *Physical Education
- *Physics
- *Political Science
- Psychology
- §Religion and Philosophy
- *Social Studies
- *Sociology
- *Spanish
- *Speech

† Needs no minor if a 50 hour Field Major is outlined in consultation with a College of Education advisor.

‡ Teaching preparation for a modern language requires 24 semester hours in the language to be taught or 15 semester hours if the prospective teacher has 24 semester hours in another modern language.

§ Religion must be combined with Philosophy on minor—no more than 8 hours Religion will count towards degree.

AEROSPACE STUDIES

AIR FORCE ROTC

The purpose of Air Force ROTC is to select and prepare qualified university students for careers as commissioned officers in the
United States Air Force. The objective of all courses in Aerospace Studies is to strengthen the general education base of students who are to become junior commissioned officers. Following conferral of a degree and successful completion of prescribed AFROTC requirements, a cadet is commissioned a Second Lieutenant in the United States Air Force. Uniforms and Aerospace Studies texts are provided at no expense to members enrolled in Aerospace Studies courses. The Department of Aerospace Studies is staffed by active duty officers and noncommissioned officers to conduct the two-year and four-year AFROTC programs.

FOUR-YEAR PROGRAM

The four-year program consists of the General Military Course (GMC) for freshman and sophomores and Professional Officer Course (POC) for qualified students with two years of academic work remaining.

1. **General Military Course:** The two-year GMC consists of one lecture hour and one corps training hour per week.

2. **Professional Officer Course:** The POC consists of three lecture hours and one corps training hour per week. POC students in the four-year program must attend a four-week Field Training Course (summer camp) at an Air Force Base, normally between the first and second years of the POC. To qualify for acceptance into the POC a student must:

   (a) Have four semesters of study remaining at undergraduate or graduate level or a combination of both as a full-time student.
   (b) Complete the GMC or have been granted equivalent credit.
   (c) Pass the Air Force Office Qualifying Test (AFOQT).
   (d) Have a scholastic GPA of 2.0 or above.
   (e) Be physically qualified.
   (f) Complete required processing.
   (g) Be selected by a board of officers.

TWO-YEAR PROGRAM

The two-year program consists of only the Professional Officer Course. Students participating in this program must successfully complete a six-week Field Training Course (summer camp) at an Air Force base prior to acceptance into the POC. Two-year POC students do not attend the four-week Field Training Course required of four-year students. Additional requirements for enrollment are identical to those listed for the four-year program except that completion of the GMC is not required.

FLIGHT INSTRUCTION PROGRAM

Qualifying male POC students may participate in the Flight instruction Program (FIP) during the second year of the POC. Approximately 72 hours of specialized instruction is provided. Thirty-six hours of ground training and approximately 36 hours of flying
instruction by an approved FAA school provide the student an opportunity to qualify for a private pilot's license.

PAY AND ALLOWANCES

POC students are entitled to receive $50.00 per month for a maximum of 20 months. A student in the four-year program receives approximately $225.00 for the four-week Field Training Course (summer camp) attendance plus a travel allowance of six cents per mile to and from the encampment. A two-year applicant receives approximately $200.00 for the six-week Field Training Course attendance plus a similar travel allowance to and from camp. Upon entering active duty the new officer receives a $300.00 uniform allowance. Total pay and allowances for students completing AFROTC will normally approach $1500.00.

AFROTC COLLEGE SCHOLARSHIP PROGRAM

Students enrolled in the four-year program may be eligible for scholarships which provide full tuition, laboratory expenses, incidental fees, book allowances, and $50.00 per month. Applicants are selected on the basis of scores on a qualifying test, quality of academic work, and rating by an interview board. Applications from AFROTC freshmen, sophomores, and juniors are normally submitted near the end of the Fall Semester. Additional scholarships designed for AFROTC cadets are listed under “Financial Aids and Awards” of this catalog.

EXTRACURRICULAR ACTIVITIES

Field Trips to various Air Force installations and activities are scheduled throughout the year for members of AFROTC. An active flight orientation program is conducted in coordination with McConnell AFB to provide flight experience for interested cadets. Arnold Air Society, an honorary cadet organization, pledges AFROTC students for membership each semester. Additional activities with the Color Guard and cadet newspaper are also available for interested students.

Lower Division Courses

113 & 114. U. S. Military Forces in the Contemporary World. (1-1). IR, IR/L. The first year General Military Course (GMC) is a study of the doctrine, mission, and organization of the United States Air Force; strategic offensive and defensive forces; aerospace and missile defense; and general purpose and aerospace support forces. Corps Training provides practical leadership experience in basic military and officer-type activities, including drill and ceremonies, customs and courtesies, Air Force as a career, and officer environment.

223 & 224. U. S. Military Forces in the Contemporary World. (1-1). IR, IR/L. The second year General Military Course (GMC) studies U. S. national defense policies and the role of alliances; policies and strategies of the Soviet Union and China; Department of Defense organization and decision-making;
and the role of the military in United States national policies. Corps Training provides practical leadership experience in basic military and officer-type activities, including drill and ceremonies, customs and courtesies, Air Force as a career, and officer environment. Prerequisite: Department consent.

Upper Division Courses

353 & 354. Growth and Development of Aerospace Power. (3-3). 3R, 1R/L. The first year Professional Officer Course (POC) is a seminar study of the development of airpower; aerospace power today; the future of manned aircraft; the U.S. space program; the spatial environment; space orbits, trajectories, vehicle systems, operations, and future developments. Corps Training provides practical leadership experience in basic military and officer-type activities, including drill and ceremonies, customs and courtesies, Air Force as a career, and officer environment. Prerequisite: Department consent.

453 & 454. The Professional Officer. (3-3). 3R, 1R 235/L. The second year Professional Officer Course (POC) is a seminar study of professionalism, leadership, and management as applicable to the Air Force officer. It includes the meaning of professionalism; officer responsibilities; the military justice system; leadership theory, functions and practices; management principles and functions; and problem solving procedures. Corps Training provides practical leadership experience in basic military and officer-type activities, including drill and ceremonies, customs and courtesies, Air Force as a career, and officer environment. Prerequisite: Department consent.

455. Flight Instruction Program (FIP). (3). This course provides the student an opportunity to learn and experience the basic techniques of flying, navigation, and air traffic control. It consists of 36 hours of classroom study (ground school) and 36 hours of flight training to prepare the student for the FAA flight examination and a private pilot's license. The FIP is limited to Senior AFROTC cadets qualified for pilot training and Department consent.

ART EDUCATION

Art Minor for Students Majoring in Elementary Education

Students will complete 18 art hours. These hours will be distributed as follows: 165, 240, 343, one elected studio course and 6 hours of art history: 101, 102.

Lower Division Courses

240. Art Fundamentals for the Classroom Teacher. (3). For students without previous art background who plan to teach in the elementary school classroom. Study of fundamental methods, materials, and concepts used to develop art knowledge and skills in the elementary age levels.

343. Fiber and Fabric Process. (3). Fiber processing and structuring in traditional and experimental processes in woven forms and other structural techniques using natural and man-made fibers. Prerequisite: Art 241 or consent of instructor.

Upper Division Courses

406. Art Curricular and Supervision Methods. (4). The construction of an art program of study outline for elementary grades and junior and senior high school; techniques in the supervision of an art education program.

442. Art Education in the Secondary School. (3). The study of philosophy, objectives, and classroom procedures directed toward the development of informational and studio skills at the secondary level.

450. Art Workshop. (1-3). May be repeated for credit. (The area to be covered will be inserted at the time the course is offered.)

218 COLLEGE OF EDUCATION
EDUCATIONAL ADMINISTRATION AND SUPERVISION

E. A. S. Graduate Courses

501. Introduction to Administration and Supervision. (3). An examination of the major theories of administration and their application to specific problems. Emphasis upon an overview of administration of the school district, especially problems involving the community and the staff. Includes data gathering for self-evaluation of supervisory potential. Open to all College of Education graduate majors. (Summer; fall; spring.)

503. The Sociology of Administration. (3). An examination of the interaction of Society and the School as it relates to the administrative processes. Systems of control, social class, power structure, human relations and group dynamics. (Summer, odd numbered years; fall, even numbered years.)

504. Supervision and the Improvement of Instruction. (3). The application of curricular theories, psychology and methods of supervision to the problems of improving classroom instruction and teaching methods. Open to all College of Education graduate majors. (Summer; fall; spring.)

506. Elementary School Organization and Administration. (3). Alternate methods of organizing the elementary school and its classrooms, problems of administration of staff, curriculum, pupils and facilities, community relations. Prerequisite: E. A. S. 501. (Summer, even numbered years; fall.)

509. School-Community Relations. (3). Knowledge about and experience with the unique nature of the community-school. The student will study the actions of community persons within the school-community, formulate cooperative plans for community development, develop ways in which the personnel and facilities can be better utilized and promote the school-community concept to the benefit of the school and the community. (Summer, even numbered years; spring.)

510. Secondary School Student Activities. (3). The role of extra-class activities in secondary school programs. Problems of organizing and administering the program. (Summer, even numbered years; fall, odd numbered years.)

512. The Middle School. (3). A middle school offering children an education appropriate for present times, built upon human development in late childhood through the early stages of adolescence. This school evolves as an organic whole with development of program, administrative pattern and teaching requirements, creating grouping practices with focus on transcence. Vertical and horizontal organization patterns include taking the child from where he is educationally. (Fall.)

515. The Community Junior College. (3). Considers educational services to a community as the basic thrust of the organization; surveys the history and philosophy of the community-junior college movement; emphasizes the curriculum provided appropriate to the community and studies the administrative organization, legal control, and methods of financing. (Spring.)

518. Group Dynamics for Teachers. (2). A laboratory course in human relations and group dynamics based upon involvement in various group activities. Applications for the use of group dynamics in classroom teaching utilizing knowledge gained in personal experience in group work. (Prerequisite: Teachers certification.) (Offered Summer; fall; spring.)

522. Financial Support of Education. (3). Concepts of the financial support of education at local, state and national levels. Emphasis upon methods of taxation, budget preparation, and efficient expenditures. Prerequisite: E. A. S. 501. (Summer; spring.)
523. School Law. (3). General concepts of law, interpretations of statutes and court decisions affecting education, legal responsibilities of school personnel. Kansas school law. (Summer; fall.)

524. The School Plant. (3). Planning new school facilities based upon educational programs. Evaluation of existing schools, remodeling, operation and maintenance of present school plant. Prerequisite: Master's degree or consent of instructor. (Summer; spring.)

526. Curriculum Development. (3). Curriculum philosophies and theories. An examination of recent programs and proposals. The local school building and individual teacher as units of curriculum development. System-wide curriculum development and evaluation with kindergarten through grade 12 articulation. (Prerequisite: E. A. S. 504. (Summer; fall.)

527. The Ungraded School. (3). Understanding the rationale of non-gradedness. Organizing and teaching the non-graded concepts centered upon individualization of instruction, continuous pupil progress. Operation of viable flexible program. Prerequisites: One course in curriculum or consent of instructor. (Spring.)

531. Organization and Administration of the Secondary School. (3). Organizational plans for junior and senior highs, present trends. Problems of administration of staff, pupil, curriculum, facilities and community relationships in the modern secondary school. Prerequisite: E. A. S. 501. (Summer, odd numbered years; spring.)

536. Problems of Staff Personnel. (3). Advanced study of staff problems—selection and recruitment, certification, orientation, in-service training, evaluation, transfer and dismissal, and retirement. Prerequisite: Master's degree or consent of instructor. (Summer, even numbered years; spring, odd numbered years.)

537. School Business Management. (3). School budgeting processes, salary scheduling, cost accounting and purchasing procedures, IBM programming of record systems. Prerequisite: E. A. S. 522 and consent of instructor. (Summer, odd numbered years; fall, even numbered years.)

538. Advanced Group Dynamics. (2). A laboratory course in theories of group dynamics, with emphasis upon their application to uses in education, especially in the classroom and in faculty-administrator relationships. Prerequisite: E. A. S. 460 or E. A. S. 518 and consent of the instructor. (Summer, odd numbered years; spring, even numbered years.)

546-547-548-549. The Internship. (2-3-4-5). Administrative assignment in educational institutions. Prerequisite: Nine semester hours of post-masters graduate courses in Educational Administration and Supervision and 3.10 graduate grade point average. (Arranged on individual basis.)

550. Special Problems in Administration. (1-4). Directed reading in research under supervision of a graduate instructor. Prerequisite: Approval of the department.

560. Seminar in the Process of Administration. (1-3). Concurrent enrollment in the Internship is required. (Arranged on an individual basis.)

562. Presentation of Research. (1-2). A project submitted in thesis manuscript form. Prerequisite: Ed. Psych. 560. May be repeated for a maximum total of 2 hours credit.

566. Frontiers of Knowledge and the Future of Education. (3). Key concepts and discoveries in the sciences and humanities presented by experts in each field and investigation of their possible implications in education. (Fall, odd numbered years.)


220 COLLEGE OF EDUCATION
EDUCATIONAL PSYCHOLOGY

Lower Division Courses

219. Introduction to Child Growth and Development. (3). Designed to provide a systematic study of the processes involved in how children grow and develop. The interrelatedness of various aspects of growth (physical, social, emotional, intellectual) and their implications will be given attention.

220. Psychological Problems of Young Children. (3). The course will introduce students to (1) the types and nature of emotional and behavioral problems encountered in young children, (2) the identification of these problems (3) the factors determining the problems (developmental, experiential, social), (4) methods of intervention to modify the problems, and (5) the community resources available to assist in dealing with the problems and how to use these resources. Prerequisite: Consent of Department.

221. Interviewing and Recording for Social Service Aides. (3). To develop skills and understandings of the basic methods of interviewing and recording as related to headstart families. Prerequisite: Consent of Department.

233. The Elementary School Child. (4). His socio-cultural context, developmental characteristics, with stress upon application to instruction. Prerequisite: Psych. 111, Fd. Ed. 232 (or department consent) and sophomore standing.

Upper Division Courses


361. Educational Measurements. (3). Fundamental statistical methods applied to educational problems; construction, administration, and analysis of teacher made examinations. Prerequisite: Ed. Psych. 233 or 333.


404. Understanding of the Mentally Retarded Child. (3). The current research and historical approaches to the education of the mentally retarded will be examined. The literature in this field will be surveyed. Prerequisite: Ed. Psych. 401 or consent.

419. Growth and Development I. (3). Bio-social foundations of human growth and development related to the development of behavior from birth to eight years. Prerequisite: Ed. Psych. 233 or 333 or consent.

420. Growth and Development II. (3). Bio-social foundations of human growth and development related to the development of behavior from middle childhood to maturity. Prerequisite: Ed. Psych. 419 or consent.

421. Mental Hygiene. (3). Principles of mental hygiene in relationship to the development of wholesome personality. There are examined the interrelationships of teacher, school, home, and community as they affect mental health. Prerequisite: Ed. Psych. 233 or 333.


443. Programmed Instruction. (3). Study of approaches to programming; techniques of programming. Students will construct and develop a programmed
unit in their own area of interest. Prerequisite: Psych. 111, Ed. Psych. 233 or 333, or consent of instructor.

444. Curriculum for the Mentally Retarded Child. (3). Adaptations of the standard curriculum and innovations which have proven to be beneficial for the teaching of the mentally retarded child. Prerequisite: Ed. Psych. 401 or consent.

450. Workshop in Educational Psychology. (1-3).

451. Institute in Educational Psychology. (1-3). Designed to study physical, social, emotional and psychological development of humans. Specific emphasis will be on growth and development of school age children and adolescents.

Graduate Courses

501. Introduction to Educational Research. (3). An introduction to research in education. Included in the course content: (1) a survey of current educational research; (2) the nature of research methodology; (3) the preparation of research reports, and (4) criticisms of current research.

504. Introduction to Educational Statistics. (3). An introduction to statistics including measures of central tendency, variability, correlation, chi square, “t” test, F test and analysis of variance. (Not open to students with credit in Ed. Psy. 500.)


519. Human Growth and Development. (3). The study of human development (physical, mental, social, emotional) from birth to maturity. Prerequisite: Ed. Psy. 233 or 333 or consent.


521. Advanced Educational Psychology. (3). Review of recent research in the areas of personality and social psychology. Prerequisite: Ed. Psy. 520 or consent.


540. Program Development in Mental Retardation. (3). Examination of the social and psychological factors in classroom organization and management. Focus will be on the mentally retarded classroom as a model of the factors affecting the establishment and operation of programs for the handicapped. Prerequisite: Consent of instructor.

541. Psychology of Exceptional Children. (3). A study of the conceptual and theoretical formulations, empirical evidence, and research concerning behavioral characteristics of exceptional children with an emphasis on the mentally retarded child. Prerequisite: Consent of instructor.

544. Occupational Aspects in Mental Retardation. (3). Designed to study in depth occupational information, curriculum, and methods employed by teachers of the mentally retarded in secondary school. Prerequisite: Ed. Psy. 404 or consent.

547. Practicum and Internship in Special Education: Mental Retardation. (3-6). Full-time participation in a special education class under immediate supervision of a master teacher and a college supervisor. (A) A minimum of two years experience in the specific special education field is required. (B) A full course sequence has been followed leading to this stage of preparation.
For Master level students without teacher credentials and experience. Prerequisite: Ed. Psyc. 540, Ed. Psyc. 544 or consent.

550. Special Problems in Educational Psychology. (1-4). Directed reading and research under supervision of a graduate instructor. Prerequisite: Department consent.

558. Experimental Design in Educational Research. (3). A consideration of sampling theory; design for testing hypotheses about populations from samples; testing correlation coefficients; means and difference between means; simple factorial designs; designs involving matched groups; designs involving repeated measure of the same group; analysis of covariance. (Not open to students with credit in Ed. Psy. 559.) Prerequisite Ed. Psy. 504.

560. Seminar on Research Problems. (1). Development and presentation of research proposals. Required of students enrolled in M.A. or 32 hour M.Ed. programs. Prerequisite: Ed. Psych. 558 or concurrent enrollment.

562. Presentation of Research. (1-2). A project submitted in thesis manuscript form. Prerequisite: Ed. Psych. 560. May be repeated for a maximum total of 2 hours credit.


ELEMENTARY EDUCATION

Lower Division Courses

216. Children's Literature. (3). Reading and discussion of stories, poems, and factual materials for children; a background of appreciation essential to the setting up of standards of selection. Authors, illustrators, poets, and their contributions to children's literature are studied; also the children's library and booklist.

246. Introduction to Methods and Materials in Preschool Education. (3). Introduction to the study of teaching methods for the teacher of the preschool child and the preparation of materials to enhance the learning experiences of these children.

252. Introduction to Educating the Disadvantage. (3). An investigation into the cultural backgrounds, the economic problems and the educational issues presented by the disadvantaged. Laboratory experiences in various school and community programs are included.

Upper Division Courses

318. Methods for the Kindergarten Teacher. (3). To acquaint students with all aspects of the kindergarten program and introduce the wide variety of materials available and in use. Prerequisites: Fd. Ed. 232 and Ed. Psy. 233.

319. Language Arts in the Elementary School. (3). Objectives, methods and materials of teaching the language arts including listening, oral and written communications, spelling and handwriting. Students will be given an opportunity to acquire skill in manuscript and cursive writing. Prerequisite: Fd. Ed. 232 and Ed. Psy. 233.

321. Science in Elementary Education. (3). This course will encompass the areas of: Development of scientific concepts in children, strategy, tactics and A-V aids in teaching elementary school science, stating objectives in terms of expected pupil behavior, and evaluation of those objectives, off-campus observation and participation, and introduction to experimental science. Prerequisite: Fd. Ed. 22 and Ed. Psy. 233.

322. Individual Studies in Education. (1-2).

344A and 344B. Mathematics in the Elementary School. (3). A study of the basic methods of instruction with emphasis given to relating mathematical concepts to cognitive development and learning. Specific attention will be given to current curriculum practises, materials and evaluation technique. Section A is for teachers of primary grades K-3. Section B is for intermediate grade teachers 4-6. Prerequisite: Math. 373 and 374. Math. 374 may be taken concurrently.

405. Developmental Reading. (3). To acquaint students and teachers with all of the aspects of current reading theory and pertinent reading research. Also to point out the possibilities of applying this theory and research to actual teaching of children in the classroom. Prerequisite: El. Ed. 320.


443. Parent Education for Pre-school Teachers. (3). An introduction to ways of working with parents of pre-school children; analysis of formal and informal approaches with emphasis on the teacher's role in developing these procedures. Prerequisites: El. Ed. 444 or consent of instructor.

444. Early Childhood Education. (3). An introduction to the problems and philosophy of educating children in the pre-school years.

445. Guidance of the Pre-school Child. (3). Study of the dynamics of behavior of the pre-school child in his relations with peers and adults; in his methods of coping with developmental aspects of growth; and the teacher's role in guiding such behavior. Prerequisite: El. Ed. 444 or consent.

446. Methods and Materials in Pre-school Education. (3). The study of teaching methods for the teacher of the pre-school child and the preparation of materials to enhance the learning experiences of these children. Prerequisite: El. Ed. 444 or consent of the instructor.

447E. Student Teaching in the Elementary School. (3-10). The student teaching program provides full-time participation in the public schools under guidance of a master teacher and a college supervisor. Prerequisite: El. Ed. 319, 320, 321, 344, 406.

The student teaching semester is required of all students who are working toward a degree certificate in elementary education. Every student wishing to receive the above certificate must file an application with the coordinator of elementary student teaching. Application for the fall semester must be filed by May 1; spring semester by November 15. Applications may be secured in Room 117, CEC. (The only exception ever granted to the requirement of thirteen semester hours is to the transfer student that has taken student teaching elsewhere or may have taught a number of years.) Any deviations from established grade point averages and other regulations must be approved by the Elementary Education Department.

447L. Student Teaching for Logopedics Majors. (4). These students will be assigned to a self-contained classroom in the elementary school for the first nine weeks and then assigned by the Department of Logopedics for the second nine weeks of the semester. Prerequisite: Senior standing. Fd. Ed. 232, Ed. Psy. 233, El. Ed. 320, 321, 344, and 406.
447M. Student Teaching in the Elementary School. (3). Prerequisite: Music Majors.

447P. Student Teaching in the Elementary School. (3). Prerequisite Physical Education Majors. Application for Student Teaching must be made to the Director of Student Teaching prior to the semester in which the student intends to enroll. The assignment for student teaching begins with the opening of the public school and the student is expected to follow the public school calendar for a semester. The student will receive thirteen hours credit.

448. Seminar in Student Teaching. (3). Taken concurrently with Student Teaching. Concerned with evaluation of experience and planning for the next experience in the classroom.

450. Workshop in Education. (1 to 6).

451. Institute in Elementary Education. (1-6). (a) Math., (b) Science. Course designed for elementary teachers, who will be institute participants. One or a combination of pre-selected areas will be emphasized during a semester. Prerequisite: Consent of instructor.

452. Special Studies in Education. (1-3). (a) Mathematics, (b) Health and physical education, (c) Language Arts, (d) Reading, (e) Recent innovations, (f) Science, (g) Social Studies, (h) Instructional Media, (i) Other Areas. Course designed for elementary school teachers. Only one pre-selected area will be emphasized during a semester. (Prerequisite: Teacher certification and consent.) This course may be repeated with advisor's consent.

Graduate Courses

528. Elementary School Curriculum. (3). An intensive study of the field of curriculum in the elementary school. Who should make the curriculum; bases for making curriculum decisions; diversity within a school and school system; participation in curriculum development and revision; the future in elementary school curriculum.

540. Diagnostic Procedures in Reading. (3). Emphasis upon diagnosis; use of standardized instruments, teacher-made instruments and corrective treatment of reading difficulties. Diagnostic practicum included. Prerequisite: El. Ed. 320 or equivalent.

542. Clinical Procedures in Reading. (3). Emphasis upon diagnosis and corrective treatment of reading difficulties. A laboratory practicum in corrective teaching required. Prerequisite: El. Ed. 540 or equivalent.

550. Special Problems in Education. (1 to 4). Directed reading and research under supervision of a graduate instructor. Prerequisite: Approval of the department.

556. Mathematics in the Elementary School. (3). For teachers in service. Consideration of recent trends in subject matter content and teaching guides to improve understanding of meanings, vocabulary, and mathematical concepts. Instructional methods and materials. Prerequisite: El. Ed. 344 or consent.

558. Science in the Elementary School. (3). To identify and explore the principles of science that teachers should recognize and understand; to give consideration to their development from kindergarten through grade eight. To experience these concepts through demonstration or experimentation for teachers in service. Prerequisite: El. Ed. 321 or consent.

559. Seminar in Elementary Education. (3).

562. Presentation of Research. (1-2). A project submitted in thesis manuscript form. Prerequisite: Ed. Psy. 560. May be repeated for a maximum total of 2 hrs. credit.
563. Trends in Theories of Instruction. (3). Uses materials from public school work groups and from research journals to examine development of modern practices.


* Prerequisites may be waived for equivalent experience by department consent.

INDUSTRIAL EDUCATION

Industrial Education includes the following areas of specialization: Industrial arts education and vocational-industrial education.

Industrial arts education prepares young men to become industrial arts teachers at the junior high and senior high level. The person selecting this field will teach young people about the tools, materials, processes, and products of industry. Industrial arts instructors teach such general courses as metals, electricity-electronics, woods, plastics, drafting, auto mechanics, or a combination of some of these in a comprehensive general shop. Work experience in his specialty is not demanded of the industrial arts teacher, but it is highly desirable.

Vocational-industrial education is for persons who wish to become certified vocational-industrial instructors. The vocational-industrial educator, like the industrial arts educator, deals with tools, materials, and processes of industry, but stresses skill development more than is possible in the industrial arts program. Instructors in this field teach vocational subjects in such fields as drafting and design, machine shop practice, electronics, auto mechanics, industrial plastics, and the like. Certification for vocational teaching does require a minimum of 2,000 clock hours of occupational experience in the field taught.

**COMBINED MAJOR AND MINOR:** Required—Ind. E. 111, 120, 124, 135, 155, 180, 260, 319, 401, and Sec. Ed. 443. An additional 21 hours of industrial education will be selected in consultation with the student's major advisor, completing the combined curricula with a minimum of 50 semester hours.

Lower Division Courses

111. Introduction to Industrial Education. (2). Industrial Education as a career; an introduction to present day programs and the opportunities available; a survey of materials and processes used in industry; recommended as a first course in the department.

120. Drafting I. (3). 2R; 3L. An introduction to orthographic projection, pictorial representations, with emphasis placed on auxiliary view, sectional views, sketching, revolutions, dimensioning, lettering, care and use of drafting instruments.

121.° Drafting II. (3). 2R; 3L. A study of the relationship of views in drafting with emphasis on rotation, projection of solids, planes, and lines using standard drafting techniques and procedures. Prerequisite: Ind. Ed. 120.
124. Woodwork I. (3). 2R; 3L. A study of the use and care of hand and power tools, methods of finishing, wood technology, and an overall view of the woods industry.

125. Woodwork II. (3). 2R; 3L. A study in design, construction, and finishing of woodworking projects, with special emphasis on woodworking machine tools, including methods and processes used by industry. Prerequisite: Ind. Ed. 124.

135. Metalwork. (3). 2R; 3L. A basic course dealing with the processes, equipment, materials and products of the metal-working industry; lab experience in sheetmetal, benchmetals, forging, founding, welding, and machine tools.

154. Power Mechanics I. (3). 2R; 3L. A study of energy sources and the machines that convert energy into useful work. Emphasis is given to a broad overview of the entire field of power and its importance to technology.

180. Electricity I. (3). 2R; 3L. A study of basic principles of electricity and electronics as related to home and industry. Emphasis on electrical theory, transmission, and utilization. Laboratory activities include experimentation and fabrication of electrical components.

181. Electricity II. (3). 2R; 3L. A study of basic concepts of alternating current electricity with emphasis on reactance and impedance of resonant and non-resistant circuits. Prerequisite: Ind. Ed. 180.

225. Drafting III. (3). 2R; 3L. Development of working drawings in machine, aircraft, steel structural, electrical, architectural details, pipe, map, patent drawings—all conforming to industrial and prescribed standards. Prerequisite: Ind. Ed. 121.

236. Metals II. (3). 2R; 3L. A study of materials, machines and handtools used by the sheetmetal industry and an introduction to basic machine tool operations. Prerequisite: Ind. Ed. 135.

255. Power Mechanics II. (3). 2R; 3L. A study of the operation of motor vehicles, including chassis and drive line components. Lab experiences include repair techniques and procedures. Prerequisite: Ind. Ed. 154.

260. Plastics I. (3). 2R; 3L. Study of plastic materials being used in industry; fundamental operations including molding, casting, thermoforming, fabrication, and finishing.

261. Plastics II. (3). 2R; 3L. Technical information and product development; construction of molds and forms for molding, casting, laminating, and thermoforming. Prerequisite: Ind. Ed. 260.

282. Electronics I. (3). 2R; 3L. A basic study of electronics including the function of components, dc and ac theory, vacuum tube characteristics and applications and power supplies. Experimentation and project construction. Prerequisite: Ind. Ed. 180.

283. Electronics II. (3). 2R; 3L. A study of basic electronic circuits and systems, including an introduction to radio circuits and systems, with proper circuit analysis techniques receiving major emphasis. Prerequisite: Ind. Ed. 282.

* Prerequisites may be waived for equivalent experience by department consent.

Upper Division Courses

319. Shop Planning and Organization. (3). Selection, purchase, and organization of shop equipment and supplies; developing and maintaining necessary records and reports; planning of shop facilities.

325. Woodwork III. (3). 2R; 3L. For advanced woodworking students, with special emphasis on tools, materials, and construction practices as they relate to the building trades. Prerequisite: Ind. Ed. 124.
326. Woodwork IV. (3). 2R; 3L. Advanced work for specialists in the woodworking field with emphasis placed on problems growing from the needs of the student. Prerequisite: Ind. Ed. 125.

327. Drafting IV. (3). 2R; 3L. Advanced study for drafting students with emphasis on problems growing from the needs of students based on past performances and progress. Complete dwelling and machine problems. Special emphasis on industrial practices and procedures. Prerequisite: Ind. Ed. 225.

337. Metals III. (3). 2R; 3L. A study of the structure, physical and mechanical properties of metals and the effect of heat treatment on these characteristics; the methods of hot working metals including forging, foundry, and arc, acetylene and tungsten inert gas welding. Prerequisite: Ind. Ed. 135.

350. Metalwork IV. (3). 2R; 3L. Fundamentals of benchwork and basic operations on lathes, mills, grinders, shapers, and drills. Prerequisite: Ind. Ed. 236.

351. Metalwork V. (3). 2R; 3L. Emphasis on advanced machine tool operations; new techniques of industry and the making of basic tools and dies. Prerequisite: Ind. Ed. 350.

356. Power Mechanics III. (3). 2R; 3L. A continuation of the study of motor vehicles, including tune-up, electrical systems, fuel systems, and engine service. Prerequisite: Ind. Ed. 154.

362. Plastics III. (3). 2R; 3L. Advanced problems in production techniques; compression and injection molding; recent developments and experimental work. Prerequisite: Ind. Ed. 135 and Ind. Ed. 260.

363. Plastics IV. (3). 3R; 3L. Advanced problems in production techniques; extrusion, rotational casting and foaming. Recent developments and experimental work. Prerequisite: Ind. Ed. 362.

384. Electronics III. (3). 2R; 3L. Course includes the theory, instrumentation, and application of semi-conductors in electronic circuitry. Emphasis will be placed on the utilization of transistors and newly developed semi-conductors. Prerequisite: Ind. Ed. 282.

385. Electronics IV. (3). 2R; 3L. Motors and generators; synchros and synchro control systems; servo control devices and systems; industrial measurement and control systems; introduction to microwaves and microwave oscillators; microwave transmitters, microwave duplexers and antennas; amplifiers and microwave mixers; microwave receivers; multiplexing; radar detection and navigation systems. Prerequisite: Ind. Ed. 384.

401. Preparation of Instructional Materials. (3). The selection, development, and organization of instructional materials for effective teaching of industrial education.

450. Workshop in Education. (1-4). This course will be offered from time to time on various aspects of Industrial Education.

457. Power Mechanics IV. (3). 2R; 3L. Advanced study in the power mechanics field with emphasis placed on problems growing from the needs of the student. Prerequisite: Department consent.

* Prerequisites may be waived for equivalent experience by department consent.

GRADUATE COURSES

520. Foundations for Curriculum Development in Industrial Education. (3). A study of the theory and practice of curriculum development as determined by social, cultural, and industrial changes, including current industrial education curriculum designs, problems and trends.
521. Curriculum Construction in Industrial Education. (3). Selection and construction of curriculum content for general and specialized areas of study in industrial education. Prerequisite: Ind. Ed. 520.

560. Seminar in Industrial Education. (1-3). (May be repeated.) Prerequisite: Consent of instructor.

LIBRARY SCIENCE

Students wishing to become school librarians in Kansas must have valid teaching certificates plus specific courses in library science which may be taken either at the upper division or graduate level. Effective July 1, 1967, requirements are as follows:

Elementary School Librarian: A valid certificate for teaching in the elementary school and a minimum of 15 semester hours of library science and audio-visual courses.

Junior and Senior High School of fewer than 500 pupils: A valid certificate for teaching in the secondary schools and a minimum of 15 semester hours of library science and audio-visual courses.

Junior and Senior High Schools of more than 500 pupils: A valid certificate for teaching in the secondary schools and a minimum of 24 semester hours of library science and audio-visual courses.

Upper Division Courses

401. School Library Cataloging and Classification. (3). The fundamentals of the Dewey Decimal Classification system and the basic cataloging techniques necessary for organizing a school library collection.


403. School Library Administration. (2). The activities and functions of the school library, the relationships of the librarian to the teaching staff, the organization of technical and mechanical processes such as circulation and order routines, the repair of books, and teaching the use of the library to students.


405. The School Library Program. (2). Emphasis is on planning and implementing an effective school library program. Explores objectives and standards, and deals with all phases of instruction, services and activities through which the school library contributes to the total instructional program of the school.

LOGOPEDICS (Speech, Language and Hearing Disorders)

The Department of Logopedics provides academic and clinical training for university students who wish to become professionally qualified to work with communicatively handicapped children and adults. The undergraduate program constitutes a broad and comprehensive pre-professional preparation for specialized training which is offered on the graduate level. A graduate program,
culminating in a Master's degree, is required to obtain professional certification to work as a speech or hearing clinician in the public schools, hospital clinics, rehabilitation centers, or to engage in private practice. With an undergraduate, pre-professional major, a student can normally complete the graduate program in one calendar year and be eligible for certification by the American Speech and Hearing Association and the State of Kansas public schools.

**MAJOR:** A pre-professional, undergraduate major may be obtained with emphasis in speech pathology, audiology, or deaf education. Logopedics, 317 and 326 are observation courses required of all students. Supervised practicum courses are also required: Logopedics 417 and 441 are required of students majoring in speech pathology; in addition, Logopedics 447 and 448 are required for those planning to qualify as speech clinicians in the public schools; Logopedics 441 and 455 are required for those majoring in audiology, while Logopedics 440 is required for those majoring in deaf education. All of these clinical courses are designated by the symbols (R) and (L) which stipulate the number of clock hours of Recitation or Laboratory required per week. Other courses are designated with the symbols (R) and (D) which indicate the number of clock hours of Recitation and Demonstration offered each week.

Undergraduate students may major in Logopedics in either the College of Education or the Fairmount College of Liberal Arts and Sciences. Most students normally take the program in the College of Education. Those wishing to prepare themselves exclusively for employment in community speech and hearing clinics or hospitals may wish to pursue the program in the College of Liberal Arts and Sciences.

The major with emphasis in speech pathology consists of 30 hours and includes the following courses:

**Required**—Logopedics 111, 212, 315, 317, 324, 326, 327, 417, 431 and 441. Students planning to qualify as speech clinicians in the public schools are required to complete, in addition, Logopedics 447 and 448.

**Optional**—Logopedics 132, 415, 432, 435, 436, 437, 455, 461, 462 and 470.

The major with emphasis in audiology consists of 30 hours and includes the following courses:


**Optional**—Logopedics 132, 324, 326, 327 and 432.

The major with emphasis in deaf education consists of 30 hours and includes the following courses:
Required—Logopedics 111, 212, 317, 326, 431, 432, 433, 434, 437,
438, 439 and 440. Logopedics 441 is required but may be taken in
the first semester of graduate work.

Teacher Education: One full semester of student teaching is
required for all who are working toward certification as a public
school speech clinician. In order to complete this requirement,
students must take Logopedics 417 and 441 in a clinical setting and
447 and 448 in a public school setting for a total of 13 hours credit.

The assignment for student teaching begins with the opening of
the public school and the student is expected to follow the public
school calendar, on a half-day basis, for a semester.

Admission into the student teaching semester requires a grade
point average of 2.5, a 2.5 average in the major field, a grade of C
or higher in Speech 111 or its equivalent, and recommendation of
the major department.

By arrangement with the Department of Elementary Education,
any of these emphases in Logopedics may be combined in a dual
major with Elementary Education. The education requirements
are given on page 209.

The logopedics undergraduate preprofessional major may be
applied toward certification by the American Speech and Hearing
Association. This certification requires a Master's degree (or
equivalent) with major emphasis in speech pathology or audiology.

Minor: A minor in Logopedics consists of 15 hours and may be
utilized in either the College of Education or the College of Liberal
Arts and Sciences. Arrangements for the minor should be made
in consultation with the Department of Logopedics.

Logopedics 421 “Speech Defective Child in the Public School”
is a general survey course; hence, it may not be used as part of
either a major or minor in Logopedics at the undergraduate or
graduate level.

Corrective training for regularly enrolled university students with
speech or hearing disorders may be arranged with the Department
of Logopedics. A minimal fee is charged.

Speech Pathology

Lower Division Courses

111. Introduction to Speech Pathology. (3). 3R; 1D. General orientation,
history of the field, the place of Logopedics among the professions, speech and
language disorders commonly found, and application of the border sciences to
these conditions.

132. Introduction to Clinical Procedures. (2). 2R; 3D. Observation of clinical
procedures and normal children.

212. The Development of Language. (3). 3R; 1D. Prenatal and post-natal
development of the structures involved in speech, and the applications of the
development and regression theories to speech disorders. General develop-
ment of the child from birth to five years, emphasis on speech development. Prerequisite: Sophomore standing or department consent.

Upper Division Courses

315. Clinical Phonetics. (3). 3R; 1D. Anatomy of the face, tongue, and mandible. Applied phonetics as it relates to articulatory defects. Prerequisite: Logopedics 111 and 212 with grades of C or better, or department consent.

317. Techniques of Speech Pathology. (2). 1R; 3L. Observation of cases in the speech clinic, with emphasis on simpler types of defects. Routine of record taking, interview and counseling techniques with parents and professional workers. The use of graphic equipment. Prerequisite: Logopedics 315 with a grade C or better, concurrent enrollment in Logopedics 315, or department consent.

324. Anatomy of Voice. (3). 3R; 1D. Anatomy of the pharynx, nose, larynx, and thorax. Disorders from organic and functional changes in the organs of phonation. The normal voice. Prerequisite: Logopedics 315 with a grade of C or better, or department consent.

326. Application of Techniques. (2). 1R; 3L. Supervised application of techniques to cases with simpler problems. Observation of more difficult communicative disorders. Introduction to techniques used with stutterers and aphasics. Prerequisite: Logopedics 324 with a grade of C or better, concurrent enrollment in Logopedics 324, or department consent.

327. Speech Therapy in the Public School: Methods and Procedures. (3). Organization, administration, and professional relationships in public school speech therapy programs on the elementary and secondary school levels. Emphasis given to procedures and materials for surveying scheduling, therapy lesson planning and record keeping, and utilization of various instructional media. Prerequisite: 315 and 324 with grades of C or better or consent. (May be taken concurrently with 324.)

415. Organic Anomalies of Speech. (3). 3R; 1D. Specific congenital and post-natal anomalies that produce speech disorders, including cleft palate and mongolism. Prerequisite: Logopedics 324 with a grade of C or better, concurrent enrollment in Logopedics 324, or department consent.

417. Supervised Practicum in Speech Pathology. (3). 2R; 4L. Supervised practice teaching including application of advanced techniques to problems of an organic or neurological etiology. Prerequisite: Logopedics 415 with a grade of C or better, concurrent enrollment in Logopedics 415, or department consent.

421. Speech Defective Child in the Public School. (3). Problems of the speech defective child in the schools relative to emotional handicaps, pedagogical retardation, etc. Methods for classroom teachers. Also listed as speech 465.

442. Infancy: Pre- and Post-Natal Behavior. (2). Development of behavior from the ontogenetic view-point in both subhuman and human infants. Prerequisite: Department consent.

447. Student Teaching in Public School Speech Therapy. (4). One half time participation in a public school speech therapy program under the guidance of a certified clinician and a college supervisor. Prerequisite: Senior standing, Logopedics 327, and permission of the Department.

448. Seminar in Public School Speech Therapy. (3). Taken concurrently with Logopedics 447. Discussion and evaluation of the student teaching experience in the public school speech therapy program on the elementary and secondary school levels.
450. **Workshop in Logopedics.** (1-4). This course will be offered from time to time on various aspects of speech and hearing habilitation.

461. **Neurology of Cerebral Palsy and Aphasia.** (4). Ground work of neuro-anatomy and neuro-physiology required for the understanding of conditions resulting from lesions of the nervous system. Prerequisite: Logopedics 315 and 324 with grades of C or better, or department consent.

462. **Cerebral Palsy.** (4). 3R; 1D. Problems and training procedures concerned with cerebral palsy. Prerequisite: Logopedics 461 with a grade of C or better, or department consent.

470. **Laboratory Instrumentation.** (3). 2R; 3D. Application of and limitations of research and clinical instruments employed in the field of Logopedics. Prerequisite: 18 hours of Logopedics or department consent.

490. **Advanced Logopedics.** (1-2). Individual study and research on specific problems. (May be repeated.)

**Graduate Courses**

505. **Introduction to Graduate Study.** (3). Survey of research in the fields of speech pathology, audiology, and voice science. Principles of research procedure.

507. **Early Speech Development.** (2). Mastery during infancy of elementary speech sounds, patterning of sounds, appearance of words, sentences and meanings. Prerequisite: Department consent.

521. **Aphasia.** (3). 3R; 1D. Various contemporary theories in regard to the cause and neuro-physiology of aphasia; modern techniques. Prerequisite: Logopedics 461 with a grade of C or better, or department consent.

531. **Basic Communicative Sciences I.** (3). 3R; 2D. A critical review of pertinent research concerning the physiological bases of speech-respiratory, laryngeal, resonatory and articulatory functions. Prerequisite: Logopedics 470 with a grade of C or better, or department consent.

532. **Basic Communicative Sciences II.** (3). 3R; 2D. A critical review of research dealing with the perception of speech. Emphasis is also given to techniques of speech synthesis and analysis. Prerequisite: Logopedics 470 with a grade of C or better, or department consent.

535. **Stuttering.** (3). 3R; 1D. Organismal and functional approaches to the problem. Prerequisite: Logopedics 461 with a grade of C or better, or department consent.

541. **Neurophysiology of Communication.** (2). Special lectures, seminars, clinical demonstrations, and independent study. Prerequisite: Logopedics 461 with a grade of C or better or department consent.

552. **Examination Methods in Speech Pathology.** (4). 2R; 8D. The differentiation of logopedics disorders on an objective basis. Prerequisite: Logopedics 461 with a grade of C or better, or department consent.

560. **Seminar in Rehabilitation of Speech and Hearing Handicaps.** (3). Rehabilitation of adults with various types of organic problems including cerebral palsy,aphasia, hearing loss or other handicaps resulting from organic impairments. Prerequisite: Department consent.

562. **Presentation of Research.** (1-2). A project submitted in thesis manuscript form. Prerequisite: Logopedics 505. May be repeated for a maximum total of 2 hours credit.

568. **Seminar in Clinical Research.** (3). Emphasis is given to a review of recently published research which reflects applicability in the clinical setting.
Techniques of experimental design are discussed. Prerequisite: Logopedics 505 with a grade of C or better, or department consent.


AUDIOLOGY

Upper Division Courses

431. Introduction to Audiology. (3). 3R; 1D. History and scope of the field. Elementary anatomy of the ear, auditory testing. Rehabilitation and training of the deaf and hard of hearing. Prerequisite: Logopedics 315 with a grade of C or better, or department consent.

435. Anatomy, Physiology, and Pathology of the Ear. (3). 3R; 1D. Detailed study of the ear. Prerequisite: Logopedics 431 with a grade of C or better, or department consent.

436. Introduction to Audiometrics. (3). 3R; 1D. Techniques and interpretation of hearing tests. Prerequisite: Logopedics 431 with a grade of C or better, or department consent.

437. Speech Reading and Auditory Training. (3). 3R; 1D. Methods of teaching speech reading. Techniques used in auditory training. Prerequisite: Logopedics 431 with a grade of C or better, or department consent.

441. Supervised Practicum in Speech for the Deaf. (3). 2R; 4L. Supervised application of techniques involving the teaching of speech, speech reading and auditory training to the deaf and hard of hearing child. Prerequisite: Logopedics 431 with a grade of C or better, concurrent enrollment in Logopedics 431, or department consent.

455. Practicum in Audiometrics. (3). 1R; 9L. Application of audiometric techniques in clinical situations. Prerequisite: Logopedics 436 with a grade of C or better, concurrent enrollment in Logopedics 436, or department consent.

Graduate Courses

514. Hearing Aids. (3). 2R; 6D. Speech audiometry; assessing the usefulness of residual hearing; the construction and function of hearing aids, principles and procedures in selecting a hearing aid, and adjustments to a wearable instrument. Prerequisite: Logopedics 436 with a grade of C or better, or department consent.

516. Advanced Clinical Audiology. (3). 2R; 6D. Diagnostic procedures in an audiological clinic. Techniques for administration and interpretation of advanced audiometric tests. Prerequisite: Logopedics 436 with a grade of C or better, or department consent. (Offered in alternate years.)

518. Seminar in Audiology. (3). Principles of the psychophysical dimensions of hearing, functions of the normal ear; problems in industrial noise. Prerequisite: Logopedics 436 with a grade of C or better, or department consent. (Offered in alternate years.)

DEAF EDUCATION

Upper Division Courses

432. Introduction to Deaf Education. (3). 3R; 1D. Comparison and contrast of the deaf child with the normal child in the areas of physical, mental, social and personality development. Evolution of educational programs and methods used with the deaf. Special aspects of curriculum development in schools and
classes for the deaf. Agencies, professional organizations, and journals concerned primarily with education and rehabilitation of the deaf. Prerequisite: Logopedics 431 with a grade of C or better, or department consent.

434. Teaching Language to the Deaf. (3). 3R; 1D. Evolution of methods. Analysis of language problems and teaching techniques. Prerequisite: Logopedics 432 with a grade of C or better, or department consent. (Offered in alternate years.)

438. Teaching Speech to the Deaf. (3). 3R; 1D. Current methods. Evaluation techniques. Prerequisite: Logopedics 432 with a grade of C or better, or department consent. (Offered in alternate years.)

439. Teaching School Subjects to the Deaf. (3). 3R; 1D. A study of the principles, techniques and methods for teaching school subjects to deaf children. The development of reading readiness and reading ability from the point of view of acquiring language facility or achievement in other basic subjects. Prerequisite: Logopedics 432 with a grade of C or better, or department consent. (Offered in alternate years.)

440. Supervised Practicum in Teaching the Deaf. (2). 1R; 6L. Supervised application of techniques involving the teaching of academic material and the development of language for the deaf child. Prerequisite: Logopedics 439 with a grade of C or better, or department consent. (Offered in alternate years.)

MILITARY SCIENCE

U. S. ARMY ROTC

The Army Reserve Officers' Training Corps exists to develop citizen officers for the United States Army. It enables a student to prepare for a position of leadership in either a civilian or military career by earning a Reserve Army Commission while acquiring his baccalaureate degree. Outstanding students are designated as Distinguished Military Students with an opportunity to acquire a Regular Army Commission. Completion of the ROTC program, coupled with courses in a prescribed field of study enables the college graduate to fulfill his military obligation as an officer.

Information of Army ROTC scholarships is listed on page 75 under "Financial Aids and Awards," of this catalog.

Students enrolled at nearby colleges not offering Army ROTC may enroll in the ROTC Program at Wichita State University as special students and thereby qualify for a commission.

Currently a University graduate who is commissioned through Army ROTC is placed on active duty in the U. S. Army for a period of two years. Students may be permitted to delay entry upon active duty for a period up to four years in order to pursue graduate level studies.

Wichita State University offers two elective ROTC programs. They are designated as the four year and two year programs.

Four-year Program

The four-year program consists of a basic course for freshmen and sophomores and an advanced course for juniors and seniors.
Freshmen attend one conference hour, and sophomores two conference hours each week, plus an additional leadership laboratory hour each week. Enrollment in the basic course does not obligate a student to enter the advanced course.

The advanced course requires juniors to attend two conference hours in the fall per week and three conference hours per week in the spring; seniors attend three hours per week in the fall and two conference hours per week in the spring. Juniors and seniors must also attend one leadership laboratory hour each week. Advanced course students attend a six-week summer camp between their junior and senior years.

Prerequisites for enrollment in the advanced course are as follows:
1. Completion of the basic course or Armed Forces active duty service credit.
2. Physically qualified.
3. Scholastic grade point average of 2.0 or above.
4. Successfully complete survey and general screening tests.
5. Pass the Officer Qualification Test.

The testing and physical examinations are scheduled and arranged by the Military Science Department.

Advanced course students receive $50 per month for a minimum of 20 months. Attendance at summer camp is reimbursed by approximately $290, plus 6¢ a mile for travel to and from summer camp. Total pay allowances received by an advanced course student is approximately $1200. The commissioned officer is presented with a uniform, and upon entering active duty, a $300 uniform allowance.

During all courses each student is furnished a uniform and Military Science texts. Extracurricular activities that students may voluntarily participate in are the ROTC Band, Pershing Rifles Drill Team, and the Scabbard and Blade fraternal organization.

Two-year Program

Although designed basically for transfer students from junior colleges and colleges and universities not offering ROTC, any student who has four semesters of school remaining before qualifying for a degree may enroll in a basic six-week summer camp between his sophomore and junior years. This camp is designed to educate the student in the basic military skills which he would have acquired during the first two years of the four-year program. Pay rate for this camp is approximately $105 per month. Upon beginning the junior year the two-year program students will then complete the same advanced course as the four-year program student. Prerequisites are the same as those for entry into the four-year advanced course.
Army Aviation Training

Qualifying ROTC seniors may participate in an on-campus pilot training program. Thirty-five hours of ground training and thirty-six hours of flying instruction by an approved FAA school leads to the opportunity to qualify for a private pilot's license. Upon graduation and commissioning, the students are given Army aviation assignments, upon completion of Army aviation training.

Lower Division Courses

F113 & S114. First year basic. (1-1). 1C; 1 Leadership Laboratory. Historical Growth and Development of the Army; The United States Army and National Security.

F223 & S224. Second Year Basic. (1-1). 2C; 1 Leadership Laboratory. Introduction to Tactics; Map Reading; Cadet Non-Commissioned Officer Training. Prerequisite: Completion of MS 113 and MS 114 or Department consent.

Upper Division Courses

F333 & S334. First Year Advanced. (2-3). 2C-3C; 1 Leadership Laboratory. Branches of the Army; Military Teaching Principles; Leadership: Small Unit Tactics and Communications. Prerequisite for 333: MS 223 and 224 or Basic Summer Camp.

F443 & S444. Second Year Advanced. (3-2). 3C-2C; 1 Leadership Laboratory. Theory and Dynamics of the Military Team; Seminar in Leadership and Management; Military Law; Service Orientation.

MUSIC EDUCATION

Lower Division Courses


139. Methods of Teaching Band and Orchestral Instruments (brass). (1). Procedures and materials for class and private teaching of all brass instruments, emphasizing tone qualities, difference in embouchure, and necessary technique for performance. Band and orchestra laboratory.

140. Methods of Teaching Band and Orchestral Instruments (percussion). (1). Procedures and materials for class and private instruction. Application of
142. Survey of Choral Techniques and Literature. (1). A study of basic techniques of singing and examination of literature for solo voice, large and small ensembles. Prerequisite: One hour of applied voice.

201. Fundamentals of Vocal Music for Elementary School. (2). The teaching of music in the elementary school, consideration of objectives, examination of materials. For students primarily interested in teaching music in elementary schools. Includes observation in public schools. Prerequisite: Music education major or consent of instructor.

202. Fundamentals of Instrumental Music for Elementary School. (2). Materials and techniques focused on teaching instrumental music in the elementary schools. Includes observation in the public schools. For students primarily interested in teaching instrumental music in the elementary schools. Prerequisite: Music education major or consent of instructor.

203. Fundamentals of Vocal Music for Secondary Schools. (2). The teaching of music in the secondary school, consideration of objectives, examination of materials. For students primarily interested in teaching music in secondary schools. Includes observation in public schools. Prerequisite: Music education major or consent of instructor.

204. Fundamentals of Instrumental Music for Secondary Schools. (2). Techniques and materials focused on teaching instrumental music in Junior and Senior high schools. Emphasis on instrumental organization and administration, pedagogical practices, laboratory experiences, guiding student behavior, evaluation, and professional responsibilities. For students primarily interested in teaching instrumental music in the secondary schools. Prerequisite: Music education major or consent of instructor.

251. Music Fundamentals for the Classroom Teacher. (3). For students planning to teach in the elementary school classroom. Basic fundamentals of music with emphasis upon development of student's musical ability in singing, playing piano and classroom instruments.

252. Music Methods for the Classroom Teacher. (3). For the elementary classroom teacher. Development of children's musical growth through singing, listening, rhythmic and creative activities. Prerequisite: Music 251 or consent of instructor.

Upper Division Courses

301. Survey of Vocal Music for Secondary School. (3). An overview of activities in secondary vocal and general music programs. Includes study of objectives for secondary classes, consideration of materials and methods. For students primarily interested in teaching music in the elementary schools. Prerequisite: Music 201.


303. Survey of Vocal Music for Elementary Schools. (3). An overview of activities in the elementary general music program. Includes study of objectives for elementary classes, consideration of material and methods. For students primarily interested in teaching music in the secondary schools. Prerequisite: Music 203.

304. Survey of Elementary School Music. (3). A survey of activities in the elementary school, including consideration of the general music program and
instrumental instruction. For students primarily interested in teaching instrumental music in the secondary schools. Prerequisite: 204.

305. Advanced Techniques in Elementary School Music. (2). Consideration of methods, materials for teaching music in the elementary classroom with special emphasis on correlation with elementary curriculum. For elementary education majors. Prerequisite: Music 252 or 201.

306. Music Methods for Kindergarten Teacher. (3). Methods and materials for teaching music in the pre-school and kindergarten classroom. Development of the child's musical growth through singing, listening, rhythmic and creative activities; survey of available materials; and continuation of playing, singing, and conducting skills appropriate for the kindergarten teacher. Prerequisite: Music 251 or consent of instructor.

337. Advanced Techniques in Woodwind Methods. (1). (See Music 337.)

339. Advanced Techniques in Brass Methods. (1). (See Music 339.)

340. Advanced Techniques in Percussion Methods. (1). (See Music 340.)


402. Advanced Techniques of Elementary School Music. (2). Emphasis on special problems related to preparation for student teaching; consideration of the instrumental and the general music programs at the elementary level. Includes audio-visual instruction and materials. Prerequisite: Music 202 and 302.


(Requirements for admission to the student teaching semester.)

Senior standing.
Overall grade average 2.25.
Major field grade average 2.50
English 111 with C or better or equivalent.
Speech 111 with C or better.
Fd. Ed. 232.
Ed. Psy. 333. (Elementary major may elect Ed. Psy. 233.)
Physical examination.
Students who have taken education courses at other institutions must have such courses validated and approved.
Music methods completed:
Elementary vocal 201, 301.
Elementary instrumental 202, 302 (plus Methods 135 through 140—music 142).
Secondary vocal 203, 303.
Secondary instrumental 204, 304 (plus Methods 135 through 140—music 142).
Recommendation of department.
Application for student teacher semester must be on file with the music education supervisor.
Piano proficiency passed.

COLLEGE OF EDUCATION 239
406. Comparative Arts for Teachers. (3). Emphasis on the related arts of music, visual art and literature from two approaches; an approach that shows the elements the arts have in common, with an emphasis on creativity; an approach that examines the relationships of the three areas according to basic philosophies. Attention will be given to materials and activities suitable for use in the classroom at various levels.

432. Teaching of Music Literature. (2). (See Music 432.)

450. Music Education Workshop. (1-4). Prerequisite: Consent of instructor. May be repeated for credit.

484. String Teaching Seminar. (2). Historical development of string instrument teaching. Problems involving traditional and recent techniques. Private study versus class study. School class methods, studio methods, etc. Prerequisite: Consent of instructor.

Graduate Courses

521. Elementary Music Supervision. (3). Trends in elementary music education; evaluation of various materials and techniques; special projects in planning and executing a modern program of music supervision. Prerequisite: Music Ed. 401.

530. Seminar in Music Theory. (3). (See Music 530.)

531. Developing the Child's Musical Understanding. (3). (See Music 531.)

532. Music in the Junior High School. (3). Elective for MME program. Suggested for credit toward Administrative Certification. To include administrative structures, the curriculum, adolescent development, teaching as behavior, and competencies needed for successful teaching.

535. Teaching in Music Education Materials (Vocal). (2). (See Music 535.)

541-542. Special Project in Music. (1-3; 1-3). (See Music 541-542.)

545. Seminar in Music Education Materials (Instrumental). (2). (See Music 545.)

551. Psychology of Music. (2). (See Music 551.) (Prerequisite 552.)

552. Introduction to Graduate Study. (3). (See Music 552.)

554. Research Seminar in Music Education. (3). (See Music 554.)

575. Thesis Research. (2). (See Music 575.)

576. Thesis. (2). (See Music 576.)


591-592. Seminar in Music History. (3-3). (See Music 591-592.)

593. Music of Antiquity Through the Renaissance. (3). (See Music 593.)

594. Music of the Baroque Era. (3). (See Music 594.)

595. Music of the Eighteenth Century. (3). (See Music 595.)

596. Music of the Nineteenth Century. (3). (See Music 596.)

597. Music of Twentieth Century. (3). (See Music 597.)
PHYSICAL EDUCATION, HEALTH, AND RECREATION

SERVICE PROGRAM

All P. E. 101 activity courses will meet two class periods each week and will carry one hour credit. Such courses will count toward graduation requirements, but will not replace any required academic hours.

Juniors and seniors may enroll for three hours of physical education per week for one hour of elective credit, not to replace any academic requirements for graduation.

When enrolling in P. E. 101 activity courses, the course numbers are to be following in sequence to designate the semesters of activity courses already completed.

101, 102, 103, 104. Physical Education for Men. (1 each). Two hours per week to be elected each semester from the following activities:

*Group Activities:* Touch football, speedball, softball, volleyball, basketball, gymnasium games, and varsity activities.

*Individual Activities:* Tennis, badminton, handball, golf, bowling, swimming, weight training, ice skating, social dance, folk and square dance, and adapted physical activities.

*Gymnastics:* Tumbling, trampoline, and apparatus.

*Combatives:* Wrestling.

105, 106, 107, 108. Physical Education for Men. (1 each). Two hours per week each semester, except that an additional hour per week will be assigned by arrangements. Prerequisites: P. E. 101, 102, 103, 104.

101, 102, 103, 104. Physical Education for Women. (1 each). Two hours per week to be selected each semester on the advice of the advisor and in specific instances, the physician.

*Team Sports:* Basketball, field hockey, soccer, speed-a-way, softball, and volleyball.

*Individual Sports:* Archery, badminton, bowling, tennis, golf, swimming, life-saving, water safety, fencing, gymnastics, track and field events.

*Dance:* Folk dance, square dance, modern dance I, II, III, theatre dance, social dance, ballet I, II, III, and Orchesis I, II.

*Miscellaneous:* Outing activities, recreational games, ice skating, and special restricted activities.

105, 106, 107, 108. Physical Education for Women. (1 each). Meet three hours a week each semester, two hours of activity and one hour of leadership training. Prerequisite: P. E. 101, 102, 103, 104.

PROFESSIONAL PROGRAM REQUIREMENTS

Teachers in Kansas schools in the field of physical education are required to have 24 hours preparation, including a minimum of 5 hours of health, physiology, first aid, or hygiene, and a minimum of 10 hours in physical education, including teaching methods in physical education.

Major: Required—P. E. 111, 115, 117, 212, 225, 329, 330, 433, and 444. Also P. E. 101, 102, 103, and 104 (service courses) will be required of all majors. In addition to these courses one of the following options must be completed.

COLLEGE OF EDUCATION 241
Options

In addition to the Professional Core requirements, the following options for women are offered:

(A) (Secondary Physical Education) (Women) P. E. 203W, 204 W, 324, 350W, 351W and electives chosen from the Professional course offering to complete 40 hours.

(B) (Dance) (Women) P. E. 204W, 212, 223, 324, 350 W or 351W, 446 and electives chosen from the following to complete 40 hours: P. E. 202, 203W, 400, 424, and 331.

(C) (Men) P. E. 204M, 218M, 311M, 312M, 331, 335M, 336M, and 337M. Men Physical Education majors must pass a Sports Skills Proficiency Examination before being permitted to enroll in P. E. 311M or P. E. 312M.

Minor: The following courses are required in order to complete a minor in Physical Education: P. E. 111, 115, 329, and 330. In addition one of the following options must be completed.

Options

(A) (Physical Education) (Women) P. E. 212, 225, 203W, 204W, 350W or 351W. Prerequisite for 203W and 204W: Sports in specific areas. Prerequisite for 350W and 351W: Service courses in sports included in each course.

(B) (Dance) (Women) P. E. 212, 223, 324, 412, 424, 446. Prerequisite for professional courses are listed in the catalog. Dance 101 courses are recommended.

(C) (Men) P. E. 204M, 218M, 225, 311M, 312M, 331, and 3 hours of electives. Men Physical Education minors must pass a Sports Skills Proficiency Examination before being permitted to enroll in P. E. 331M or P. E. 312M.

(D) (Men and women—Recreation) 202, 212, 225, 226, and 426. Minors with this option may be elected in the College of Liberal Arts in accordance with transfer regulations.

PROFESSIONAL COURSES

Professional courses for physical education, health, and recreation are offered in the College of Education and, unless otherwise indicated, are open to both men and women. Course numbers followed by M are for men only; by W for women only.

Lower Division Courses

111. Introduction to Physical Education. (2). Prerequisite for professional sequence—A survey study of health, physical education, and recreation as to their identification, purpose, and inter-relationship in the total field of education.

115. Personal and Community Health. (3).

117. First Aid. (2). Standard and/or advanced first aid with certification by the American Red Cross.

203W. Officiating Techniques for Women's Sports. (3). Includes the study of the philosophies and standards of D.G.W.S., officiating techniques, basic skills, testing procedures, and laboratory work. Prerequisite: P. E. 101 Basketball and Volleyball or consent of Department.

204M. Body Mechanics and Gymnastics. (2). A fundamental skills and content laboratory course in gymnastics, designed to aid the physical education major in his ability to teach and coach this activity. Prerequisite: P. E. 101 Gymnastics or consent of Department.

204W. Body Mechanics and Gymnastics. (3). 2R; 3L. Principles of body mechanics and application to gymnastics including free exercise, tumbling, apparatus, and trampoline. Prerequisite: P. E. 101 gymnastics, or consent.


212. Folk and Square Dance. (2). 1R; 2L. Materials from different countries and teaching methods for high school and recreational groups. Prerequisite: Sophomore standing or department consent.


220M. Rules and Mechanics of Officiating. (2). 2R; 1L. Theory, rules, and mechanics of officiating major sports common to the high school and college athletic program.

223. Introduction to Dance. (2). 2R; 2L. History, philosophy, and basic background work in the field of dance. Prerequisite: One activity course in modern dance.

225. Methods in Elementary School Physical Education. (3). 2R; 2L. A study of the curriculum and methods of teaching physical activities to elementary children. Includes practice in playing and teaching games in the normal progression used in elementary physical education; and field work with children of elementary school age. Prerequisite: Sophomore standing.

226. Introduction to Community Recreation. (2). A study of the philosophy, origin and development of modern recreation programs.

Upper Division Courses

300. Basic Driver Education and Training I. (3).

301. Advanced Driver Training II. (3).

311M. Techniques in Physical Education I. (3). 2R; 3L. Emphasis upon development of skill and assimilation of teaching techniques. Activities covered are soccer, golf, bowling, and badminton. Prerequisites: Pass the Sports Skills Proficiency Examination in the above activities.

312M. Techniques in Physical Education II. (3). 2R; 3L. Emphasis upon development of skill and assimilation of teaching techniques. Activities covered are wrestling, tennis, and volleyball. Prerequisite: Pass the Sports Skills Proficiency Examination in the above activities.

324. Methods in Modern Dance. (2). Teaching techniques and compilation of materials for teaching dance in educational programs. Prerequisite: One semester modern dance or equivalent.
329. Applied Human Anatomy. (3). 3R; 1L. A study of the structure and function of the skeletal and muscular systems of the human body with direct application to body movements in physical activities. Prerequisite: C or better in Biol. 100 or consent of department.

330. Kinesiology. (3). 3R; 1L. The study of human motion by means of muscular and mechanical analysis. Prerequisite: P. E. 329 with a grade of C or better or department consent.

331. Athletic Injuries and Training Techniques. (2). 2R; 1L. Injuries common to athletic activities, emphasizing prevention, first aid, treatment and care as prescribed by the team physician.

335M. Football Theory and Organization. (2). Advanced theory of team play, organization and management of competition, etc. Prerequisite: Phys. Ed. 118 or concurrent enrollment.

336M. Basketball Theory and Organization. (2). Theory of basketball, including methods of teaching fundamentals, individual and team offense and defense, various styles of play, and methods of coaching. Prerequisite: Phys. Ed. 218 or concurrent enrollment.

337M. Theory and Organization of Track and Field Athletics. (2). Selection of personnel, conditioning, training, and techniques. Prerequisite: Phys. Ed. 218 or concurrent enrollment.

350W. Methods in Team Sports. (3). 3R; 2L. Techniques and teaching progressions in basketball, softball, hockey, volleyball, and soccer. Organization of classes and contests, practical experience in officiating. Prerequisite: Satisfactory completion of 101 courses in the above sports or consent of instructor.

351W. Methods in Individual Sports. (3). 3R; 2L. Techniques and teaching progressions in golf, tennis, badminton, and archery. Organization of classes and contests, practical experience in officiating. Prerequisite: Satisfactory completion of 101 courses in the above sports or consent of instructor.

400. Health Education. (2 or 3). Health problems and organization of materials for health instruction. Individual projects for graduate students.

412. Methods and Materials in Folk and Square Dance. (2). 2R. Materials selected from American and European countries and teaching methods for school and recreational groups. Will include outside preparation dealing with source materials and methods. Prerequisite: P. E. 212 or consent of department.

424. Creative Dance in the Schools. (2). Discussion and laboratory work with emphasis on appropriate and sincere expression. Class work, reading, and observation of selected groups. Prerequisite: Modern Dance I or P. E. 223 or consent of department.


436. Camp Administration. (3). Modern practice in camp organization, program-building, business practices, staff training and guidance. Problems in camping administration.

444. History, Philosophy, Curriculum, and Administration. (4). History, philosophy and objectives of physical education. The organizational and administrative problems of the health and physical education programs, and the management of the physical plant and curriculum.

446. Dance Composition and Production. (2). Prerequisite: Modern Dance I or P. E. 223 or P. E. 424 or consent of department.
450. Workshop in Education. (1-4).

455. Perspectives on Human Design and Behavior. (3). Survey of concepts from anatomy, medicine, biology, anthropology, neuropsychology—concerned with human form and behavior. Discussion of individual differences. Prerequisite: Consent of instructor. (Also Anthro. 455.)

495. Applied Health I. (2). Introduction to public health problems and practices. Field excursions arranged. Prerequisite: Department consent.

496. Applied Health II. (2). Intensive study of selected health problems with regard to illness prevention and the present state of world health. Prerequisite: Phys. Ed. 495 or department consent.

Graduate Courses

500. Recent Literature in Health, Physical Education, and Recreation. (3). Survey and critical analysis of research and other pertinent materials in the field.

510. Adapted Physical Education. (3). Philosophy, principles, and methods of adapting physical education and recreation activities to the needs of the handicapped and the exceptional individual; laboratory experience. Prerequisite: P. E. 330 or consent of department.

512. Advanced Techniques in P. E. (3). Comprehensive coverage of selected physical activities with special emphasis on class procedures. Laboratory experiences.

515. Problems in Health, Physical Education, and Recreation. (1-4). Directed reading and research under supervision of a graduate instructor. Prerequisite: Department consent.

520. Foundations of Physical Education. (3). Examination of the philosophical and biological basis for physical education.

525. Physical Education in Elementary Schools. (2). New concepts, recent trends, methodology, programming, and supervision. For the elementary teacher and physical education specialist.


550. Analysis of Motor Skills. (3). Techniques of analyzing fundamental motor skills. Selected mechanical principles; fundamental motor skills analyzed in terms of the stated mechanical principles. Prerequisite: P. E. 330.


562. Presentation of Research. (1-2). A project submitted in thesis manuscript form. Prerequisite: P. E. 557. May be repeated for a maximum total of 2 hours credit.

SECONDARY EDUCATION

Upper Division Courses

322. Individual Studies in Education. (2-3).


A—Art Education in the Secondary Schools. (Same as Art Ed. 442.)

B—Field and Laboratory Methods in Biology.
D—Methods of Teaching Speech and Dramatic Art.

E—The Teaching of English. Preparation for student teaching of English composition, grammar, and literature. Required of all English majors expecting to teach in junior and/or senior high schools, and strongly recommended for all English minors expecting to teach English in junior and/or senior high schools. Prerequisite: Completion of the requirements of the English Department for English majors and minors planning to teach English in junior and/or senior high schools.

FL—The Teaching of Foreign Languages. Methods of teaching foreign languages, based on the audio-lingual approach and applied linguistics contrasted with traditional methods. Laboratory techniques, transition into reading and writing, planning, evaluation of student progress. Required of all foreign language majors expecting to teach in junior and senior high schools; strongly recommended for all minors expecting to teach.

H—Methods of Teaching the Social Studies in Secondary Schools. Preparation for student teaching in history, political science, economics, sociology and psychology. Meaning and content of the broad field of the social studies, materials for instruction, preparation of teaching units, and evaluating instruction and student progress in the social studies.

I—Methods of Teaching Industrial Education. Selection and arrangement of teaching content, methods of teaching, lesson planning, courses of study, testing and grading shop work, evaluating pupil progress, securing industrial education positions, and professional responsibility of the shop teacher.

P—Methods in Physical Education. Presentation and participation in methods of teaching physical education. Emphasis on techniques, skills, organization of activities, and classroom procedure.

R—Methods in Teaching Science and Mathematics. Preparation of the student for teaching in biological science, physical science, or mathematics. Materials for instruction, preparation of teaching units and evaluating instruction and student progress in the sciences or in mathematics.

S—Special Methods of Business Education. Prerequisite: Sec. Tr. 234 or Data Processing, Sec. Tr. 237, Acctg. 113 and 114.

443. Methods of Teaching in the Comprehensive General Shop. (3). 2R; 3L. Preparation for teaching industrial arts in the comprehensive general shop. Emphasis is placed upon theory, organization, and operation of a comprehensive general shop program. Prerequisite: Departmental consent.

447. Student Teaching.

The student teaching semester is required of all those who are working toward a Secondary Certificate, and is a full-time assignment. Applications for approval to enroll in this program must be made to the Coordinator of Student Teaching by March 1 of the semester prior to the year in which the student intends to enroll. In addition, students must obtain approval from the representative of the subject area in which they wish to student teach before placement will be considered.

It is expected that students will student teach in their field of major interest. However, individuals who are well prepared in more than one field may apply to student teach in a second field. Those desiring to student teach in two fields must take the special methods course in the second field before entering the student teaching semester.

The assignment for student teaching begins with the opening of the public school semester, and enrollees must arrange to meet from
8 to 5 daily and to be available for selected evening programs throughout the semester.

Credit for the student-teaching semester will be entered on the transcript according to the following distribution:

Ed. Psych. 433. Psychological Aspects of the Teaching Process (2 or 3).
Total—16 or 17 semester hours.
* Fd. Ed. 427 may be selected in lieu of Fd. Ed. 428 in order to reduce the load in the student teaching semester.

450. Workshops in Education. (1 to 4).

452. Special Studies in Education. (1-5). (a) Mathematics, (b) health and physical education, (c) language arts, (d) reading, (e) recent innovation, (f) science, (g) social studies, (h) other areas. Course designed for secondary school teachers. Only one pre-selected area will be emphasized during a semester. (Prerequisite: Teacher certification or consent of instructor.) This course may be repeated with advisor’s consent.

455. Aerospace-Aviation Education. (3). For those who have an interest in aviation education and particularly for those who plan to teach aviation in the secondary schools. There are two parts: (1) Aeronautical knowledge of the airplane and of flight and (2) general knowledge about aviation and aerospace. Part I will include the basic ground school subjects of aerodynamics, structures and propulsion, meteorology, navigation, communication and Federal Aviation Regulations. Part II will present information concerning occupational opportunities and the influence of powered flight on modern society.

Graduate Courses

529. Secondary School Curriculum. (3). Basic curriculum concepts necessary to meet the needs of high school youth are studied. Major emphasis upon the conversion and improvement of high school curriculum to comprehensive designs, college preparatory and vocational, with studies of methods of curriculum evaluation.

530. Trends and Innovations in Secondary Education. (3). Emphasis is placed upon the factors bearing upon the development of a qualitative learning environment in the secondary school and the evaluation of current trends in the secondary school. Modular scheduling, team teaching, educational television, and interaction analysis are indicative of topics presented.

535. Problems in Teaching at the Secondary Level. (3). A course designed to study in depth new curricular designs and emphases in specific disciplines at the secondary level. Particular attention will be devoted to examining the latest curricular developments, new techniques in teaching, research in secondary education and new materials available in secondary disciplines. Students will be encouraged to place emphasis in their study upon the disciplines in which they teach.

536. Problems in Teaching Social Studies at the Secondary Level. (3). A course designed to study in depth new curricular designs and emphases in secondary social studies. Particular attention will be devoted to examining the latest social studies curriculum developments, new techniques for teaching the social studies, research in social studies education, and new materials available to the secondary social studies teacher.

537. Problems in Teaching Science at the Secondary Level. (3). A course designed to study in depth new curricular designs and emphases in secondary school science. Particular attention will be devoted to examining the latest
science curriculum developments, new techniques for teaching the sciences, methods of conducting research in science education, and new materials available to the secondary science teacher.

538. The Core Curriculum. (3). The study of the theory and philosophy of the core curriculum with practical application of aspects of this curricular organization to various fields of study.

548. Teaching Reading in the Secondary School. (3). Emphasis upon the teaching of reading in the content areas. Secondary teaching experience or consent.

550. Special Problems in Education. (1 to 4). Directed reading and research under supervision of a graduate instructor. Prerequisite: Department consent.

557. Seminar in Secondary Education. (3).

562. Presentation of Research. (1-2). A project submitted in thesis manuscript form. Prerequisite: Ed. Psy. 560. May be repeated for a maximum of 2 hours credit.


FOUNDATIONS OF EDUCATION

Lower Division Courses


Upper Division Courses

425. History of Education. (3). Education's career in relation to other institutions (political, religious, etc.) in promoting and inhibiting social change. Prerequisite: Fd. Ed. 232.

426. Comparative Education. (3). Education systems of selected nations in terms of their unique structures and pervasive problems.

427. Educational Sociology. (3). Attention is given to the contributions of sociology and anthropology to the understanding of the school and its position in relation to contemporary social problems. Prerequisite: Fd. Ed. 232. May be substituted for 428 in student teaching semester. (Not open to those who have had Fd. Ed. 428.)

428. Social Aspects of Education. (3). (Part of the Secondary Student Teaching Block. For description, see Fd. Ed. 427 above.

429. Philosophy of Education. (3). Introduction to the analysis of concepts such as mind, experience and knowledge in their relationship to educational problems and practices and to philosophical systems. Prerequisite: Fd. Ed. 232 or Philos. 121.

449. Education Anthropology. (3). A course dealing with the basic concepts of anthropology and their application to social science units in elementary and secondary school. Explores the nature of sub-cultures in American society and the problems they pose for the classroom teacher. A course for education majors and graduate students. (Also listed as Anthropology 449.)

489. Theories of Knowledge and the Curriculum. (3). What does it mean to "know" in the various curriculum areas, and what methods and measurements are implied? Prerequisite: Ed. Ed. 429 or consent.

Graduate Courses

526. Humanistic Foundations of Education. (3). The philosophic, historic and literary foundations of modern education. Emphasis will be on recent scholarship in these areas.

529. Educational Classics. (3). Depth study of master works, ancient and modern, in education. Prerequisite: Consent of instructor. Prerequisite: 6 hours of Fr. Ed.

534. Basic Concepts of Citizenship. (3). Basic principles of citizenship as found in great treatises are discussed in the context of the democratic American tradition. Prerequisite: 6 hours of Fr. Ed.

* Prerequisites may be waived for equivalent experience by department consent.

STUDENT PERSONNEL AND GUIDANCE

Upper Division Courses

450. Workshop in Education. (1-4).

452. Special Studies in Education. (1-5). (e) recent innovations, (h) other areas. Course designed for students with personnel and guidance interests. Different pre-selected areas may be emphasized during a semester. This course may be repeated with advisor's consent. Prerequisite: consent of instructor.

Graduate Courses

501. Principles and Philosophy of Guidance. (3). The development of a guidance philosophy and a survey and study of the several guidance services that are part of the modern elementary and secondary school guidance program. Not open to students with credit in SPG 423.

502. Introduction to Interaction Processes. (1). A laboratory approach to an examination of the counselor's role in the counseling process. Designed to aid the prospective counselor increase personal understanding of self as a variable in the counseling process. (Limited to SPG majors. To be taken concurrently with SPG 501. Not open to students with credit in SPG 424. May not be taken concurrently with SPG 525.)

503. Counseling Theory. (2). A study of selected theories of counseling. Prerequisite: SPG 501 or concurrent enrollment.

505. Educating the Poorly Adjusted Individual. (3). Perceptual approach to the problems of emotionally disturbed and/or delinquent children and youth in both elementary and secondary schools.

506. Children of Poverty. (3). A perceptual approach to children and youth whose adjustment problems appear to be related to poverty in the affluent society.

510. Guidance Services for the Elementary School. (2). Examination of the role of the guidance counselor and techniques appropriate to guidance services in an elementary school setting. Prerequisite: SPG 501. Recommended: SPG 505 or SPG 506.


COLLEGE OF EDUCATION
523. Psychometric Procedures in Counseling. (3). Survey and study of standardized tests and their application in counseling with an emphasis on their selection, use, and interpretation. Study of the basic concepts pertaining to the interpretation of psychological tests and inventories including basic measurement theory and the factors involved in the selection of tests. Prerequisite: SPG 501, Ed. Psy. 504 or concurrent enrollment.

524. Techniques of Counseling. (3). Through simulated counseling situations and extensive examination of counseling case studies, techniques of counseling are examined and practiced. Prerequisite: SPG 503.

525. Group Techniques in Guidance. (2). Laboratory approach to the study of group formation, process, and communication as a tool for guidance services. Prerequisite: SPG 501 or concurrent enrollment.

533. Administration of Guidance Services. (3). Administration theory with emphasis for the SPG major on relating theory to the problem of administration of guidance services. Prerequisite: 15 hours SPG.

550. Special Problems in Guidance. (1-4). Directed reading and research under supervision of a graduate instructor. Prerequisite: Department consent.

555. Individual Intelligence Testing in the Public School. (3). Use of individual tests for appraisal of intelligence. Prerequisite: SPG 523 or concurrent enrollment and consent of department.

556. Practicum in Individual Counseling. (3). (May be repeated.) Supervised practice in individual counseling. Prerequisite: SPG 524 and consent of instructor.

557. Seminar in Guidance. (2). Prerequisite: 15 hours in SPG sequence.

558. Diagnostic Testing. (3). Practice in the interpretation and evaluation of commonly used test results and student records to develop an educational diagnosis and a remediation program for individual students in the public schools. Prerequisite: Ed. Psy. 501 SPG 555 and consent in instructor.

562. Presentation of Research. (1-2). A project submitted in thesis manuscript form. Prerequisite: Ed. Psy. 560. May be repeated for a maximum of 2 hours credit.

566. Practicum in Guidance Services. (3). Supervised work in administration, test interpretation, group counseling, and other activities of the guidance counselor. Prerequisite: SPG 553 and consent of instructor.

567. Practicum in Group Guidance and Counseling Methods. (3) Supervised practice in group guidance and group counseling. Prerequisite: SPG 525 and SPG 556 and consent of instructor.


* Prerequisites may be waived for equivalent experience by department consent.
The many recent technological developments in engineering have resulted in considerable modification of engineering curricula. To meet such technological needs, the College of Engineering is dedicated to providing a vigorous and challenging experience to all students admitted to engineering. In particular, the curriculum includes a great breadth of subject material covering a broad spectrum of fundamental technical knowledge. In addition to such technical material, the engineering programs contain a sufficient number of courses in humanities, social sciences, communications, mathematics and physical sciences. A proper balance in the curriculum prepares the students to hold professional positions in the scientific-industrial community after the B.S. degree, or prepares him by means of additional graduate offerings for a more active participation in research and advanced study.

The faculty provides the student with a basic core of knowledge, including a large portion of scientific and analytical tools which will be required for the complex problems he is likely to face as an engineering leader. Thus, the student is being prepared for real-world problems which he will continually encounter throughout his professional career.

Because of the diverse nature of engineering subject material, the College of Engineering is organized into several degree granting departments. Curricula offerings in Aeronautical, Electrical, Industrial, and Mechanical Engineering are available at the Bachelor of Science level. The Master of Science degree is offered in Aeronautical, Electrical, Engineering Mechanics and Mechanical Engineering.

The curricula of the various departments at the undergraduate level contains a large portion of common courses (two years being common) with provisions for specialized departmental offerings in the following years. The student is allowed ample flexibility within a chosen major field to study select areas outside the "engineering core subjects." Detailed program requirements for the majors in the various engineering fields are given under departmental offerings.

The programs in Engineering are offered in daytime and evening classes. The courses are the same whether they are taught in the daytime or at night. The curricula on the following pages are arranged for full-time sequences and contain all the requirements for the various undergraduate degrees.
The curricula of the Departments of Aeronautical Engineering, Electrical Engineering and Mechanical Engineering are accredited by the Engineers' Council for Professional Development.

Programs leading to the Master of Science Degree are offered in the Departments of Aeronautical, Electrical and Mechanical Engineering.

The Doctor of Philosophy Degree in Aeronautical Engineering is offered in cooperation with the University of Kansas.

**ENTRANCE REQUIREMENTS**

Students may enter the College of Engineering from University College, other degree granting colleges within the university, or other universities and colleges, provided they have completed 24 semester credit hours and are not on probation, as defined by this school.

Particular attention is called to Mathematics 142 as a first semester offering in the engineering sequence of courses. A prerequisite for Math 142 is Math 141 or equivalent.

**Mathematics 141. Algebra and Trigonometry.** (5). Functions, theory of equations and inequalities, complex numbers, the trigonometric functions, exponential and logarithmic functions, and other standard topics prerequisite to a beginning study of analysis. Prerequisite: One and one-half units of high school algebra or Mathematics 52, and one unit of high school geometry or Mathematics 60. (For those students who doubt the adequacy of their mathematical preparation, a placement examination is available for advisory purposes).

**Mathematics 142. Introductory Analysis I.** (5). Analytic geometry and the Calculus in an inter-related form. Prerequisite: Mathematics 141 with a C or better or two units of high school algebra, one unit of high school geometry, and one-half unit of high school trigonometry. (For those students who doubt the adequacy of their high school preparation, a placement examination is available for advisory purposes).

Engineering students having physics prerequisites for Physics 244E will not be required to take Physics 243E. (Prerequisite to Physics 244: Math. 243 with a grade of C or better and, Physics 123 with consent of the department, or Physics 243.) Engineering students will normally be required to take 244E if Physics 123 with a grade of B of better or equivalent has been satisfied.

Engineering students having Physics prerequisites for Physics 311 will not be required to take Physics 244E. (Prerequisite: The sequence of 123-124 with a grade of B or better in both, or Physics 244. Corequisite: Math. 244.)

**PROBATION AND DISMISSAL STANDARDS**

**PROBATION**

A student will be placed on probation for the next term in which he enrolls if his cumulative grade point index falls below the following levels:
1.700 if the student has earned 24 to 63 credit hours.
2.000 if the student has earned 64 or more credit hours.

The student remains on probation if he earns at least a 2.000 grade point index in the term during which he is on probation and his cumulative grade point index does not yet meet the minimum standards.

Probation is removed when the cumulative grade point index reaches the required level.

A student also will be placed on probation for the next term in which he enrolls if his engineering major grade point index falls below the following levels (the engineering major consists of the 43 hours of engineering core courses and the courses required by the student's engineering department):

1.700 if the student has earned 24 to 63 total credit hours and 12 or more credit hours in his engineering major.
2.000 if the student has earned 64 or more total credit hours and 12 or more credit hours in his engineering major.

The student remains on probation if he earns at least a 2.000 engineering major grade point index in the term during which he is on probation and his cumulative engineering major grade point index does not yet meet the minimum standards.

Probation is removed when the engineering major grade point index reaches the required level.

A student on probation for not meeting either the required cumulative or the required engineering major grade point index may not enroll for more than 12 semester hours in an eighteen week term or two-thirds as many hours as the number of weeks for which he is enrolled in the summer term, plus one hour of military or air science, physical education, or marching band. Exceptions to this limitation may be made on recommendation of the student's advisor with the approval of his Dean. Such exception is to be recorded by the Committee on Admission, Advanced Standing, and Exceptional programs.

**ACADEMIC DISMISSAL**

A student is subject to academic dismissal from the College of Engineering if he fails to satisfy the following criteria:

1. if he is on probation because of his cumulative grade point index and if his grade point index for the term during which he is on probation falls below 2.000.
2. if he is on probation because of his cumulative engineering

*No student on probation because of a deficient cumulative grade point index shall be placed on academic dismissal for failure to raise this index until he accumulates 9 or more hours. When such a student has accumulated 9 or more hours, the cumulative grade point index including these hours shall be used to determine whether he shall be academically dismissed.
major grade point index and if his engineering major grade point index for the term during which he is on probation falls below 2.000.

READMISSION

A student who has failed to meet the necessary scholastic requirements and has been academically dismissed may apply to the College of Engineering Exceptions Committee for readmission consideration. It is the student's responsibility to supply the committee with sufficient reason for readmission consideration.

Students are expected to maintain a "C" average in all work for which they are registered for credit during any semester. Failure to maintain this standard implies the advisability of limiting the student's program.

No student shall be allowed credit toward graduation for D grade work in excess of one-quarter of total hours.

At the end of the first 8 weeks in each semester, reports of unsatisfactory grades are sent to the student.

CURRICULA

The curriculum in engineering is common for the first two years. For administrative purposes, the student is requested to choose a departmental curriculum in which to study. Change to another curriculum may be made during this period without loss of credit toward graduation.

Each of the curricula consists of three parts: (1) The General Requirements of the University, (2) an "Engineering Core" Program, and (3) specialized department courses.

As a portion of the general requirements of the University, the student must elect 4 hours of University Core Electives, as specified on page 59 under (V) Electives.

Every engineering student is required to complete a total of 43 hours of courses from the following "Engineering Core Courses." Some of these courses are required as departmental prerequisites for the departmental offerings; the remainder of courses should be selected in consultation with a faculty advisor.

<table>
<thead>
<tr>
<th>Engineering Core</th>
<th>43 Hours Required</th>
</tr>
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<tbody>
<tr>
<td>IE 110, Graphics I</td>
<td>2</td>
</tr>
<tr>
<td>IE 213, Graphics II</td>
<td>2</td>
</tr>
<tr>
<td>IE 254, Engr. Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>AE 227, Engr. Dig. Comp.</td>
<td>2</td>
</tr>
<tr>
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<tr>
<td>AE 398, Systems Dynamics</td>
<td>3</td>
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</table>

† No student on probation because of a deficient engineering major grade point index shall be placed on academic dismissal for failure to raise this index until he accumulates 2 or more engineering major courses. When such a student has accumulated 2 or more engineering major courses, the cumulative engineering major grade point index, including the hours for the last 2 or more courses, shall be used to determine whether he shall be academically dismissed.
The recommended sequence of courses for all engineering students is outlined below. This sequence has been planned for completion of the program in the minimum time and to satisfy all university course requirements and prerequisites for engineering students. Any deviation from this sequence should be discussed with the faculty advisor.

A student may elect to take courses outside his major under the credit-no credit option. Under this option the grade for the course is recorded as “credit” if the student performs at a C or better level, and “no credit” if class performance is below the C level. A course major is defined as follows: “All courses in the Catalog SEQUENCE OF COURSES (courses required for graduation designated by a course number) are considered as required courses for a student’s major. In technical elective courses, a course will be considered a major if taken in the department in which the student is majoring.”

Credit-no credit courses are allowed up to a 24 hour maximum and not more than two courses per semester.

SEQUENCE OF COURSES

AERONAUTICAL ENGINEERING

Rapid progress in the development of airplanes, missiles, and space vehicles presents challenging opportunities for engineers interested in research, development, design, and teaching. A strong fundamental knowledge in mathematics, physics, and the engineering sciences is required of those persons who will contribute to future developments in aeronautical and astronautical engineering.

The curriculum in this field offers students an opportunity to develop this foundation and acquire competence in professional fields such as aerodynamics, flight and orbital mechanics, propulsion, control systems, and structural mechanics. Emphasis is placed on the fundamental principles involved in aeronautical engineering so that graduates will be prepared to contribute to this rapidly changing and growing field with its wide variety of engineering applications. Engineers trained in this field also may find challenging careers in other industries which are making use of many advanced concepts similar to those developed in the aeronautical field.

The program requires the completion of 132 semester hours for graduation, less hours commensurate with Honors and Advanced Placement credit.
## FRESHMAN

<table>
<thead>
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<td>Chem. 111, General Chemistry</td>
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## SOPHOMORE

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<td>A. E. 324, Aerodynamics Theory</td>
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<td>A. E. Technical Electives †</td>
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*Engineering Core Electives totaling at least 13 hours must be chosen from the following courses:

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<tbody>
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<td>A. E. 398, System Dynamics</td>
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<td>Engr. 464, Field Analysis</td>
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<td>E. E. 392, Electronic Circuits</td>
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<tr>
<td>M. E. 369, Energy Conversion</td>
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</table>

† Technical Electives may be chosen from any course numbered 300 or above in Engineering, Math., or any of the physical sciences, with the exception of B. S. A. E. required courses.

## ELECTRICAL ENGINEERING

In the Electrical Engineering Department emphasis is placed on the intensive study of physical laws as appropriate to the study of modern electrical devices, including electrical machines. The laws governing the individual behavior as well as behavior in the interconnection of devices is particularly emphasized. Analysis and synthesis of electrical networks, or systems, is of particular concern in specialized courses. The undergraduate program in Electrical Engineering is sufficiently flexible so that a student may choose a program particularly appropriate to communication systems, modern control theory, computers, energy conversion, network and system theory, and microwave electronics.

Students in this curricula are required to have a strong interest in mathematics and physics. As a part of the curriculum, students
at the senior level are required to take a senior project of their own choosing under the supervision of a faculty member. The choice of subject material is varied, and represents a challenge to the student to exercise judgment and creativity in the analysis or design of an appropriate equipment. This program requires the completion of 133 semester hours for graduation, less hours commensurate with Honors and Advanced Placement credit.

The specific requirements and suggested semester breakdown for the electrical engineering program is as follows:

**FRESHMAN**

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<td>Chem. 111, General C</td>
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<td>Math. 243, Intro. Anal I</td>
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<td>Speech 111, Ext. Spe</td>
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<td>Physics 243E, Gen. Coll. Phys.</td>
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**SOPHOMORE**

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**SENIOR**

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Technical electives may be chosen from (a) any 400 level E. E. course which was not required (at least six hours of technical electives must be selected from E. E. courses) (b) any 300 or 400 level Engineering Core course over and above the basic core requirement, (c) selected courses in Mathematics and Engineering outside the E. E. Department with the approval of the student's advisor.

**INDUSTRIAL ENGINEERING**

The Department of Industrial Engineering is concerned with instruction and research in the design, analysis, and operation of integrated systems of men, material, equipment, and money. In
addition to a strong interest in the solution of current, real problems found in industry, the curricula is devoted to the preparation of students who can examine and analyze problem areas that are amenable to a system’s engineering approach.

Sixteen (16) hours of Industrial Engineering electives allows the student to tailor his program in one of the following primary options: (1) Operations Research, (2) Manufacturing Systems, and (3) Information Systems. This scheme is completely flexible so that a student may specialize in a specific aspect of Industrial Engineering. A student’s program is determined by his own special interests and in consultation with his major advisor.

A modern, well equipped laboratory is also available to supplement classroom theory in human factors engineering, manufacturing processes, work measurement, and factory planning. In addition, the Industrial Engineering Department has the responsibility for teaching all engineering graphics courses. To accomplish this end, the Department maintains modern drafting rooms and drafting facilities. Also, the Department is seeking to develop a modern sequence of engineering graphics courses oriented toward digital computer applications.

The Industrial Engineering program requires the completion of 133 semester hours for graduation, less hours commensurate with Honors and Advanced Placement credit.

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MECHANICAL ENGINEERING

The curriculum in Mechanical Engineering is based upon three central parts of an integrated program of study. The first part provides the student with a basic series of courses in physics, mathematics, and appropriate humanities. This is followed by a core of engineering science subjects embracing the concepts and techniques which are judged to be fundamental to the requirements of the modern Mechanical Engineer. The third part of the program permits the student to choose from a series of specialized Mechanical Engineering Department electives in addition to choosing from a series of engineering core courses which best suit the needs and desires of the student. Study in all three of these fields is distributed throughout the entire curriculum in order to provide a fully integrated program. The undergraduate program in Mechanical Engineering is sufficiently flexible so that a student may choose a program which is appropriate to the fields of design, heat transfer, systems, thermodynamics, instrumentation, and experimentation.

The objective of this program is to provide a modern engineering education and a strong stimulus for continued learning which will enable the student to take an active and meaningful part in the technical and social community of today and tomorrow. The program includes the technical and conceptual fundamentals which are necessary to permit the student to contribute to the technical or scientific community and/or continue his education at the graduate level. At the same time, the program is broad enough to help the student find an appreciation and concern for the social

COLLEGE OF ENGINEERING 259
problems which he will encounter in his professional and personal life.

The technical portion of the program will provide the background for a career in design, research, development, production and technical management in a wide variety of industries and fields. The course of study will equip the student for the development of systems and processes involving mechanical, thermal, and electrical energy, including the generation, conversion, metering, control, and utilization of these energy sources.

The student will be prepared to accept the challenges of the entire industry, including those concerned with food products, aircraft, chemical products, automotive products, aerospace systems, agriculture, petroleum, electrical products and consumer products, to mention a few. In fact, many employers seek the mechanical engineer because of his versatility.

The faculty and laboratory facilities of the Department provide the elements for a well-balanced, coherent program. In the senior year, the program provides for a selection of specialized electives, where the student may emphasize the study of design, fluid flow, heat transfer, instrumentation, or systems and controls. The student is urged to work out a suitable program of study with consultation of the faculty. The program requires the completion of 135 semester hours for graduation, less hours commensurate with Honors and Advanced Placement credit.

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<td>A. E. 333, Mech. of Materials</td>
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<td>A. E. 398, Systems Dynamics</td>
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260 COLLEGE OF ENGINEERING
M. E. Elective ........................................... 3 M. E. 448, Mech. Engr. Proj. 0, 1 or 2
Humanities or Social Sciences ....................... 3 Engr. Core Elective † ................................. 4
M. E. 448, Mech. Engr. Proj. .0, 1 or 2 ............................ 2 M. E. 300, Prof. Development ................. 0
Engr. Core Elective † ................................ 3 University Core Elective .......... 2
M. E. 300, Prof. Development ......................... 3

16, 17, or 18

15, 16, or 17

Mechanical Engineering electives may be selected from the following: M. E. 404, 405, 421, 422, 443, 459, Math. 333, 447. Appropriate courses from other engineering departments may be selected if they suit the academic needs of the student. Electives must have the approval of the student's departmental advisor.

* Total of 2 hours required for graduation.

† Engineering core electives must be selected from the following list: A. E. 347, Engr. 363, M. E. 369, E. E. 392, A. E. 399, Engr. 464. A minimum of 11 hours of these engineering core electives are required for graduation, and must have the approval of the student's departmental advisor.

OTHER ENGINEERING FIELDS

Students desiring to specialize in other fields of engineering may complete two years at Wichita before transferring. It is suggested that the student planning to transfer at the end of two years make the selection of his school as soon as possible in order to permit his program to be planned to meet the requirements of that school.

GRADUATE WORK

The departments of Aeronautical Engineering, Electrical Engineering, and Mechanical Engineering supervise graduate programs leading to the degree of Master of Science as offered by the Graduate School. A notation on the diploma identifies the department of study. Various specializations are available in each of the departments.

The Doctor of Philosophy Degree in Aeronautical Engineering is offered in cooperation with the University of Kansas.

Students must be accepted for graduate standing before any graduate work can be scheduled. Prospective students should obtain a Graduate Bulletin and the Engineering Graduate Regulations prior to application for graduate standing.

ENGINEERING CURRICULUM

Majors and Specialized Curricula. See appropriate departmental offerings.

Lower Division Courses


225. Digital Computer Programming. (3). Programming concepts with emphasis upon analysis of classes of problems and the design of algorithms for effecting their solution. Material coverage on computer systems, data structures, and design of computer-based information systems. Problem orientation dependent upon class background and interest. Not open to students with Engr. 127 or equivalent. Prerequisite: Math. 121 or equivalent.
228. Computer Programming and Procedures. (3). 3R. An introduction to programming in a symbolic assembler type language and a continued study of the Fortran procedure oriented language. Prerequisite: Engr. 127 or equivalent.

Upper Division Courses

300. Engineering Science in Society. (3). A course to demonstrate and explain—in depth but without technical jargon—developments in engineering science in the past century which have influenced large portions of society. Emphasis will be placed upon conceptual understanding of scientific phenomena and devices. Guest lecturers and demonstrations will be used extensively. Prerequisite: Upper division standing.

361. Fluid and Heat Flow. (4). 3R; 3L. Pressure and velocity fields, kinematics of perfect and real fluids; similarity; temperature fields and heat transfer, conduction, convection, radiation; introduction to gas dynamics. Prerequisites: Physics 244E, Math. 346, and M. E. 298.


400. System Modeling. (3). Interdisciplinary subjects are considered to analytically develop simple models of real systems. These models are then fully exploited, to show similarities between systems performance and analysis techniques. Examples are taken from anthropology, sociology, economics, and technology. Senior or graduate standing recommended. Prerequisite: Consent of instructor.


AERONAUTICAL ENGINEERING

Lower Division Courses


Upper Division Courses


262 COLLEGE OF ENGINEERING

373. Engineering Mechanics II. (3). 3R. The laws of motion and the dynamics of particles and systems of particles. Prerequisites: A. E. 223 with C or better and Math. 244.


399. Experimental Mechanics Laboratory. (1) 3L. Selected experiments in mechanics of material and materials science. Experiment design, measurement and data interpretation. Prerequisite: A. E. 333, A. E. 347 or concurrent.

412. Experimental Methods in Aerodynamics Engineering. (2). 4L. Experimental methods and test planning, error analysis and propagation, model design, instrumentation, flow visualization. Use of subsonic and supersonic wind tunnels, shock-tube, etc. Prerequisite: A. E. 324 or concurrent.


417. Projects in Aeronautical Engineering. (1-2). Design, analysis, or research problems under supervision of faculty advisor. May be taken for 1 hour credit in each of two consecutive semesters. Department consent.


426. Flight Structures Laboratory. (1). 3L. Special projects in the design and analysis of flight vehicle structures. Prerequisite: A. E. 333.


433. Advanced Strength of Materials. (3). Limitations and usefulness of basic concepts of resistance of materials. Advanced concepts, including theories of failure and stresses and deformation in thin plates, cylinders, non-symmetrical and curved flexural members, non-circular bars in torsion, etc. Stress concentrations. Energy methods. Prerequisite: A. E. 333.

Physical metallurgy principles and reference to specific alloy systems. Prerequisite: A. E. 347.

475. Selected Topics in Aeronautical Engineering. (1-3). Prerequisite: Department consent.

476. Selected Topics in Engineering Mechanics. (1-3). Prerequisite: Department consent.


Graduate Courses

There are two separate programs leading to the Master of Science degree—one in Aeronautical Engineering and the other in Engineering Mechanics. For details, see the Graduate School Bulletin.

Graduate Courses in Aeronautical Engineering

Prerequisite for all graduate courses is Department consent.


505. System Optimization. (3). Analytical and numerical techniques for minimizing or maximizing functions and the functionals occurring in engineering problems.


511. Aerodynamics of Non-Viscous Fluids. (3). Equations of motion; potential flow; conformal transformations; finite wing theory; non-steady airfoil theory.


516. Aerodynamics of Compressible Fluids I. (3). Analysis of compressible fluid flow for one- and two-dimensional cases. Moving shock waves. One-
dimensional flow with friction and heat addition, linearized potential function. Method of characteristics. Conical shocks. Subsonic similarity laws. Prerequisite: A. E. 416 or equivalent.

520. Theory of Elastic Stability. (3). Buckling and bending of columns, beams, plates, and shells. Prerequisite: Consent of instructor.


530. Theory of Elasticity. (3). Elements of the common theory of elasticity with emphasis on two-dimensional problems in strain and stress.


533. Continuum Mechanics. (3). A unified development of the basic theories and equations of solids and fluids in invariant tensor notation. Formulation of problems of elasticity, plasticity and fluid mechanics. Prerequisite: Consent of instructor.

535. Experimental Stress Analysis. (3). The theoretical bases and techniques of the common methods of experimentally determining stress and strain in structural and machine parts. Selected laboratory demonstrations.

537. Advanced Engineering Dynamics. (3). Kinematics and kinetics of particles and rigid bodies for two and three dimensional motion. Introduction to vibratory motion. Lagrange's equations.

538. Random Vibration. (3). Characterization, transmission and failure of mechanical systems subjected to random vibration. Analysis and measurement methods for random data. Prerequisite: Consent of instructor.

539. Energy Methods in Mechanics. (3). The principles of virtual work, potential energy, and potential coenergy applied to static equilibrium of rigid and deformable, discrete, and distributed mass bodies. Also, energy methods extended to the dynamics of discrete mass systems.

541. Transform Methods in Mechanics. (3). The LaPlace, Hankel, Legendre, Fourier, and Jacobi transform solutions of differential equations arising in engineering mechanics. Prerequisite: Consent of instructor.


560. Selected Topics in Engineering Mechanics. (1-3). Supervised study or research. May be repeated to a total of 3 hours.

561. Selected Topics in Aerodynamics and Fluid Mechanics. (1-3). Supervised study or research. May be repeated to a total of 3 hours.

562. Selected Topics in Propulsion. (1-3). Supervised study or research. May be repeated to a total of 3 hours.

COLLEGE OF ENGINEERING 265
563. Selected Topics in Guidance and Control. (1-3). Supervised study or research. May be repeated to a total of 3 hours.


676. Thesis. (1-16). May be repeated to a maximum of 36 hours.

ELECTRICAL ENGINEERING

Upper Division Courses

382. Electrical Dynamics. (4). 3R; 3L. Electric circuit analysis with emphasis on the time varying case: sinusoidal excitation, frequency response, network theorems, coupled circuits, polyphase circuits. Prerequisite: Math. 244, Physics 244E.


394. Logic Design and Switching Theory. (3). 2R; 3L. An introduction to the theory and application of switching devices with particular emphasis on computer applications. Combinational, sequential, and threshold logic concepts and realizations; network minimization methods, hazards, codes, computerized logic design. Prerequisite: E. E. 392 or Department consent.

477. Special Topics in Electrical Engineering. (1-4). New or special courses are presented under this listing on sufficient demand. May be repeated for credit. Prerequisite: Department consent.

480. Transient and Frequency Analysis. (4). 3R; 3L. Review of classical transient analysis and Fourier Series. Introduction to Laplace and Fourier Transforms with emphasis on network response; complex frequency concepts; signal spectra. Prerequisite: E. E. 392 or concurrent.

481. Pulse Electronics. (4). 3R; 3L. An investigation of active and passive circuits, including integrated circuits, for the generating and processing of pulse waveforms. Topics covering other nonlinear electronic circuits will be included. (e.g., class C amplifiers; nonlinear feedback; adaptive selection of linear circuits.) Prerequisite: E. E. 480 or department consent.

482. Energy and Information Transmission. (4). 3R; 3L. Transmission line parameters; power, signal and high frequency transmission lines; wave propagation in free space and bounded media; wave guides and antennas. Prerequisite: Engr. 464, E. E. 486 or concurrent enrollment.


485. Electrical Design Project I. (1). 3L. A design project under faculty supervision chosen according to the student's interest. Prerequisite: Department consent.


494. Digital Computer Design Fundamentals. (3). 3R. An introductory but reasonably detailed study of stored program digital computers from an integrated hardware-software approach. Consideration of computer logic design, arithmetic units and operation, large capacity storage systems, input-output units, and system integration. Prerequisite: E. E. 394, E. E. 480 or Department consent.

495. Electrical Design Project II. (1). 3L. Prerequisite: E. E. 485 or department consent.

496. Electron Dynamics. (3). Electron ballistics in static and dynamic fields, electron optics, beam deflection devices, space charge effects, velocity modulation principles and applications. Prerequisite: Physics 311 and Engr. 363.


Graduate Courses

573. Pulse, Digital and Switching Circuits. (3). Investigation of active and passive circuits used for the generation and processing of pulse, digital and switching waveforms. Such circuits are required in computers, control systems, counting and timing, data-processing, instrumentation, communications, radar telemetry and television. Prerequisite: E. E. 481 or department consent.

576. Thesis. (1-3). This course may be repeated for credit toward a thesis option up to 6 hours. Prerequisite: Prior consent of thesis advisor.

577. Special Topics in Electrical Engineering. (3). New or special courses are presented under this listing on sufficient demand. May be repeated for credit. Prerequisite: Department consent.

578. Directed Studies in Electrical Engineering. (2-4). This course may be repeated toward the directed studies option up to 4 hours. The student must write a paper and give an oral presentation on the study made. Prerequisite: Department consent.

582. Methods of Systems Analysis. (3). Methods of analysis of both linear and nonlinear systems. Time-domain techniques; singularity functions, resolution of signals from elementary functions, solution of differential and difference equations. Transform techniques, LaPlace, Fourier and Z transforms, frequency spectra, complex frequency, complex integration, significance of singularities. Matrices and vector spaces as used in systems work. Prerequisite: E. E. 480 or department consent.

583. Electromagnetic Field Theory I. (3). Introduction to advanced mathematical treatment of electric and magnetic fields; boundary value problems;
Maxwell's equations and applications to waveguide and cavity resonators. Prerequisite: Engr. 363 or department consent.

584. Electromagnetic Field Theory II. (3). Special topics in static and electrodynamic fields: Special solution techniques; moving reference frames, radiation. Prerequisite: E. E. 583.

587. Communication Theory. (3). Theory of information and noise; communication of information in presence of noise, channel capacity; modulation and multiplexing, sampling and coding; detection theory including effects of noise and non-linear circuits, correlation methods. Prerequisite: E. E. 582.

588. Selected Topics in Antennas and Propagation. (3). Determination of characteristics of practical antenna systems; radiation patterns and antenna impedance; diffraction, horns, slots, etc.; wave propagation in the earth's environment, including tropospheric and ionospheric phenomena. Prerequisite: E. E. 583.

589. Advanced Electrical Laboratory. (2). Training in fundamental experimental technology in some field of electrical specialization. This course will consist of selected experiments in various areas of electrical engineering. The general subject area will be announced each semester the course is offered. May be taken more than once for credit. Prerequisite: Department consent.

590. Topics in Control Systems. (3). A study of various concepts such as multiloop systems, multivariable systems and decoupling, nonlinear systems and sampled-data systems. Prerequisite: E. E. 484 or Department consent.


593. State-Variable Techniques in Systems II. (3). A continuation of the study of state-space concepts in the areas of nonlinear systems, optimal and suboptimal control of systems with wide classes of performance measures. Prerequisite: E. E. 592 or department consent.

596. Passive Network Synthesis. (3). A detailed study of the direct approach to network synthesis from the functional description. Topics include realizability conditions for passive networks, synthesis of LC, RL, RC and RLC driving point impedances, synthesis of LC transfer impedances. Butterworth and Chebyshev filters and time domain synthesis. Prerequisite: E. E. 582 or consent of instructor.

597. Special Topics in Physical Electronics. (3). Special studies selected from the general topics: electron optics, space-charge waves, plasmas, quantum electronics. Prerequisites: E. E. 496 and 497.

INDUSTRIAL ENGINEERING

Lower Division Courses

The following six (6) courses are devoted to concepts in engineering graphics.

110. Engineering Graphics I. (2). 4L. Basic special relationships involving lines and planes, auxiliary views of solids, and problems in intersections. Prerequisite: Math. 141 with a C or better.

115. Architectural Drawing. (3). 9L. The study of materials and construction details pertaining to the design of simple buildings including preparation of working drawings and specifications. Prerequisite: I. E. 110 or department consent.
213. Engineering Graphics II. (2). 4L. The application of descriptive geometry, standards in graphical communications and conventions to engineering design and analysis. Prerequisite: I. E. 110 with a C or better.

250. Topics in Engineering Graphics. (2). 4L. The application of Engineering Graphics to the study of special problems and to methods of conveying information. Prerequisite: Speech 244 or department consent.

254. Engineering Probability and Statistics. (3). Basic theory of probability and statistics with emphasis on applications to engineering. Prerequisite: Math. 244 or concurrent.

257. Tool Design I. (3). 2R; 4L. Design of workholding devices for locating and holding workpieces for metal removal by machining processes, the design of small assembly jigs, and the design for pressworking tools. Prerequisite: Department consent.

260. Production Illustration. (2). 6L. The study of the graphical methods of presenting engineering information in the form of rendered pictorial (three dimensional) drawings. Prerequisite: I. E. 110 or department consent.

Upper Division Courses

352. Work Measurement. (3). 2R; 3L. Work measurement, motion and time study, biomechanics, work sampling, predetermined time standards and time formula derivation. Prerequisite: Department consent.


356. Introduction to Numerical Control. (2). An introduction to the concepts and techniques of the operation of machine tools from numerical data; including open and closed loop systems, point to point and continuous path processing, and a discussion of the various means of data representation. Prerequisite: Department consent.


449. The Human Factor in Engineering Design. (2). The synthesis of human physiological, psychological, sociological and legal limitations and influence on design of consumer, public and experimental products. Prerequisite: Department consent.


453. Production Control. (3). Techniques of production planning, scheduling, and dispatching. Applications to automation and computer control. Prerequisite: Department consent.


455. Numerical Control and Parts Programming I. (3). The study and application of the various parts programming languages with particular emphasis on the APT language. Prerequisite: I. E. 356 or department consent.

456. Introduction to Information Systems. (3). An introduction to the concepts and techniques of information systems; including open and closed loop systems, conventional control components and a discussion of the various means of data representation. Prerequisite: A. E. 227.

458. Production Design. (3). A general survey of the manufacturing and fabricating methods employed in industry. Special emphasis is placed on the latest manufacturing techniques.

465. Management Information Systems. (3). The design of systems to collect and display data for use in managerial decision models, production standards, engineering evaluations and reliability predictions, and real time systems. Prerequisite: I. E. 456 or department consent.

490. Senior Projects in Industrial Engineering. (1-3). Selection and research of a specific Industrial Engineering topic.

Graduate Courses

530. Advanced Linear Programming. (3). This course covers Stochastic Programming, Integer Programming, Sensitivity Analysis and the application of these techniques to specific problem areas. Numerical techniques or geometric programming may also be included. Prerequisite: I. E. 450 and I. E. 451 or Department consent.

531. Classical Optimization Techniques. (3). An extensive treatment of those optimization techniques which do not require the use of Linear Programming. A development of variational methods, direct search and numerically based techniques will be given. Prerequisite: Department consent.

533. Queuing and Inventory Theory. (3). An analytical analysis of the transient and steady-state behavior of queues and queuing systems. The relationship between queuing and inventory systems will be developed. Optimum inventory policies and optimum queuing system configurations will be discussed. Prerequisite: I. E. 450 and I. E. 451 or Department consent.

535. Forecasting and Scheduling. (3). Analysis of prediction techniques in Forecasting and Scheduling by time series and probability models, smoothing techniques, error analysis. Prerequisite: Department consent.

540. Analysis of Decision Processes. (3). Time value of money; economics of equipment selection and replacement; engineering estimates; evaluation of proposals; computer analysis and solution of economic problems. Prerequisite: I. E. 355 or department consent.

542 System Simulation with Digital Computers. (3). Develops the methods and techniques for simulating large-scale systems with digital computers using FORTRAN and GASP programming languages. Prerequisites: A. E. 227, I. E. 254, or Department consent.

543. Operations Research. (3). A study of the theory and application of model building techniques for the problems found in industry. Linear and dynamic programming; queuing theory; allocation processes, inventory theory; experimental designs; utilization of digital computers. Prerequisite: I. E. 450 or department consent.
545. Production Engineering. (2). The organization, design and control of production and associated staff functions; formulation of manufacturing policies; case studies in production design.


MECHANICAL ENGINEERING

Lower Division Courses

298. Thermodynamics I. (3). The First and Second Laws. Thermodynamic analysis as applied to thermal, mechanical and fluid systems. Prerequisites: Math 244, Physics 243E.

Upper Division Courses

300. Professional Development. (0). A colloquium to acquaint the student with the practice of Mechanical Engineering. One meeting per month.

301. Mechanical Engineering Measurements. (3). 2R; 3L. An introduction to modern measurement techniques in Mechanical Engineering. Prerequisites: Math 346, Phys. 244E.

369. Energy Conversion. (3). Energy Conversion principles and their implementation in engineering devices; consideration of all main areas of converting energy from one form to another. Prerequisites: M. E. 298, Engr. 361, E. E. 382.

402. Thermodynamics II. (3). Continuation of M. E. 298 with emphasis on availability, irreversibility, Maxwell’s equations, and thermodynamics property relations. Prerequisite: M. E. 298.

404. Instrumentation. (3). 2R; 3L. A more complete treatment of the measurement problem. Careful examination of modern instrumentation systems including dynamic behavior and non-linearities. Criteria for design, synthesis and selection of instrumentation systems. Prerequisites: M. E. 301.

405. Design of Engineering Experiments. (3). Study of theoretical, analytic and statistical aspects of basic engineering experimentation. Theories of test planning, data checking, analysis and synthesis, and evaluation are considered. Prerequisite: Department consent.


422. Intermediate Heat Transfer. (3). A rigorous treatment of heat transfer including transient and multidimensional conduction, free and forced convection, radiation and combined heat transfer. Various analogies, numerical methods and approximate solutions are considered. Prerequisite: Engr. 361.


441. Mechanical Engineering Design II. (4). 3R; 3L. Continuation of M. E. 439, with emphasis on kinematic analysis, design of mechanical elements and other advanced topics in mechanical design. Prerequisite: M. E. 439.

443. Mechanical Engineering Design III. (3). Kinematic synthesis and dynamic analysis as applied to machine design. Introduction to mechanical control theory. Prerequisite: M. E. 441.
448. **Mechanical Engineering Projects.** (1 or 2). 3L or 6L. A design, analysis or research project under faculty supervision. Problems are selected according to the student's interest. Student may take one hour for two semesters or two hours in a single semester. Prerequisites: M. E. 301 and senior standing.

450. **Topics in Mechanical Engineering.** (1-3). Investigation of selected phases of Mechanical Engineering. Prerequisite: Department consent.

456. **Analysis in Engineering.** (3). Analytical techniques applied to engineering problems. Prerequisite: Math. 346.

459. **Mechanical Control I.** (3). Theory and analysis of the dynamic behavior of mechanical, thermal, fluid and electro-mechanical control systems as based on the laws of physics and linear mathematics. Prerequisite: A. E. 398 or department consent.

**Graduate Courses**

501. **Boundary Layer Theory.** (3). Development of the Navier-Stokes Equation, laminar boundary layers, transition to turbulence, turbulent boundary layers, introduction to homogeneous turbulence. Prerequisites: M. E. 557 and Math 447, or department consent.

530. **Cryogenic Engineering I.** (3). Study of cryogenic problems in Mechanical Engineering involving production of low temperatures; properties of solids and liquids; fluid flow; heat transfer; insulation and applications at low temperatures. Prerequisites: Math 447, M. E. 555, or department consent.

546. **Fatigue and Wear.** (3). A study of the phenomena of fatigue and wear of engineering materials and reliability as applied to problems of engineering design. Prerequisite: Department consent.

549. **Advanced Mechanical Engineering Design.** (3). Studies of current Mechanical Engineering design problems which involve high speed, vibrations and dynamic loading. Prerequisites: Math 447, or department consent.


552. **Heat Transfer-Convection.** (2). Free and forced convention in laminar and turbulent flow. Analysis and synthesis of heat transfer equipment. Prerequisites: M. E. 422 or department consent.

553. **Heat Transfer-Radiation.** (2). Analysis and synthesis of radiant heat transmission systems and components, analogous and approximate method of solutions. Prerequisites: M. E. 422 or department consent.

555 & 556. **Advanced Thermodynamics.** (3-3). Laws of thermodynamics, steady and unsteady flow, availability, Maxwell's relations, kinetic theory, statistical concepts of thermodynamics, introduction to ionized gas theory, Boltzmann statistics, and other selected topics of interest. Neither course is prerequisite for the other. Prerequisites: M. E. 402 or department consent.

557. **Advanced Fluid Dynamics.** (2). Steady and transient flow of ideal, real and heterogeneous liquids and gases in simple and complex passages. Prerequisites: M. E. 421 or department consent.

559. **Mechanical Control II.** (3). Application of feedback methods to mechanical and combined control systems. Prerequisites: M. E. 459 or equivalent.

560. **Electromechanical Control Systems.** (3). Description, analysis, and design of electro-mechanical control systems with an emphasis on actual devices. Prerequisite: M. E. 459 or department consent.
561. Similitude in Engineering. (2). Critical analysis of models and analogies as aids to engineering design. Prerequisite: Department consent.

563. Advanced Transport Phenomena. (2). Combination of heat transfer, diffusion, and fluid dynamics theories in the determination of transport of mass, momentum, and energy. Prerequisite: Math 447 or department consent.

567. Theory of Rational Design. (3). Design decision techniques including: frequency, axiomatic and Bayesian formulation, statistical inference techniques, Jaynes' maximum entropy principle, error analysis. Prerequisite: Department consent.

568. Rational Design Methods. (3). The principles of creativity, decision theory, modeling, optimization and reliability as applied to problems of engineering design. Prerequisite: Department consent.

570. Special Topics in Mechanical Engineering. (3). New or special courses are presented under this listing on sufficient demand. Prerequisite: Department consent. May be repeated for credit when subject material warrants.

College of Fine Arts

CHARLES L. SPOHN, Ph. D., Dean

DEPARTMENT OF ART

ROBERT KISKADDEN, Chairman

The Department of Art forms a portion of the College of Fine Arts. The curriculum has developed to meet the opportunities and challenges of new generations. While not breaking with the past, the Department of Art looks toward the future. Drawing, color, two- and three-dimensional design are taught as fundamentals. Based on this background and experience students are encouraged to develop their own idiom to employ a constantly enlarging array of tools and materials. The Department its students staff and graduates prides itself in their professional attainment as productive researchers and creative and exhibiting artists. Visiting artists contribute through guest lectures and studio demonstrations.

The Department of Art offers professional courses designed to train and educate art students who are planning careers in the arts and to allow students in other colleges to gain an understanding and appreciation of art.

Two undergraduate degrees are offered by the Department of Art: (1) The Bachelor of Fine Arts with major study in the following areas: Painting, Printmaking, Ceramics, Metalsmithing, Sculpture, Graphic Design, Art History. Minor study is available in Fashion Illustration. (2) The Bachelor of Art Education which meets state requirements for teacher certification.

ADMISSION

All entering freshmen will be enrolled in the University College. Upon completing 24 semester hours of specified courses with a minimum grade point average of 1.7 or upon completing 64 or more semester hours with a minimum grade point average of 2.000 the student is eligible to enroll in the Department of Art.

Transfer students may enroll in the Department of Art if transcript indicates that student has completed a minimum of 24 semester hours with a grade point average of 2.000 or higher. Transfer students unable to meet this minimum requirement will be enrolled in University College until this requirement is met.
Freshmen who elect to major in art should indicate this on the application for admission form by placing a mark opposite the words "College of Fine Arts" and by writing the word "Art" directly below.

PROBATION AND DISMISSAL

A student will be placed on probation for the next term in which he enrolls if his cumulative grade point index falls below the following levels: (1) 1.700 if the student has earned 24-63 credit hours. (2) 2.000 if the student has earned 64 or more credit hours. The cumulative grade point index must reach the above required level for probation to be removed.

No student on probation who enrolls in fewer than seven hours shall be dismissed for failure to raise the cumulative grade point index to the required level; however, if such a student has earned 12 or more hours in two or more terms, the cumulative grade point index including these hours shall be used to determine whether he shall be dismissed.

A student on probation will be dismissed if his cumulative grade point index fails to meet the required minimum standards and if his grade point index for the term during which he is on probation falls below 2.000. Exception to this limitation may be made on recommendation of the student's adviser with the approval of his Dean. A student on dismissal must apply for readmission to the Committee on Admissions, Advanced Standing, and Exceptional Programs. If, upon readmission, the student on final probation does not achieve the required cumulative grade point index and his grade point index for that term falls below 2.000, he shall again be dismissed. Any further applications for readmission will be considered on the merits of the individual case, after a lapse of at least one calendar year.

REQUIREMENTS

No student shall be allowed credit toward graduation for D grade work in excess of one-quarter of the total hours. A grade average of 2.000 or better must be earned on all work taken at this University which could be applied to the degree sought.

The Department will accept the transfer of only one credit hour per semester of studio work totaling not more than six hours of the last thirty or ten hours of the total number of hours required for graduation in nonresident work, such as extension or correspondence courses, provided these are from accredited institutions.

GENERAL REQUIREMENTS

The art courses which will fulfill the core curriculum requirements for graduation are: All Art History courses except 463.
The Department controls all art work or essays submitted for credit by the student and reserves the right to select certain pieces for the permanent Art Department Collection.

All art materials, with the exception of certain non-expendable equipment, are furnished by the individual student.

GRADUATE ART STUDIES

The Graduate School offers a program leading to a Master of Fine Arts, or a Master of Arts in Art Education, in Art History, and in Graphic Design. For information concerning requirements for entrance and curriculum see Art section in the Graduate School Bulletin.

ART COLLECTIONS OF THE UNIVERSITY

The Department of Art manages four collections of paintings, drawings, and prints. The Art Department Collection, to date, includes works by Albers, Friedlander, Gottlieb, Levine, Piza, Roualt, Trova, as well as graduate and undergraduate student work. The University Collection of American Prints and Drawings, to which acquisitions are added every year, contains a wide range of works of the 19th and 20th century; a few of the artists represented are Calder, Cassatt, Lichtenstein, Motherwell, Reinhart, Sloan, and Whistler. The Vermillion Collection, to date, includes a Krushenick, Rayo, Summers, Tobey, and a Vasarely. The Bloomfield Collection comprises an important group of paintings from such masters as Sir William Beechy, Thomas Cole, Sir Peter Lely, and examples from the schools of Hubert Robert and Jacob Van Ruisdail.

GRADUATION REQUIREMENTS

BACHELOR OF FINE ARTS DEGREE

In addition to the scholastic and residence requirements for graduation from this University, candidates for this degree in Painting, Printmaking, Ceramics, Metalsmithing, Sculpture, or Graphic Design will complete a total of 126 semester hours. These hours will be distributed as follows: 45 Core Curriculum hours * and 81 Art Curriculum hours. The student majoring in Art History will complete a total of 124 semester hours. These hours will be distributed as follows: 45 Core Curriculum hours * and 79 Art History Curriculum hours. Specific curriculum for each of these areas of the degree are listed on the pages which follow. Electives will be selected in consultation with advisor.
CORE CURRICULUM (45 hours recommended for the B. F. A. degree)

I. Natural Sciences: 9 hours required.
   Elect one course from each area. A minimum of 4 hours must be a laboratory science.
   Physical
      (1) Geology 111 (5 hours with lab).
      (2) Physical Science 101 (5 hours without lab).
   Biological:
      (1) Biology 100 (4 hours with lab).
      (2) Biological Science 102 (5 hours without lab).

II. Communications: 8 hours required.
   English 111 (3 hours).
   English 211 or 225 (3 hours).
   Speech 111 (2 hours).

III. Humanities: 15 hours required.
   Required:
      History of World Art I 101 (3 hours).
      History of World Art II 102 (3 hours).
   Elect one course in each of the following areas:
      History (3 or 4 hours).
      Literature (3 hours).
      Philosophy or Religion (3 hours).

IV. Social Sciences: 9 hours required.
   Elect one course in three of the following areas:
      Anthropology, all courses (3 hours).
      Economics 221 (3 hours).
      Political Science: 100, 121, or 211 (3 hours).
      Psychology 111 (3 hours).
      Sociology 111 (3 hours).

V. Electives: 4 hours required.
   Credit courses offered by any department except the student's major department.

PAINTING CURRICULUM

Based on a thorough preparation in drawing and painting, the major progresses through a structured program leading to the development of a personal style. Museums, galleries, and traveling shows form the basis of environmental exposure.

Requirements:

81 Art Curriculum Hours.
9 Art History hours.
21 Painting hours.
21 Drawing hours.
6 Printmaking hours.
24 Art Elective hours.
45 Core Curriculum hours.*

Model Program

FRESHMAN

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>165 (3) Drawing I</td>
<td>175 (3) Printmaking I</td>
</tr>
<tr>
<td>101 (3) History of World Art I*</td>
<td>102 (3) History of World Art II*</td>
</tr>
<tr>
<td>111 (3) English*</td>
<td>(3) English, 211 or 225*</td>
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<tr>
<td>(3) Humanities*</td>
<td>(3) Humanities*</td>
</tr>
<tr>
<td>(3) Social Science*</td>
<td>(3) Social Science*</td>
</tr>
<tr>
<td>15 Total hours</td>
<td>15 Total hours</td>
</tr>
</tbody>
</table>

278 COLLEGE OF FINE ARTS
### Printmaking Curriculum

Exploration of the etching process and exposure to tools and techniques of the graphic arts. Emphasis is placed on creativity plus encouragement to investigate new and traditional craftsman-like techniques and methods.

**Requirements:**
- 81 Art Curriculum hours.
- 6 Art History hours.
- 21 Printmaking hours.
- 3 Design hours.
- 15 Drawing hours.
- 6 Painting hours.
- 30 Art Elective hours.
- 45 Core Curriculum hours.*

### Model Program

**FRESHMAN**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>165 (3) Drawing I</td>
<td>175 (3) Printmaking I</td>
</tr>
<tr>
<td>171 (3) Basic two-Dimensional Design</td>
<td>102 (3) History of World Art II*</td>
</tr>
<tr>
<td>111 (3) English*</td>
<td>111 (3) English, 211 or 225*</td>
</tr>
<tr>
<td>(3) Humanities*</td>
<td>(3) Humanities*</td>
</tr>
<tr>
<td>(3) Social Science*</td>
<td>(3) Social Science*</td>
</tr>
<tr>
<td><strong>15 Total hours</strong></td>
<td><strong>15 Total hours</strong></td>
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**SOPHOMORE**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>275 (3) Printmaking II</td>
<td>268 (3) Life Drawing II</td>
</tr>
<tr>
<td>267 (3) Life Drawing I</td>
<td>272 (3) Painting II</td>
</tr>
<tr>
<td>271 (3) Painting I</td>
<td>(2) Humanities*</td>
</tr>
<tr>
<td>(3) Humanities*</td>
<td>(3) Social Science*</td>
</tr>
<tr>
<td>(3) Social Science*</td>
<td>(5) Physical Science*</td>
</tr>
<tr>
<td>111 (2) Speech*</td>
<td><strong>16 Total hours</strong></td>
</tr>
<tr>
<td><strong>17 Total hours</strong></td>
<td><strong>16 Total hours</strong></td>
</tr>
</tbody>
</table>
CERAMICS CURRICULUM

The ceramics major is exposed to his materials: building, throwing, clays, and glazes. Students investigate problems of glaze formulation, firing the kiln, and characteristics of clays and production.

Requirements:
81 Art Curriculum hours.
  3 Art History hours.
  24 Ceramic hours.
  3 Metalsmithing hours.
  3 Sculpture hours.
  12 Drawing hours.
  3 Painting hours.
  3 Printmaking hours.
  30 Art Elective hours.
45 Core Curriculum hours.*

Model Program

FRESHMAN

FIRST SEMESTER

165 (3) Drawing I
181 (3) Ceramics I
101 (3) History of World Art I
111 (3) English
(3) Humanities

15 Total hours

SECOND SEMESTER

179 (3) Metalsmithing I
185 (3) Sculpture I
102 (3) History of World Art II
268 (3) English
(3) Social Science

15 Total hours

SOPHOMORE

FIRST SEMESTER

281 (3) Ceramics II
267 (3) Life Drawing I
111 (2) Speech
(3) Humanities
(3) Social Science

17 Total hours

SECOND SEMESTER

282 (3) Ceramics III
268 (3) Life Drawing II
268 (3) Social Science
(3) Physical Science

17 Total hours

JUNIOR

FIRST SEMESTER

331 (3) Ceramics Studio
(3) Study of Ceramic Materials
(284 or 484)
367 (3) Life Drawing Studio
(3) Art elective
(3) Biological Science
(3) Humanities

18 Total hours

SECOND SEMESTER

381 (3) Ceramics Studio
(3) Art History elective
(3) Art elective
(3) Art elective
(3) Humanities
(2) Humanities

17 Total hours
## Metalsmithing Curriculum

Exploration of methods of forming, constructing, and casting silver and other metals. Emphasis is placed on design and craftsmanship.

### Requirements:
- 81 Art Curriculum hours.
- 6 Art History hours.
- 21 Metalsmithing hours.
- 6 Ceramic hours.
- 6 Sculpture hours.
- 3 Design hours.
- 6 Drawing hours.
- 6 Painting hours.
- 6 Printmaking hours.
- 21 Art Elective hours (includes a minor area of 12 hours).
- 45 Core Curriculum hours.

### Model Program

#### Freshman

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>179 (3) Metalsmithing I</td>
<td>175 (3) Printmaking I</td>
</tr>
<tr>
<td>163 (3) Drawing I</td>
<td>165 (3) Sculpture I</td>
</tr>
<tr>
<td>171 (3) Basic Two-Dimensional Design</td>
<td>102 (3) History of World Art I*</td>
</tr>
<tr>
<td>101 (3) History of World Art I*</td>
<td>103 (3) English 211 or 225*</td>
</tr>
<tr>
<td>111 (3) English*</td>
<td>111 (3) Humanities*</td>
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<tr>
<td><strong>15 Total hours</strong></td>
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#### Sophomore

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td>279 (3) Metalsmithing II</td>
<td>272 (3) Painting II</td>
</tr>
<tr>
<td>271 (3) Painting I</td>
<td>275 (3) Printmaking II</td>
</tr>
<tr>
<td>181 (3) Ceramics I</td>
<td>281 (3) Ceramics II</td>
</tr>
<tr>
<td>111 (2) Speech*</td>
<td>285 (3) Sculpture II</td>
</tr>
<tr>
<td>(3) Social Science*</td>
<td>(2) Humanities*</td>
</tr>
<tr>
<td><strong>17 Total hours</strong></td>
<td><strong>17 Total hours</strong></td>
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#### Junior

<table>
<thead>
<tr>
<th>First Semester</th>
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<tbody>
<tr>
<td>379 (3) Metalsmithing Studio</td>
<td>379 (3) Metalsmithing Studio</td>
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<tr>
<td>(3) Art elective</td>
<td>(3) Art elective</td>
</tr>
<tr>
<td>(3) Humanities*</td>
<td>(3) Humanities*</td>
</tr>
<tr>
<td>(5) Physical Science*</td>
<td>(2) Humanities*</td>
</tr>
<tr>
<td><strong>17 Total hours</strong></td>
<td><strong>15 Total hours</strong></td>
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#### Senior

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>479 (3) Advanced Metalsmithing Studio</td>
<td>479 (3) Advanced Metalsmithing Studio</td>
</tr>
<tr>
<td>(3) Art History elective</td>
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<td>(3) Art elective</td>
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<tr>
<td>(3) Art elective</td>
<td>(3) Art elective</td>
</tr>
<tr>
<td><strong>15 Total hours</strong></td>
<td><strong>15 Total hours</strong></td>
</tr>
</tbody>
</table>
SCULPTURE CURRICULUM

The program is designed to provide a solid grounding in basic techniques and materials and to expose students to the past and present directions in sculpture. A professional attitude is emphasized with the exploration of traditional and experimental methods and media.

**Requirements:**

81 Art Curriculum hours.  
9 Art History hours.  
21 Sculpture hours.  
3 Ceramics hours.  
3 Metalsmithing hours.  
15 Drawing hours.  
3 Painting hours.  
3 Printmaking hours.  
24 Art Elective hours.  
45 Core Curriculum hours.

**Model Program**

<table>
<thead>
<tr>
<th>Freshman</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td><strong>Second Semester</strong></td>
</tr>
<tr>
<td>165 (3) Drawing I</td>
<td>179 (3) Metalsmithing I</td>
</tr>
<tr>
<td>185 (3) Sculpture I</td>
<td>(3) Printmaking (175 or 275)</td>
</tr>
<tr>
<td>101 (3) History of World Art I*</td>
<td>102 (3) History of World Art II*</td>
</tr>
<tr>
<td>111 (3) English*</td>
<td>(3) English, 211 or 225*</td>
</tr>
<tr>
<td>(3) Humanities</td>
<td>(4) Biological Science*</td>
</tr>
<tr>
<td><strong>Total hours</strong> 15</td>
<td><strong>Total hours</strong> 16</td>
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<table>
<thead>
<tr>
<th>Sophomore</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td><strong>Second Semester</strong></td>
</tr>
<tr>
<td>285 (3) Sculpture II</td>
<td>268 (3) Life Drawing II</td>
</tr>
<tr>
<td>267 (3) Life Drawing I</td>
<td>(3) Painting (271 or 272)</td>
</tr>
<tr>
<td>(3) Ceramics (181 or 281)</td>
<td>(3) Art elective</td>
</tr>
<tr>
<td>(5) Physical Science*</td>
<td>(3) Humanities*</td>
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<td>(2) Humanities*</td>
<td>(2) Humanities*</td>
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<td><strong>Total hours</strong> 16</td>
<td><strong>Total hours</strong> 17</td>
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<table>
<thead>
<tr>
<th>Junior</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td><strong>Second Semester</strong></td>
</tr>
<tr>
<td>385 (3) Sculpture Studio</td>
<td>395 (3) Sculpture Studio</td>
</tr>
<tr>
<td>367 (3) Life Drawing Studio</td>
<td>(3) Sculpture Studio</td>
</tr>
<tr>
<td>(3) Art elective</td>
<td>(3) Art History elective</td>
</tr>
<tr>
<td>(3) Humanities*</td>
<td>(3) Art elective</td>
</tr>
<tr>
<td>(3) Social Science*</td>
<td>(3) Social Science*</td>
</tr>
<tr>
<td>111 (2) Speech*</td>
<td><strong>Total hours</strong> 15</td>
</tr>
<tr>
<td><strong>Total hours</strong> 17</td>
<td><strong>Total hours</strong></td>
</tr>
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<table>
<thead>
<tr>
<th>Senior</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td><strong>Second Semester</strong></td>
</tr>
<tr>
<td>485 (3) Advanced Sculpture Studio</td>
<td>185 (3) Advanced Sculpture Studio</td>
</tr>
<tr>
<td>467 (3) Advanced Drawing Studio</td>
<td>(3) Art History elective</td>
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<tr>
<td>(3) Art History elective</td>
<td>(3) Art elective</td>
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<tr>
<td>(3) Art elective</td>
<td>(3) Art elective</td>
</tr>
<tr>
<td>(3) Art elective</td>
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<tr>
<td><strong>Total hours</strong> 15</td>
<td><strong>Total hours</strong> 15</td>
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</tbody>
</table>

**GRAPHIC DESIGN (Commercial Art) CURRICULUM**

Professional program for students interested in a career in the field of visual communication. Conceptual and practical problem-solving in various media: photography, typography, design, and
drawing directed toward the development of design skills for communication purposes.

**Requirements:**

81 Art Curriculum hours.
3 Philosophy of Art hours.
36 Graphic Design hours.
11 Drawing hours.
3 Basic Design hours.
3 Color hours.
3 Painting hours.
22 Art Elective hours (Graphic Design and related areas).
45 Core Curriculum hours.

**Model Program**

**FRESHMAN**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>165 (3) Drawing I</td>
<td>193 (3) Color</td>
</tr>
<tr>
<td>171 (3) Basic Two-dimensional Design</td>
<td>102 (3) History of World Art II*</td>
</tr>
<tr>
<td>101 (3) History of World Art I*</td>
<td>(3) English, 211 or 225*</td>
</tr>
<tr>
<td>111 (3) English*</td>
<td>(3) Humanities*</td>
</tr>
<tr>
<td>(3) Humanities*</td>
<td>(3) Social Science*</td>
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<tr>
<td>15 Total hours</td>
<td>15 Total hours</td>
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**SOPHOMORE**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>295 (3) Basic Typography</td>
<td>297 (3) Layout &amp; Production Techniques</td>
</tr>
<tr>
<td>267 (3) Life Drawing I</td>
<td>268 (3) Life Drawing II</td>
</tr>
<tr>
<td>238 (3) Design Media I</td>
<td>239 (3) Design Media II</td>
</tr>
<tr>
<td>299 (1) Drawing for Commercial Art</td>
<td>272 (3) Painting II</td>
</tr>
<tr>
<td>(3) Humanities*</td>
<td>(5) Physical Science*</td>
</tr>
<tr>
<td>(3) Social Science*</td>
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<td>17 Total hours</td>
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**JUNIOR**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td>393 (3) Graphic Design I—Theory</td>
<td>394 (3) Graphic Design II</td>
</tr>
<tr>
<td>387 (3) Fashion Illustration I</td>
<td>388 (3) Fashion Illustration II</td>
</tr>
<tr>
<td>399 (1) Drawing for Commercial Art</td>
<td>397 (3) Advertising Illustration</td>
</tr>
<tr>
<td>(3) Humanities*</td>
<td>(3) Art elective</td>
</tr>
<tr>
<td>(2) Social Science*</td>
<td>(4) Biological Science*</td>
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<tr>
<td></td>
<td>(3) Humanities*</td>
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<tr>
<td>14 Total hours</td>
<td>18 Total hours</td>
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</table>

**SENIOR (select one area—Graphic Design or Fashion Illustration)**

<table>
<thead>
<tr>
<th>First Semester—Graphic Design</th>
<th>Second Semester—Graphic Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>493 (3) Graphic Design III—Media</td>
<td>494 (3) Graphic Design IV</td>
</tr>
<tr>
<td>(3) Art 497 or 487</td>
<td>(3) Philosophy of Art</td>
</tr>
<tr>
<td>(3) Art elective</td>
<td>(3) Art elective</td>
</tr>
<tr>
<td>(3) Art elective</td>
<td>(4) Art elective</td>
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<tr>
<td>(3) Art elective</td>
<td></td>
</tr>
<tr>
<td>15 Total hours</td>
<td>16 Total hours</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>First Semester—Fashion Illustration</th>
<th>Second Semester—Fashion Illustration</th>
</tr>
</thead>
<tbody>
<tr>
<td>487 (3) Advanced Fashion Illustration</td>
<td>487 (3) Advanced Fashion Illustration</td>
</tr>
<tr>
<td>493 (3) Graphic Design III—Media</td>
<td>462 (3) Philosophy of Art</td>
</tr>
<tr>
<td>(3) Art elective</td>
<td>(3) Art elective</td>
</tr>
<tr>
<td>(3) Art elective</td>
<td>(4) Art elective</td>
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<tr>
<td>(3) Art elective</td>
<td></td>
</tr>
<tr>
<td>15 Total hours</td>
<td>16 Total hours</td>
</tr>
</tbody>
</table>

**ART HISTORY CURRICULUM**

The program is designed to prepare students for the whole range of activities related to the art of the past: criticism, both college and secondary level teaching, and conservation. Students are exposed
to a view of art from earliest times to the present. The language of art as well as the historical framework is emphasized.

**Requirements:**
- 79 Art Curriculum hours.
- 33 Art History hours.
- 13 Foreign Language hours.
- 33 Liberal Arts hours.
- 45 Core Curriculum hours.*

**Model Program**

<table>
<thead>
<tr>
<th>FRESHMAN</th>
<th>SECOND SEMESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIRST SEMESTER</strong></td>
<td><strong>SECOND SEMESTER</strong></td>
</tr>
<tr>
<td>101 (3) History of World Art I</td>
<td>102 (3) History of World Art II</td>
</tr>
<tr>
<td>111 (3) English*</td>
<td>(3) English 211 or 225*</td>
</tr>
<tr>
<td>(3) Humanities*</td>
<td>(3) Humanities*</td>
</tr>
<tr>
<td>(3) Social Science*</td>
<td>(3) Social Science*</td>
</tr>
<tr>
<td>(3) Liberal Arts elective</td>
<td>(3) Liberal Arts elective</td>
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<td>15 Total hours</td>
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**SOPHOMORE**

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<th><strong>FIRST SEMESTER</strong></th>
<th><strong>SECOND SEMESTER</strong></th>
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<tbody>
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<tr>
<td>(5) major Foreign Language</td>
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<td>(3) Humanities*</td>
<td>(5) Physical Science*</td>
</tr>
<tr>
<td>(4) Biological Science*</td>
<td></td>
</tr>
<tr>
<td>111 (2) Speech*</td>
<td></td>
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<tr>
<td>17 Total hours</td>
<td>16 Total hours</td>
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</table>

**JUNIOR**

<table>
<thead>
<tr>
<th><strong>FIRST SEMESTER</strong></th>
<th><strong>SECOND SEMESTER</strong></th>
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<tbody>
<tr>
<td>(3) Art History elective</td>
<td>(3) Art History elective</td>
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<tr>
<td>(3) Art History elective</td>
<td>(3) Humanities: Foreign Literature in major language*</td>
</tr>
<tr>
<td>(3) Humanities: Foreign Literature in major language*</td>
<td>(3) major Foreign Language</td>
</tr>
<tr>
<td>(3) Social Science*</td>
<td>(2) Humanities*</td>
</tr>
<tr>
<td>(2) Humanities*</td>
<td>(3) Liberal Arts elective</td>
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<td>(3) Liberal Arts elective</td>
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<td>17 Total hours</td>
<td>14 Total hours</td>
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**SENIOR**

<table>
<thead>
<tr>
<th><strong>FIRST SEMESTER</strong></th>
<th><strong>SECOND SEMESTER</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(3) Art History elective</td>
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<tr>
<td>(3) Liberal Arts elective</td>
<td>463 (3) Seminar: Techniques of Art History</td>
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<tr>
<td>(3) Liberal Arts elective</td>
<td>(3) Liberal Arts elective</td>
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<tr>
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<td>(3) Liberal Arts elective</td>
</tr>
<tr>
<td>15 Total hours</td>
<td>15 Total hours</td>
</tr>
</tbody>
</table>

**BACHELOR OF ART EDUCATION DEGREE**

In addition to the scholastic and residence requirements for graduation from this University, candidates for this degree will complete a minimum of 131 semester hours. These hours will be distributed as follows: 51 Core Curriculum hours,* 48 Art Curriculum hours, 20 Art Education hours, and 12 Education hours. Electives will be selected in consultation with advisor.

The following program fulfills both the University general requirements for graduation and the Kansas State Certification requirements for teaching art at the Secondary and Elementary levels.
CORE CURRICULUM (51 hours recommended for the B. A. E. degree)

I. Natural Sciences: 12 hours required.
   Elect in at least two areas. A minimum of 4 hours must be a laboratory science.
   Physical:
   (1) Geology 111 (5 hours with lab).
   (2) Physical Science 101 (5 hours without lab).
   Biological:
   (1) Biology 100 (4 hours with lab).
   (2) Biological Science 102 (5 hours without lab).
   Engineering:
   (1) Engineering Science in Society 300 (3 hours).

II. Communications: 8 hours required.
   English 111 (3 hours).
   English 211 or 225 (3 hours).
   Speech 111 (2 hours).

III. Humanities: 15 hours required.
   Required:
   Art History (6 hours).
   Literature (6 hours).
   Elect one course from the following areas:
   History (3 or 4 hours).
   Philosophy or Religion (3 hours).

IV. Social Sciences: 12 hours required.
   Required:
   Psychology 111 (3 hours).
   Elect in two of the following areas:
   Anthropology, all courses (3 hours).
   Economics 221 (3 hours).
   Political Science 100, 121, or 211 (3 hours).
   Sociology 111 (3 hours).

V. Electives: 4 hours required.
   Credit courses offered by any department except the student’s major department.

ART EDUCATION CURRICULUM
A professional program for students interested in art teaching.
A structured program preparing majors to teach and supervise at various education levels. All majors are encouraged to specialize in either studio or art history offerings.

Requirements:
80 Art Curriculum hours.
48 Art hours.
20 Art Education hours.
12 Education hours.
51 Core Curriculum hours.

Model Program

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>165 (3) Drawing I</td>
<td>185 (3) Sculpture I</td>
</tr>
<tr>
<td>179 (3) Metalsmithing I</td>
<td>(3) Art Elective (2-D Area)</td>
</tr>
<tr>
<td>301 (3) History of World Art I*</td>
<td>102 (3) History of World Art II*</td>
</tr>
<tr>
<td>111 (3) English*</td>
<td>(3) English 211 or 225*</td>
</tr>
<tr>
<td>(3) Humanities*</td>
<td>(3) Social Science*</td>
</tr>
<tr>
<td><strong>15 Total hours</strong></td>
<td><strong>15 Total hours</strong></td>
</tr>
</tbody>
</table>

COLLEGE OF FINE ARTS 285
SOPHOMORE

FIRST SEMESTER
267 (3) Life Drawing I
271 (3) Painting I
(3) Ceramics (181 or 281)
(4) Natural Science* (Biological)
(3) Humanities*  
 16 Total hours

SECOND SEMESTER
268 (3) Life Drawing II
272 (3) Painting II
(3) Art Elective (3-D Area)
(3) Art Specialization elective
(3) Art Ed. in Elem. (241 or 341)
 17 Total hours

JUNIOR

FIRST SEMESTER
(3) Art Specialization elective
(3) Art History elective
232 (4) Intro. Study of Teaching (Ed.)
(5) Natural Science* (Physical)  
 18 Total hours

SECOND SEMESTER
(3) Art Specialization elective
442 (3) Art Ed. Sec. (Art Ed.)
(3) Soc. School Student (Ed.)
(3) Social Science*
(3) Humanities*
(2) Humanities*  
 17 Total hours

SENIOR

FIRST SEMESTER
(3) Art Specialization elective
(3) Art History elective
343 (3) Fiber & Fabric (Art Ed.)
(3) Natural Science*
(3) Social Science*
(2) Humanities*
 17 Total hours

SECOND SEMESTER (Teaching Block)
406 (4) Art Curricular (Art Ed.)
428 (3) Social Aspects Teaching (Ed.)
433 (2) Psych. Aspects Teaching (Ed.)
447 (7) Student Teaching (Art Ed.)  
 16 Total hours

STUDENT TEACHING

Admission into the student teaching semester requires senior standing (90 hours—200 credit points); a minimum cumulative grade-point index of 2.25 and 2.50 in art courses at the time of application for student teaching; grade of C or better in English 111 or its equivalent; a grade of C or better in Speech 111; completion of Ed. 232, 333; Art Education 241, 343, 442; satisfactory physical examination; recommendation by the Department of Art Education. Applications for student teaching must be on file with and approved by the Director of Art Education by mid-term of the spring semester prior to the academic year in which student teaching is anticipated.

ART CURRICULUM

Lower Division Courses


102. History of World Art II. (3). A survey of world art from the 14th century to the mid 19th century.

161. Introduction to the Visual Arts. (3). An introduction to the understanding of images and materials in the visual arts in relation to the geographical, historical, religious, social, and economic conditions of the Western world. Designed for the non-art major.


286 COLLEGE OF FINE ARTS
171. Basic Two-Dimensional Design. (3). Introduction to the principles of design and practice in various media. A study of the two-dimensional surface in relation to the formal elements of space, form, color and consequent structure.

172. Basic Three-Dimensional Design. (3). Introduction to the principles of three-dimensional design. A study of relationships of mass and space using diverse media.


179. Metalsmithing I. (3). An introduction to metalsmithing. Stress placed on jewelry design, basic processes of construction, soldering, finishing, and stone setting.

181. Ceramics I. (3). Introduction to hand building, wheel throwing, and glazing methods. Basic knowledge involving the physical characteristics of clay and glazes. Reading assignments.

185. Sculpture I. (3). An introduction to basic sculpture techniques and materials. Direct work in plaster, clay, wood and metal; casting in plaster and concrete.


211. Greek Art. (3). An introductory study of Greek art from the Archaic to Hellenistic periods. The course will cover architecture, sculpture, and vase painting, with emphasis on the art of Pericles' Athens.

212. Roman Art. (3). An introduction to the art of Rome from the age of Augustus to the age of Constantine.

221. Italian Renaissance. (3). A study of the architecture, sculpture, and painting from the 13th century to the 16th. Emphasis will be given to early developments in Florence and Siena and late developments in Rome.

222. Italian Baroque. (3). A study of Baroque painting, sculpture, and architecture in Rome, Venice, and Bologna from 1600 till 1750, with emphasis on the Carracci, Bernini, and Tiepolo.

229. Introduction to Methods and Media of Painting. (3). Survey of painting methods from the 12th to 20th century. History and nature of materials. Includes encaustic, tempera, oil, oil-resin, synthetic media, grounds, supports, and surface protection. Prerequisite: Prior or concurrent enrollment in painting, or art history major.

238. Design Media I. (3). Introductory course in photography and related materials (color-key, ortho film for process and plate-making). Prerequisite: Art 171 and consent of instructor.

239. Design Media II. (3). Introductory course in motion picture photography and television. Prerequisite: Art 238 and consent of instructor.

240. Art Fundamentals for the Classroom Teacher. (3). For students without previous art background who plan to teach in the elementary school classroom. Study of fundamental methods, materials, and concepts used to develop art knowledge and skills in the elementary age levels.

241. Art Education in the Elementary School. (3). Study of philosophy, psychology, and sensory growth of the elementary age student with emphasis on the development of the art program for this level. Prerequisite: Art Education major, or Art 240, or consent of instructor.

267 and 268. Life Drawing I & II. (3-3). Drawing from life with emphasis on figure construction. Anatomy sketchbooks and portfolios required. Prerequisite: Art 165.

272. Painting II. (3). An introduction to watercolor painting in both transparent and opaque media. Prerequisite: Art 165.

275. Printmaking II. (3). Basic intaglio methods (etching, engraving, soft ground, aquatint, and mixed techniques). Prerequisite: Art 165.

279. Metalsmithing II. (3). Forging and casting problems in metalsmithing. Stress placed on craftsmanship and design. Prerequisite: Art 179.

281. Ceramics II. (3). Experience in hand building, wheel throwing, glazing methods. Lecture periods involving general knowledge of clays, glazes, kilns, historical and contemporary pottery.

282. Ceramics III. (3). Experience in hand building, wheel throwing, glazing methods, and firing procedures. Lecture periods involving special studies of glazes and glaze materials, historical and contemporary pottery. Prerequisite: Art 281.

294. Study of Ceramic Materials I. (3). Lectures and research covering clays, glazes, and refractory materials. Reading assignments concerning physical and chemical characteristics of pottery materials.

295. Sculpture II. (3). An introduction to sculptural techniques in welded steel, assemblage, and vacuum formed plastic. Prerequisite: Art 185.

296. Basic Typography. (3). Lettering as related to type families and applied to advertisements. A study of type and its use. Prerequisite: Art 165 and 171.


299. Drawing for Commercial Art. (1). Directed practice in drawing in various media for Commercial Art. Outside assignments with weekly critique. Maximum credit 2 hours by re-enrollment. Prerequisite: Consent of instructor.

Upper Division Courses

302. 18th and 19th Century European Art. (3). A history of European art from Watteau through Post-Impressionism.

303. 18th and 19th Century American Art. (3). A history of American art from the colonial period through the 19th century.


307. Medieval Art I. (3). A study of the art of Europe and Byzantium from the time of Constantine to Charlemagne. An emphasis will be put on style and iconography as it develops in mosaics and illustrated manuscripts.

308. Medieval Art II. (3). A study of Romanesque and Gothic architecture and sculpture with special attention being given to the developments in France.

313. Art of the Ancient Near East. (3). Survey of the arts of ancient Egypt and Mesopotamia, concluding with a consideration of the interaction between Near Eastern art and Classical art.
338. Design Media Studio. (3). Advanced study of photography. May be repeated for credit. Prerequisite: Art 238 and consent of instructor.

341. Art Education Curriculum in the Elementary School. (3). Study of developmental characteristics of the elementary age student and the development of the art program with respect to materials, skills and knowledge content. Prerequisite: Art Education major.

343. Fiber and Fabric Processes. (3). Fiber processing and structuring in traditional and experimental processes in woven forms and other structural techniques using natural and man-made fiber. Prerequisite: Art 241 or consent of instructor.

367. Life Drawing Studio. (3). Emphasis on individual development, figurative observation and interpretation. May be repeated for credit. Prerequisite: Art 267 and 268.

371. Painting Studio. (3). Emphasis on individual development, personal interpretation and creativity. May be repeated for credit. Prerequisite: Art 271 and 272.

375. Printmaking Studio. (3). Introduction to lithography, printing from the stone in black and white. May be repeated for credit. Prerequisite: Art 165.

379. Metallurgy and Metalworking. (3). Exploration of processes of fabrication of hollowware and jewelry. May be repeated for credit. Prerequisite: Art 179.

381. Ceramics Studio. (3). Advanced studio problems involving forming methods. Experience in glaze formulation and kiln firing. Lecture periods of advanced studies of ceramic materials, historical and contemporary pottery. May be repeated for credit. Prerequisite: Art 282.

385. Sculpture Studio. (3). Special emphasis on the main approaches to sculpture. Stress is placed on the form, concept and construction of sculpture. Carving techniques in wood, stone, and/or plastic. Construction and assemblage techniques selected from wood, plastic, metal (welded, brazed, riveted, etc.) and/or combined materials. May be repeated once for credit. Prerequisite: Art 285.


388. Fashion Illustration II. (3). Development of the fashion figure. Interpretation of varied textures of furs, fabrics, leathers, etc. Problems in layout peculiar to fashion advertising. Work in media for newspaper and magazine reproduction. Prerequisite: Art 387.

393. Graphic Design I—Theory. (3). Experimentations with visual phenomena and its use in the communication of ideas through visual means. Studio practice coordinated with discussion of art theory, philosophy, and history of design. Prerequisite: Art 297.

394. Graphic Design II. (3). Introduction to printing processes; letterpress, offset printing, and photo-silk screen. Prerequisite: Art 239 and 393.

397. Advertising Illustration. (3). Development of skills used in stating a pictorial idea. The application of these skills to the needs of editorial advertising illustration. Blank and white media. Prerequisite: Art 267 and 272.

399. Advanced Drawing for Commercial Art. (1). Directed practice in drawing for Commercial Art. Outside assignments with weekly critique. Maximum credit 4 hours by re-enrollment. Prerequisite: Consent of instructor.

406. Art Curriculum and Supervision Method. (4). The construction of curriculum for elementary, junior and senior high levels; techniques of supervision and administration of an art program.

421. Northern Renaissance. (3). A study of French, Flemish, and German painting from Parisian illumination in the 14th century to Durer.

422. Northern Baroque. (3). A study of the art of Flanders and Holland during the 17th century. While a variety of artistic expression is shown with examples from a great many artists, the discussion culminates in an extensive study of the two dominant figures, Peter Paul Rubens and Rembrandt Van Rijn.

442. Art Education in the Secondary School. (3). The study of philosophy, objectives, and classroom procedures directed toward the development of informational and studio skills at the secondary level.

450. Art Workshop. (1-3). May be repeated for credit. (The area to be covered will be inserted at the time course is offered.)

455. Color and Design. (3). The psychology and optics of color perception and expression in design. Application of color theory to film making, exhibition design, and advertising.


463. Seminar: Techniques of Art History. (3). A culminating study for seniors majoring in art history in which will be considered the history of the discipline, its research methods and theory. Extensive readings and reports. Prerequisite: Consent of instructor.

467. Advanced Drawing Studio. (3). Drawing with a variety of media. Graphic problems relative to individual technical and aesthetic development. Group critiques. May be repeated for credit. Prerequisite: 3 semesters of Life Drawing.

471. Advanced Painting Studio. (3). For the professionally oriented student. Emphasis on independent achievement and preparation for graduate study. May be repeated for credit. Prerequisite: Art 371 and consent of the painting/drawing faculty.

475. Advanced Printmaking Studio. (3). For the student interested in professional printmaking. Printmaking from the individual viewpoint with options in technique. Specialization in combined methods in color printing or black and white. May be repeated for credit. Prerequisite: Art 175 or 275.

479. Advanced Metalsmithing Studio. (3). Raising, forging, and casting problems in silver and other nonferrous metals. Stress placed on craftsmanship and design. Maybe repeated for credit. Prerequisite: Art 179.

481. Advanced Ceramics Studio. (3). Advanced studio problems involving forming methods, glaze formulation and firing procedures. Lecture periods involving advanced studies of ceramic materials and glaze formulation. May be repeated for credit. Prerequisite: Art 381.

484. Study of Ceramic Materials II. (3). Lectures and research covering clays, glazes, and refractory materials. Reading assignments concerning physical and chemical characteristics of pottery materials.

485. Advanced Sculpture Studio. (3). Sculpture in any medium with an emphasis on personal development and creativity. May be repeated for credit. Prerequisite: Art 385.
487. **Advanced Fashion Illustration.** (3). Fashion drawings of costumed models for newspaper and magazine layouts. Merchandising and fashion elements analyzed in black and white and color. Consideration of reproduction requirements. May be repeated for credit. Prerequisite: Art 388.

493. **Graphic Design III—Media.** (3). Application of design media in the applied arts. May be repeated for credit. Prerequisite: Art 394.

494. **Graphic Design IV.** (3). A comprehensive study of the corporate image. Development, coordination, and execution of a corporate design program. This course emphasizes conceptual aspects of Graphic Design. May be repeated for credit. Prerequisite: Art 394.

497. **Advanced Advertising Illustration.** (3). Continuation of Art 397. Color media. May be repeated for credit. Prerequisite: Art 397.

**Graduate Courses**

501. **Seminar in Art.** (3). Supervised study and research in the following art areas: (a) Painting, (b) Printmaking, (c) Ceramics, (d) Sculpture, (e) Metalsmithing, (f) Art Education, (g) Art History, (h) Crafts, (i) Drawing, (j) Graphic Design. Weekly consultation and reports. Individual areas may not be repeated for credit. Prerequisite: Consent of instructor.

505 & 506. **Special Problems in Painting.** (3 or 5, 3 or 5). Professional and experimental painting with emphasis on the development of maturity, ideas, independent thinking, and personal expression. Mediums: oil, watercolor, synthetic media. May be repeated for credit.

507 & 508. **Special Problems in Printmaking.** (3 or 5, 3 or 5). Advanced printmaking on an individual basis; encouragement given to investigation and an experimental attitude combined with a craftsmanlike approach. Techniques include all intaglio methods, lithography and relief, black and white, and color. May be repeated for credit.

509 & 510. **Special Problems in Sculpture.** (3 or 5, 3 or 5). Advanced sculpture with emphasis on experimentation and high quality work on an individual basis. Special projects in casting, architectural sculpture, mixed media, or new materials and techniques will be stressed. May be repeated for credit.

511 & 512. **Special Problems in Ceramics.** (3 or 5, 3 or 5). Research in advanced problems in ceramics. May be repeated for credit.

513 & 514. **Special Problems in Metalsmithing.** (3 or 5, 3 or 5). Large raising and/or forging problems in silver and other nonferrous metals. Stress placed on craftsmanship and design. Maybe repeated for credit.

517 & 518. **Research Problems in Art Education.** (3-3). Orientation in research methods, findings and designs related to the analysis of studies and current problems in art education. May be repeated once for credit. Prerequisite: Consent of instructor.

519. **Development of Art Understanding in the Educational Program.** (3). Readings, observation and evaluative techniques in the development of concepts and materials for art understanding. Prerequisite: Consent of instructor.

521 & 522. **Special Problems in Drawing.** (1 or 3, 1 or 3). Advanced drawing in various media with emphasis on independent work and development of personal expression. May be repeated for credit.

523. **Fiber and Fabric Processes.** (3). Fiber processing and structuring in traditional and experimental processes in woven forms and other structural techniques using natural and man-made fibers. Prerequisite: Consent of instructor.
531. Seminar: Art of the 18th and 19th Centuries. (3). Selected readings and problems in 18th and 19th century art, emphasizing aesthetic theory and the history of ideas.

532. Seminar: Art since 1945. (3). Selected readings and problems in contemporary art.

548. Advanced Research of Ceramic Materials. (3). Lectures and advanced research covering clays, glazes, and refractory materials. Reading assignments concerning physical and chemical characteristics of pottery materials. Notebook and outside lab work required.

551. Graphic Design Media. (3). Application of design media in the applied arts. May be repeated for credit.

553. Typography. (3). The study of typography in visual communication and its use in graphic design. Laboratory work in designing, setting, printing, and binding original design.

555. Graphic Design Theory. (3). Experimentation in visual phenomena and its use in the communication of ideas through visual means. Studio practice coordination with discussion on design theory, philosophy and history of design. May be repeated for credit.

557. Production Techniques. (3). Laboratory problems in planning and executing design work for the various graphic media. A study of office practices related to the operation of a studio and the production of art.

561. Methods and Media of Painting. (3). Painting methods from the 12th to 20th century. History and nature of materials. Includes encaustic, tempera, oil, oil-resin, synthetic media, grounds, supports, and surface protection. Prerequisite: Consent of instructor.


567. Special Problems in Life Drawing. (1 or 3). Drawing from life. Sketchbooks and portfolios required. May be repeated for credit.


577-578. Terminal Project. (3 or 5, 3 or 5).

SCHOOL OF MUSIC

HOWARD E. ELLIS, Ph. D., Assistant Dean

The School of Music provides courses, programs, and curricula which are designed to train and educate serious music students who are planning careers in the music profession, and to allow students in other colleges to gain an understanding of music as a humanistic study. Recitals by students, faculty, and guests, augment the overall community programs in the Fine Arts. The School of Music is an accredited member of the National Association of Schools of Music. Requirements for entrance and graduation are in accordance with its published regulations.

Two undergraduate degrees are offered by the School of Music: (1) The Bachelor of Music Education—containing a minor in education meeting the state requirements for the secondary three-year...
certificate and degree three-year elementary certificate. There are two options within this degree: (a) the Bachelor of Music Education General degree (Instrumental Emphasis) which is offered to satisfy the needs of the student whose chief performing medium is instrumental or keyboard, and who plans to enter the field of instrumental music teaching in the public schools; (b) the Bachelor of Music Education degree (Vocal Emphasis) which is offered to satisfy the needs of the student whose chief performing medium is voice or piano, and who plans to enter the field of vocal music teaching in the public schools.

(2) The Bachelor of Music in Performance may emphasize either a performing medium (piano, organ, voice, strings, wind or percussion), or theory-composition as the major area of concentration.

REQUIREMENTS

ADMISSION

All entering freshmen will be enrolled in the University College. Upon completing 24 semester hours of specified courses with a minimum grade point average of 1.700 the student is eligible to enroll in the School of Music; students transferring with 64 or more semester hours must have earned a 2.000 grade point average.

Transfer students may enroll in the School of Music if transcript indicates that student has completed a minimum of 24 semester hours with a grade point average of 2.000 (C) or higher. Students with grade average of 1.700 and less than 2.000 may petition for admittance to the School of Music. Transfer students who do not meet this minimum requirement will be enrolled in the University College until this requirement is met.

Majors in music must demonstrate performance ability on one instrument or voice to the satisfaction of the music examining committee following registration. Entering students unable to meet applied music requirements will be enrolled in Applied Music 9 or 10 until they attain proficiency necessary to meet the requirements of Applied Music 11. Prospective students are urged to contact the School of Music office with regard to dates when ACT and other tests will be administered. The result of these tests are utilized for counseling purposes.

Freshmen who elect to major in music should indicate this on the Application for Admission form by placing a mark opposite the words “College of Fine Arts,” and by writing the word “Music” directly below. This will provide the student with a faculty advisor from the School of Music staff.

For additional details write to the School of Music, Wichita State University, Wichita, Kansas 67208.
PROFICIENCY EXAMINATIONS

In order to determine the status of all students in applied music, proficiency examinations will be given following the registration period. Thereafter, repertoire cards will be maintained, recording the student's progress each semester. The piano proficiency examination for all music degree students may be taken by entering students whose background indicates they may pass this requirement without enrolling in class or private piano (non-piano majors). If the requirement is met, the student may elect other interest areas or additional private study in piano courses designed for the non-piano major. Transfer students who submit proof, by official transcript or letter from the Dean, of completion of a comparable piano proficiency examination will be exempt. Proficiency examinations in music theory will also be given new students. Those deficient will be required to enroll concurrently in remedial work until competency has been attained. All proficiency examinations must be passed before the student will be allowed to practice-teach.

PROBATION AND DISMISSAL STANDARDS

It is expected that students will make satisfactory progress in their studies. A student who fails to do so may be placed on probation at any time and ultimately dismissed from the University.

Students who have earned up to 63 hours will be required to earn a Grade Point Average of at least 1.7 each semester. Students who have completed more than 63 hours will be required to earn an average of at least 2.000 each semester.

A student with less than 64 hours not on probation who fails to earn a Grade Point Average of at least 1.7 in any semester will be placed on probation for the following semester. At the end of the semester in which the student has been placed on probation, and was required to earn at least a 2.000 grade point average, his transcript will be reviewed. Students who failed to earn the required average will be dismissed. Students who live up to the probation requirements will be continued on this status as long as they earn at least a 2.000 average and until their accumulative Grade Point Average has reached the minimum level commensurate to their hours of college credit earned.

A student with more than 63 hours not on probation who fails to earn a Grade Point Average of 2.000 in a semester will be placed on probation for the following semester. At the end of the semester in which the student has been on probation, he will be continued on probation if his Grade Point Average for the semester is at least 2.000 and until he reaches a cumulative GPA of 2.000. If he fails
to earn at least a 2.000 for any semester on probation, he will be dismissed for poor scholarship. *(Note)*

A student who has been dismissed for poor scholarship may enroll only with special permission of the Committee on Admissions and Exceptional Programs.

**STUDENT TEACHING**

Admission into the student teaching semester requires a minimum *cumulative* grade-point index of 2.25; a minimum grade-point index of 2.50 in music courses; senior standing (90 hours—200 credit points); a grade of C or better in English 111 or its equivalent; a grade of C or better in Speech 111; completion of Ed. 232, and Ed. 333; physical examination passed; transfer student must satisfy Education department requirements for Ed. 232 if not taken at Wichita State University; application on file with, and approval of, The Admissions Committee of the College of Education; application filed with the Chairman of the Music Education Department by mid-term of the spring semester prior to the academic year in which student teaching is requested; recommendation of Music Education department; *must have passed piano proficiency*; must have completed sequence of Music Education methods (Elementary vocal major 201, 301; Elementary instrumental major 202, 302 plus Methods 135 through 140; Secondary vocal major 203, 303; Secondary instrumental major 204, 304, plus Methods 135 through 140); instrumental majors must have completed Music 142.

**APPLIED MUSIC REGULATIONS**

(1) A minimum of 10 hours practice per week is required for 2 semester hours credit for applied music in the chief performing medium. Practice rooms are available to all students in the School of Music who are enrolled for any phase of applied music. For practice room fee see departmental fees, page 48.

(2) Applied music instruction at the college level shall be on the University campus with approved music faculty staff.

(3) Any credit for applied music requested on the basis of transfer from other institutions shall be subjected to the normal routine of the Committee on Admissions, Advanced Standing, and Exceptional Programs.

(4) Music major applied classifications are: 9-10, pre-major or secondary; 11-12, freshman; 21-22, sophomore; 31-32, junior; 41-42, senior. These classifications are determined during jury examinations of appropriate semesters.

*Note:* No student on probation who enrolls in fewer than 7 hours shall be placed on academic dismissal for failure to raise the cumulative grade point index to the required level; however, if such a student has earned 7 or more hours in two or more terms, the cumulative grade point index including these hours shall be used to determine whether he shall be academically dismissed.
Secondaries will take class or private lessons until proficiency requirements are met.

(5) Prior to graduation, candidates in various phases of applied music must pass an examination on the list of materials from the outline below:

Candidates for any degree in music must pass an examination in keyboard proficiency and pass an examination on materials in the chief performing medium, e.g., requirements listed under Piano 20 or Voice 20.

(6) Candidates for the degree of Bachelor of Music must, before graduation, be classified as follows:

**Vocal majors**—Voice 42 and Piano 20.

**Keyboard majors**—Piano or Organ 42, and Secondary Medium 20 or 22 as appropriate.

**Instrumental majors**—Major instrument 42, and Secondary Medium 20 or 22.

**Theory-composition majors**—Piano or Organ 22, chief performing medium 22. If chief performing medium is that elected to fulfill the Piano and Organ requirement, level 32 is required.

(7) A specified number of ensembles is required of all students according to degree requirements described in the catalog. Specific ensembles must be scheduled in consultation with faculty adviser.

**RECITALS**

Each student shall be required to declare a performance medium, and in this major area he shall be required to present a public or jury recital. A jury recital is performed before at least 3 faculty members.

Each student is to present to an examining committee, at the end of the semester preceding the recital semester, a projected senior recital program. It shall be the function of the examining committee to determine at this time: (1) The suitability of the projected program; (2) the capability of the student to perform this program publicly; or whether this program shall be performed before a faculty jury.

A selection of student compositions representing large and small forms, totaling a minimum of twenty minutes in duration shall be performed publicly as the senior recital for the theory-composition major. In addition the student may elect to present a recital in his chief performing medium with the permission of his applied music instructor and achievement of junior standing in that instrument—applied level 31.

No graduating senior may prepare or perform the graduation recital without the guidance of a full-time staff member. In the event the required credit hours in applied music are earned prior
to the recital presentation, the student is expected to elect the applied major during the preparation for recital performance. When a student attains an Applied Music classification of 11 or above, he must perform each semester in a studio recital or its equivalent.

Attendance is required at 18 specified recitals and concerts each semester sponsored by the School of Music. The recital requirements are outlined at the first Tuesday afternoon recital following registration.

Seniors are required to attend 9 recitals during the semester in which they are enrolled in student teaching.

GRADUATE MUSIC STUDIES

The Graduate School offers a program leading to a Master of Music Education or a Master of Music degree in Performance or Theory. This program may be pursued during the summer session or during the regular fall and spring terms. For information concerning requirements for entrance and curriculum consult the Director of Graduate Music Studies, School of Music, Wichita State University.

MUSIC MAJOR IN THE COLLEGE OF LIBERAL ARTS AND SCIENCES

Students in the College of Liberal Arts and Sciences who wish to major in music are required to elect 41 hours as specified in the following areas and course listings:

GROUP I
Music Literature and History ........................................ 8 hours
113, 331-332.

GROUP II
Music Theory .................................................. 16 hours
127-128, 129-130, 227-228, 229, 323.

GROUP III
Counterpoint .............................................. 2 hours
361.

GROUP IV
Conducting, Orchestration and Choral Arranging .................... 4 hours
217 or 218 and 441 or 445.

GROUP V
Applied Music (4 semesters) ......................... 4 hours
Voice, Piano, Organ or Orchestral Instrument.

GROUP VI
Ensemble ................................................ 3 hours
Select in consultation with adviser.

GROUP VII
Electives from the areas of Music Literature, Music Theory, Counterpoint, Conducting, Orchestration, and Choral Literature ........... 4 hours
Competence in performance in one medium in applied music must equal performance of music major at termination of Freshman year.

MUSIC MINOR IN THE COLLEGE OF LIBERAL ARTS AND SCIENCES

A music minor in Liberal Arts consists of 18 hours selected from the following: Music 127-128, 129-130, 113, 227-228, 229-230, 323, 331, 332, a maximum of 4 hours of ensembles and a maximum of 2 hours (2 semesters) in applied music. Students who choose to utilize 2 hours of applied music must meet the requirements of Applied Music 11.

GRADUATION REQUIREMENTS

BACHELOR OF MUSIC DEGREE REQUIREMENTS

(1) General graduation requirements of the University, see page 58.

(2) Music requirements for Bachelor of Music in Theory-Composition:

Applied Music:
- Chief performing medium (piano, organ) .......................... 16 hours
- Other performing media ............................... 4 hours
- or
- Chief performing medium (non-keyboard) .......................... 8 hours
- Keyboard performing medium ............................... 8 hours
- Other performing media ............................... 4 hours

Theory and Composition:
- History and Literature of Music:
  - Music 113-114 and 331 and 332 ............................... 10 hours
- Conducting:
  - Music 217 or 218, and 451 or 491 ............................... 4 hours
- Ensembles ............................... 10 hours
- Electives (Music or non-music courses) .......................... 11 hours

Recital attendance for seven semesters plus senior recital. The theory-composition major is required to present for public performance a selection of his compositions representing large and small forms, totaling a minimum of twenty minutes. In addition the student may elect to present a recital in his chief performing medium with the permission of his applied music instructor and achievement of junior standing in that instrument—applied level 31.

(3) Music requirements for Bachelor of Music in Performance (Instrumental major).

Applied Music:
- Chief performing medium ............................... 24 hours
- Second performing medium (4 semesters) ....................... 4 hours

Theory:
- Music 127-128, 129-130, 227-228, 229-230, 323, 361, and 441 .......................... 22 hours

History and Literature of Music:
- Music 113-114 and 331-332 ............................... 10 hours
Conducting:
Music 217 or 218 and 451 or 491 ........................................... 4 hours
Ensembles ..................................................................... 12 hours
Electives (either music or non-music courses) o. ......................... 11 hours
Senior Recital .................................................................. 1 hour
Attendance at specified number of recitals per semester for 7 semesters plus senior recital.

(4) Requirements for Bachelor of Music Performance (Vocal major).

Foreign Languages ............................................................. 20 hours
French 111-112
German 111-112
Italian 111-112
(10 hours in each of 2 of the above 3 languages.)
A student with 2 units of a foreign language from high school may continue this language for elective credit, but is required to take, in addition to this language, 10 hours in each of 2 of the 3 languages listed above.

Applied Music:
Voice .................................................................................. 24 hours
Piano (2 semesters) ........................................................... 2 hours
Study in another instrument may be substituted if student meets proficiency in Piano 10.

Theory:
Music 127-128, 129-130, 227-228, 229-230, and 323 ............... 18 hours
History and Literature of Music:
Music 113-114, 331-332 ..................................................... 10 hours
(Above courses count in the Core under Humanities)

Conducting:
Music 218 ......................................................................... 2 hours

Voice Pedagogy and Repertoire:
Music 425, 426 .................................................................. 5 hours

Ensembles ............................................................................ 10 hours

Electives in upper division Theory, Conducting, Choral Materials, or Music Theater Directing .................. 4 hours

Senior Recital ...................................................................... 1 hour

Attendance at specified number of recitals per semester for 7 semesters plus senior recital.

*Bachelor of Music Education Degree Requirements

(1) The following program fulfills both the University requirements for graduation and the Kansas State Certification requirements and is required of all Bachelor of Music Education degree candidates:

Mathematics and Natural Sciences ........................................ 12 hours
A minimum of 4 hours must be a laboratory science. Courses must be taken in at least 2 of the following 3 subdivisions:
(1) Mathematics; (2) Physical Science; (3) Biological Science.

Communications .................................................................. 8 hours
English 111 & 211, or equivalent; Speech 111

Humanities ........................................................................ 12-15 hours
Fine Arts: Music 113, 331 & 332
Literature (English or Foreign Language)
Electives from History, Philosophy, Religious Education, or American Civilization as listed in the University Requirements for Graduation
Social Sciences ............................................ 9-12 hours
Economics 221 or Political Science 121 or 211
Psychology 111
Sociology and Anthropology 111 or 124
(For state Certification, History may be added to this area.)
Electives in non-music courses ......................... 10 hours
To be selected from Mathematics and Natural Sciences,
Communications, Humanities or Social Sciences; 1-4 hours of
Marching Band, P. E., or Aerospace Studies may apply.
Education ............................................. 25-31 hours
Ed. Psych. 233, or 333, and 433 *
Fd. Ed. 232 and 427, or 428 *
Elementary Education 447M *
Secondary Education 447M *
(Additional courses required in this category are listed below
under instrumental/vocal emphasis programs.)
* These courses must be taken concurrently during the student-teaching semester.

Bachelor of Music Education-General Degree
(Instrumental Emphasis)

The following additional courses are required of all Bachelor of
Music Education degree candidates (Instrumental Emphasis):

Applied Music
Chief performing medium .................................. 8 hours
Second performing medium ............................... 2 hours
Third performing medium ............................... 2 hours

The above must include completion of keyboard proficiency
and must include 2 hours of voice (1 semester of applied voice
and 1 semester of Music 142). The above minimums are subject
to requirements of the chief performing medium 22 and secondary
performing medium 10. Keyboard majors with an instrumental
background who elect the Instrumental Emphasis program must
include 2 semesters of one orchestral instrument as the third
performing medium.

Theory: Music 127-128, 129-130, 227-228, 229-230, 323, 441
or 445 ................................................ 20 hours

Conducting: Music 217 or 218 and Music 451 or 491 ......... 4 hours

Ensembles .............................................. 10 hours

Wind and Percussion majors are required a minimum of 6 hours
in Music B and 2 hours of Music M. The exceptions are: (1) 2
hours of Music B will be waived if the student elects 4 hours of
Music M; (2) Women with elementary instrumental emphasis are
not required to elect Music M; and (3) Upperclass transfer stu-
dents, except women with elementary emphasis, are required only
1 hour of Music M.

Keyboard Majors following the Instrumental emphasis program
are required a minimum of 4 hours of instrumental ensembles.

Recital attendance for 7 semesters plus senior recital.

Music Education:
Music 202, 302 and 402 * (elementary instrumental emphasis) or
Music 204, 304 and 404 * (secondary instrumental emphasis) .... 7 hours
Music 135, 136, 137, 138, 139 and 140 ....................... 6 hours
* These courses must be taken concurrently during the student-teaching semester.

Bachelor of Music Education—General Degree
(Vocal Emphasis)

The following additional courses are required of all Bachelor of
Music Education degree candidates (Vocal Emphasis):

300 COLLEGE OF FINE ARTS
Applied Music
Chief performing medium, minimum Piano 22 or Voice 22 8 hours
Second performing medium, minimum Piano 10 or Voice 10 2 hours
Applied Music Electives 2 hours
Keyboard majors must elect 2 hours of voice (1 semester of applied voice and 1 semester of Music 142) and complete the keyboard proficiency examination

Theory:
Music 127-128, 129-130, 227-228, 229-230, 323, 445 20 hours
Conducting:
Music 217 or 218 and 451 or 491 4 hours
Ensembles 10 hours

*Voice majors, secondary emphasis, are required to enroll for 2 hours of small vocal ensemble and 2 hours of opera workshop.
*Keyboard majors are required to enroll for 5 hours of vocal ensemble; it is recommended that 2 of the remaining hours be in Piano Accompaniment or Chamber Music Performance.

Music Electives (May not be in applied music) 6 hours
Piano majors in vocal emphasis program must elect Music 381.
Music 142 may apply here.
Recital Attendance for 7 semesters plus senior recital.

Music Education:
Music 201, 301, 401* (elementary vocal emphasis) or Music 203, 303, 403* (secondary vocal emphasis) 7 hours
*These courses must be taken concurrently during the student-teaching semester.

CURRICULUM FOR PIANO

Non-majors

Piano 9-10. (1-1). Group instruction is designated for music majors who have not passed the requirements for the piano proficiency examination. Private instruction by departmental consent only. Prerequisite: Theory 127 or concurrent.

Piano 9a10a. (1-1). Material from technical studies and standard repertoire assigned by the instructor to fit the needs of the individual non-music major student.

Piano 19-20. (1-1). Course designed for secondaries. (Non-music majors and non-piano majors who have passed the piano proficiency.) Special emphasis is placed on developing skills in sight reading. May be re-elected.

Piano Majors

Piano 11-12. (2 to 4—2 to 4. First course for the student who enrolls with piano as a major study. Suggested level of material: Bach, Two-Part Inventions; a complete Sonata in Classic Style; Character Pieces from the Romantic Period; Bartok, Mikrokosmos, Book IV. Students who fail to achieve this level of accomplishment will be placed on probation by the Keyboard Department and required to repeat Piano 12 until this level is satisfactorily attained. All Piano Majors are expected to complete the Piano Proficiency* examination during the Freshman year.


Piano 31-32. (2 to 4—2 to 4). Technical materials and studies adopted to the needs of the student.* Suggested level of materials: Bach, Well-Tempered Clavier; Beethoven, Sonata, Op. 31, No. 2; Chopin, Etudes; Brahms, shorter works; Debussy, Preludes; Copland, Passacaglia.
Piano 41-42. (2 to 4—2 to 4). Senior Recital. The Senior recital program should be representative of as many historical periods as scheduling time permits.

* See Departmental Handbook for specific requirements.

CURRICULUM FOR ORGAN

Non-majors


Organ Majors


CURRICULUM FOR BAND AND ORCHESTRAL INSTRUMENTAL MAJORS

Curriculum for Flute Majors

Flute 10. (1). Basic instruction in flute and tone production. Ernest Wagner: *Foundation to Flute Playing* or *Rubank Elementary Method*; selected easy solos; supplementary exercises and duets.

302 COLLEGE OF FINE ARTS
Flute 11-12. (2 to 4—2 to 4). Review of basic principles of tone production, articulation, breathing, intonation, phrasing, and general musicianship; orientation toward college level performance; all scales, major and harmonic minor through two octaves; Andersen, *Etudes*, op. 33; Boehm, *Studies*, op. 26; sonatas by Handel, Bach, or Telemann; concertos by Mozart, Haydn, or Boccherini; other standard solos, sight reading and ensemble performance.


Flute 31-32. (2 to 4—2 to 4). More difficult etudes of Anderson, Jeanjean, Karg-Elert, and the works of Marcel Moyse; scales in thirds, fourths, chromatic and whole-tone scales; unaccompanied solos; contemporary solos and ensembles; emphasis on advanced performance.

Flute 41-42. (2 to 4—2 to 4). Progressively difficult sonatas, solos, and concertos; orchestral excerpts; concentration on interpretation. Senior recital.

Curriculum for Oboe Majors

Oboe 10. (1). Preparatory study for Oboe 11. Materials will be selected to fit individual needs. Emphasis will be placed on tone production, playing position and embouchure. Study of major and minor scales and arpeggios. Sight reading and reed making.

Oboe 11-12. (2 to 4—2 to 4). Studies selected from Andraud, Ferling and Vade-Mecum. Solo literature selected from works of Corelli, Pierre, Valentine, Schumann and others of comparable difficulty. Major and minor scales and arpeggios to be played in eighth-notes at 88 M.M. Sight reading and reed making.

Oboe 21-22. (2 to 4—2 to 4). Continuation with studies from above texts and others such as Prestini and Barret. Solo literature selected from works of Cimarosa, Telemann, Handel and others of comparable difficulty. Major and minor scales and arpeggios to be played in eighth-notes at 120 M.M. Sight reading and reed making.

Oboe 31-32. (2 to 4—2 to 4). Studies selected from Vade-Mecum, Labate, Iasilli and Gillet. Solo literature selected from works of Britten, Albinoni, Guiaud, Marcello, Hindemith, and others of comparable difficulty. Study of English horn. Advanced work with increased speeds on all scales. Sight reading and reed making.

Oboe 41-42. (2 to 4—2 to 4). Orchestral studies and advanced studies such as those by Gillet. Solo literature selected from works of Haydn, Mozart, Strauss, Vaughn Williams and others of comparable difficulty. Advanced exercises on scales, arpeggios, and intervals. Senior recital. Sight reading and reed making.

Curriculum for Clarinet Majors


Clarinet 11-12. (2 to 4—2 to 4). Principles of tone production, musicianship, technique, and reed adjustment. Traditional studies from Rose, Baermann, Thurston, Voxman. Introduction to contemporary technique in studies by Bozza and Perier. Standard solos from various periods including Wanhal, Sonatas, Weber, Concertos, and solos from the French Conservatory School. Major and minor scales and arpeggios to be played in eighth-notes at 80 M.M.
Clarinet 21-22. (2 to 4—2 to 4). Studies by Thurston, Bitsch, Perier, and Uhl. Baermann Method, Parts III, and IV. Solos from all periods, such as Hindemith, Sonata, Schumann, Fantasy Pieces, and Crusell, Concerto. Orchestral studies. Major and minor scales and arpeggios to be played in eighth-notes at 120 M. M.


Curriculum for Saxophone Majors

Saxophone 10. (1). Materials selected to fit individual deficiencies in the student's preparation for Saxophone 11 standing. Aspects such as embouchure, articulation, and other basic facilities.

Saxophone 11-12. (2 to 4—2 to 4). Studies selected from texts such as Ferling, Bozza, Allard, Rascher. Solo literature selected from works of Bozza, Milhaud, Handel, Bach, Ravel, Ibert. Emphasis on embouchure, flexibility, facility, and development of melodic control. All major and minor scales and arpeggios.

Saxophone 21-22. (2 to 4—2 to 4). Continuation of Freshman objectives. Increase in performance application and expansion of repertory. Etudes from texts above and others such as Perrin and Massis.

Saxophone 31-32. (2 to 4—2 to 4). Advanced studies from above mentioned etudes and any other texts fitting needs of the individual student. Performance literature will involve the major concerti and chamber works such as those of Creston, Ibert, Bonneau, Glazounov.

Saxophone 41-42. (2 to 4—2 to 4). Continuation of advanced study. Materials and problems regarding pedagogy and other areas of practical application. Senior recital.

Curriculum for Bassoon Majors

Bassoon 10. (1). Studies from Weissenborn, Book I; development of embouchure, articulation, tone quality and control; easier major and minor scales.

Bassoon 11-12. (2 to 4—2 to 4). Studies from Weissenborn: Books I and II; solos by Gailliard, Telemann, or from Boyd and Garfield; further development of embouchure, articulation, technique, tone control; major and minor scales; reed-making and adjustment.

Bassoon 21-22. (2 to 4—2 to 4). Studies from Weissenborn: Book II, Milde Scales and Arpeggios; orchestral excerpts; solos by Gailliard, Vivaldi, Mozart, Weber; highest range, trills, alternate fingerings; tenor and treble clefs; all major and minor scales; reed-making and adjustment.

Bassoon 31-32. (2 to 4—2 to 4). Studies from Milde Concert Studies Book I and Gambaro Eighteen Etudes; orchestral excerpts; solos by Bach, Vivaldi, Saint-Saens, Ibert, Phillips, Hindemith; development of range, scales, technical problems, clefs, articulation and phrasing.

Bassoon 41-42. (2 to 4—2 to 4). Studies from Milde Concert Studies Book II, Bozza Fifteen Daily Studies, Bertoni Twelve Modern Etudes; orchestral excerpts; solos by Jacob, Bozza, Mozart, Grundahl; concentration on scales, arpeggios, articulation, technical problems and phrasing. Senior recital.
Curriculum for French Horn Majors

Horn 10. (1). Studies selected from: Farkas, Hauser, Franz and Kopprasch (I); all scales and arpeggios, two octaves. Compositions by Mozart, Corelli, Glazunov, Purcell and Butterworth.

Horn 11-12. (2 to 4—2 to 4). Etudes selected from: Farkas, Kopprasch (I), Alphone (I), Pottag and Hauser; all scales and arpeggios, two octaves. Compositions by Mozart, Franz, Corelli, Gipps, Cohen, Tillotson and Saint-Saens. Orchestra studies.


Horn 31-32. (2 to 4—2 to 4). Etudes selected from: Farkas, Alphonse (III), Kopprasch, Kling, Gallay and Mueller. Three octave scales and arpeggios (where possible); Orchestra studies, Pottag and Gumbert. Compositions by Mozart, Hermann, Beethoven, Dukas, Heiden, Sanders, Poulenc, Haydn, Saint-Saens and Strauss.

Horn 41-42. (2 to 4—2 to 4). Etudes selected from: Farkas, Gallay, Alphonse (IV-VI), Kling, Reynolds and Schuller; Orchestra studies, Pottag, Gumbert, Strauss, Wagner and Farkas. Compositions by Mozart, Hindemith, Heiden, Bozza, Dukas, Jacobs, Porter, Sanders, Haydn, Strauss, Schumann, Brahms and Britten. Senior recital.

Curriculum for Trumpet Majors

Trumpet 10. (1). Materials selected to individual needs in preparation for class 11 requirements. Emphasis on proper embouchure techniques and development. Fundamentals of attack and release, tone quality, flexibility, rhythmic understanding. All major and minor scales and arpeggios to be played in eighth-notes at 60 M. M.

Trumpet 11-12. (2 to 4—2 to 4). Studies selected from Schlossberg, Clark, Concone, Arban, Vosman, and Small. Solo literature of Handel, Purcell, Fitzgerald, Barat, Corelli, and Tuthill. Emphasis on tone quality, articulation, flexibility, lyrical concept, and an introduction to transposition. All major and minor scales and arpeggios to be played in eighth-notes at 80 M. M.

Trumpet 21-22. (2 to 4—2 to 4). Studies selected from Schlossberg, Clark, Nagel, Concone, Brandt, Bozza, and Bartold. Solo literature selected from Frankenpohl, Persichetti, Mozart, Purcell, Bozza, Emmanuel, and Handel. Concentration on styles, transposition, and an introduction to orchestral excerpts. All major and minor scales and arpeggios to be played in eighth-notes at 120 M. M.


Curriculum for Trombone (Euphonium) Majors

Trombone 21-22. (2 to 4—2 to 4). Studies by Kopprasch and Rochut. Appropriate solos. Formation of a strong and flexible embouchure, control of the tongue, double and triple tonguing, tenor clef, sight reading. All major and minor scales and arpeggios to be played in eighth-notes at 80 M.M.

Trombone 31-32. (2 to 4—2 to 4). Studies by Blazhevich and Couillaud. Orchestral excerpts and solos by Cowell, Hindemith, McKay, Rimsky-Korsakov, Sanders, or their equivalent. Continued technical development and sight reading.

Trombone 41-42. (2 to 4—2 to 4). Studies by Bitsch. Orchestral excerpts and solos by Bach, Creston, Hindemith, Martin, Milhaud, Saint-Saens, or their equivalent. Sight reading and advanced legato studies. Senior recital.

It is recommended that all trombone (euphonium) majors have some playing experience on the companion instrument.

Curriculum for Tuba Majors

Tuba 10. (1). Studies selected from Arban, Bell, Cimera, Cornette and Pares. Basic development of embouchure, articulations, tone quality and control. Familiarity with major and minor scales.

Tuba 11-12. (2 to 4—2 to 4). Studies by Kopprasch and Rochut. Appropriate solos. Formation of a strong and flexible embouchure, control of the tongue, double and triple tonguing, octave transposition, sight reading. All major and minor scales and arpeggios to be played in eighth-notes at 80 M.M.

Tuba 21-22. (2 to 4—2 to 4). Studies by Kopprasch and Rochut. Orchestral excerpts and appropriate solos. Range extension, rapid single and multiple tonguing, treble clef transposition, sight reading. All major and minor scales and arpeggios to be played in eighth-notes at 120 M.M.

Tuba 31-32. (2 to 4—2 to 4). Studies by Blazhevich. Orchestral excerpts and solos by Frackenpohl, Hartley, McKay, or their equivalent. Continued technical development and sight reading.

Tuba 41-42. (2 to 4—2 to 4). Studies by Bernard and Blazhevich. Orchestral excerpts and solos by Hindemith, Perichetti, Stevens, Wilder, or their equivalent. Sight reading. Senior recital.

It is recommended that all tuba majors have some playing experience on F and CC tubas as well as BB flat.

Curriculum for Percussion Majors


Percussion 11-12. (2 or 4—2 or 4). Studies selected from McMillan, Goldenberg, Feldstein, Bailey, and Firth. Emphasis on physical, technical, and musical factors on marimba and xylophone. Compositions of beginning to intermediate difficulty taken from selected standard repertoire.

Percussion 21-22. (2 or 4—2 or 4). Further study of marimba and xylophone pursued with studies selected from Torrcombruno: Books I-II. All major and minor scales, arpeggios, in double thirds, sixths, octaves, to be played in quarter notes at 100 M.M.; additional study of vibraphone and chimes.

**Percussion 31-32.** (2 to 4—2 to 4). Further study of timpani pursued with studies selected from Seitz, Goodman, Firth and Knauer: *Book II*. Emphasis on timpani. Compositions of intermediate to advanced difficulty taken from orchestral and solo repertoire. The study of multi-percussion will be emphasized. Selected compositions from the repertoire will be used.

**Percussion 41-42.** (2 to 4). Emphasis placed on the review of previous study and preparation of the senior recital; program to include a multi-percussion solo, a two-mallet marimba/xylophone or vibraphone solo, a timpani solo (3-6), a three- or four-mallet marimba solo. The study of the Latin-American instruments will be emphasized.

**Curriculum for Harp Majors**

**Harp 10.** (1). Studies selected from Dilling, Paret, Salzedo, Grandjany, and Grossi. Reasonable facility on the harp, including use of pedals.

**Harp 11-12.** (2 to 4—2 to 4). Studies selected from Bochsa-Oberthuer, Salzedo, Vito, and Lawrence. Selected solos by Grandjany, Salzedo, Hasselmans, and Tournier. Transcriptions of major composers. Selected orchestral and chamber music.

**Harp 21-22.** (2 to 4—2 to 4). Technical studies by Vito, Naderman, and Boch-David or Boch-René. Selected solos and ensemble literature.

**Harp 31-32.** (2 to 4—2 to 4). Technical studies of Naderman and Dizi. Advanced works by Tournier, Fierné, René, Grandjany, and Salzedo. Selected solos and ensemble literature.

**Harp 41-42.** (2 to 4—2 to 4). Concentrated study of major works by Ravel, Debussy, Mozart, Handel, and Hindemith. Other selected solos and ensemble literature.

**Curriculum for Violin Majors**

**Violin 10.** (1). Studies selected from the following: Kayser, Wohlfahrt, Laoreaux, Dont; scales and arpeggios in all keys in the first position; detailed study of shifting and positions; special bowing studies; concertos by Sitt, Rieding, Seitz, De-Beriot. Compositions of intermediate difficulty in the lower positions.

**Violin 11-12.** (2 to 4—2 to 4). Studies chosen from the following: Seveik, Schradieck, Dont *Op. 37*, Kreutzer; advanced scale and arpeggio technique; detailed study of double stops; sonatas by Handel, Tartini, Corelli Veracini; concertos by Kreutzer, Rode, Viotti; single compositions of a more advanced nature.

**Violin 21-22.** (2 to 4—2 to 4). Rode and Fiorillo *Etudes*, Flesch *Scale Studies*; concertos by Spohr, Mendelssohn, Bach, Vivaldi; sonatas by Beethoven, Mozart; short numbers by romantic and modern composers.

**Violin 31-32 (2 to 4—2 to 4).** *Etudes* by Dont *Op 35*, Rode, Wieniawski, continuation of Flesch; concertos by Mozart, Wieniawski, Vieuxtemps; sonatas by Mozart, Beethoven, Grieg; concert pieces of Sarasate, Wieniawski, Vieuxtemps, Brahms, and modern composers.

**Violin 41-42 (2 to 4—2 to 4).** Bach solo sonatas; sonatas by Schumann, Brahms, modern American composers; concertos by Saint-Saens, Lalo, Bruch, Tchaikovsky, Brahms; extensive study of contemporary program material. Senior recital.
Curriculum for Viola Majors


Curriculum for Cello Majors

Cello 10. (1). Studies selected from Feuillard, Somlo, Friss, Dotzauer; scales and arpeggios through two octaves; shifting and bowing techniques; compositions in lower positions by Romberg, Krane, Stutschewsky.

Cello 11-12. (2 to 4—2 to 4). Studies chosen from Schroeder *170 Foundation Studies*, Feuillard *60 Studies*; scales and arpeggios in three octaves; sonatas by Corelli, Vivaldi, Vandini; shorter pieces using neck positions; concerti by Vivaldi, Bach.

Cello 21-22. (2 to 4—2 to 4). Continuation of studies from Schroeder, Feuillard, and Popper *High School of Cello Playing*; scales and arpeggios in three octaves in all keys; thumb position techniques; sonatas by Eccles, Handel, Sammartini, Beethoven op. 5; concerti by Saint-Saens, Romberg, *Suites* by Bach.

Cello 31-32. (2 to 4—2 to 4). Studies chosen from Popper and Duport; scales and arpeggios with a variety of bowing techniques; sonatas of Beethoven, Breval, Hindemith; concerti of Boccherini, Haydn, Kabalevsky; pieces by Popper, Bloch; *Suites* by Bach.

Cello 41-42. (2 to 4—2 to 4). Studies chosen from Duport, Piatti, Grutzmacher; traditional and synthetic scale materials in three octaves; sonatas by Brahms, Beethoven, Shostakovitch; concerti by Tchaikowsky, Shostakovitch, Schumann, Dvorak; contemporary pieces by Brown, Davidovsky; review of program materials. Senior recital.

Curriculum for String Bass Majors

String Bass 10. (1). Studies selected from Simandl's *30 Etudes for the String Bass*; Shmuklovsky's *Scales, Triads and Exercises*; solos by Wagner, Handel; Bach, and Bakaleinikoff.


String Bass 41-42. (2 to 4—2 to 4). Simandl’s Gradus ad Parnassum; advanced orchestral repertoire; sonatas by Hindemith, Schubert, Handel, and Birkenstock; concerti by Bottesini, Dragonetti, and Koussevitzky. Senior recital.

CURRICULUM FOR VOICE MAJORS

Voice 9-10. (1). The student must demonstrate an ability to sight read simple melodies, produce a pleasing tone quality with good intonation, and sing a prescribed number of songs with proper interpretation.

Voice 11-12. (2 to 4—2 to 4). Posture, breathing, tone production, diction, interpretation, ability to sing required songs with a well-produced tone, good intonation, clear diction, and musical interpretation. Repertoire in Italian and English songs.


Voice 21-22. (2 to 4—2 to 4). More advanced technical studies; remedial training as needed. Repertoire in Italian, English, and German songs.


Voice 41-42. (2 to 4—2 to 4). Higher standards of performance in technique and interpretation. Bachelor of Music students will prepare a full recital program. Bachelor of Music Education students will prepare a half recital program.

MUSIC CURRICULUM

MAJOR: Prescribed courses leading to the degree of Bachelor of Music and Bachelor of Music Education are found on page 298. These schedules must be followed without deviation except by permission of the Dean of the College of Fine Arts.

Music 111-112, 211-212, 311-312, 411-412 (Ensemble), either vocal or instrumental, is a laboratory requirement. Each music student is required to participate in a minimum of specified ensembles.

Lower Division Courses

60. Rudiments of Music. (2). Intensive study of music fundamentals and elementary aural skills. Required of students not achieving a satisfactory score in departmental placement examination for music 127 or music 129.

107-108, 207-208. Piano Repertoire. (1-1). Designed to give performing and listening experience to Piano majors.

111-112, 211-212. Ensemble. (1-1). (A) Orchestra, (B) Band, (C) University Chorus, (E) Chamber Music Performance, (F) University Singers and A Cappella
Choir, (G) String Ensemble, (H) Brass Ensemble, (J) Piano Accompaniment, 

113. Introduction to Music. (2). Development of skills and techniques used in critical analysis and comparison of the contrasting styles of music literature. Designed for music majors or students with advanced musical background. Concurrent enrollment in Music 127-129 or consent of instructor.

114. Music Literature Survey. (2). A survey of representative works from the vocal and instrumental repertoire. Prerequisite: Music 113 or consent of instructor.

121. Italian Diction. (1). A course designed for the vocal performer including a comprehensive study of Italian consonant and vowel sounds.

122. English Diction. (1). A course designed for the vocal performer including a comprehensive study of English consonant and vowel sounds.

127. Theory I. (2). Review of music fundamentals, including notation of pitch, rhythm, scales, intervals and triads; introduction to melodic organization and harmony with emphasis on analysis and creative writing. Prerequisite: Concurrent enrollment in Music 60 or satisfactory score on departmental placement examination, and concurrent enrollment in Music 129.

128. Theory II. (2). Study of diatonic harmony, including cadence and phrase structure, melody harmonization and non-harmonic usage, with emphasis on analysis of related literature and creative writing. Prerequisite: Music 127, and concurrent enrollment in Music 129 or Music 130.

129. Aural Skills I. (2). Recognition, singing, and dictation of rhythms in simple and compound meters, scales, and diatonic melodies. Prerequisite: Concurrent enrollment in Music 60 or satisfactory score on departmental placement examination.

130. Aural Skills II. (2). Continuation of Music 129. Introduction of modulating melodies and elementary harmonic dictation. Prerequisite: Music 129.

135. Methods of Teaching Orchestral Instruments (violin and viola). (1). (See Music Education 135.) Band and Orchestra Laboratory.

136. Methods of Teaching Orchestral Instruments (cello and string bass). (1). (See Music Education 136.) Band and Orchestra Laboratory.

137. Methods of Teaching Band and Orchestral Instruments (clarinet and saxophone). (1). (See Music Education 137.) Band and Orchestra Laboratory.

138. Methods of Teaching Band and Orchestral Instruments (flute and double reeds). (1). (See Music Education 138.) Band and Orchestra Laboratory.

139. Methods of Teaching Band and Orchestral Instruments (brass). (1). (See Music Education 139.) Band and Orchestra Laboratory.

140. Methods of Teaching Band and Orchestral Instruments (percussion). (1). (See Music Education 140.) Band and Orchestra Laboratory.

142. Survey of Choral Techniques and Literature. (1). A study of basic techniques of singing and examination of literature for solo voice, large and small ensembles. Prerequisite: One hour of applied voice.

148. Double Reed Making and Adjusting. (1). Making and adjusting oboe, English horn and bassoon reeds. Prerequisite: Mus. 138 or consent of instructor. May be repeated for credit.

161. Music Appreciation. (2). Intended to develop a capacity for critical listening and an appreciation for the various musical styles. Special attention given to works from the standard musical repertoire. Designed exclusively for the non-music major.

201. Fundamentals of Vocal Music for Elementary School. (2). (For the elementary vocal major—see: Music Education 201.)

202. Fundamentals of Instrumental Music for Elementary School. (2). (For the elementary instrumental major—see: Music Education 202.)

203. Fundamentals of Vocal Music for Secondary Schools. (2). (For the secondary vocal major—see: Music Education 203.)

204. Fundamentals of Instrumental Music for Secondary Schools. (2). (For the secondary instrumental major—see: Music Education 204.)

217. Instrumental Conducting. (2). Fundamentals of baton technique, elementary score-reading, and musical leadership. Practical experience in conducting laboratory and classroom groups.

218. Choral Conducting. (2). Fundamentals of conducting, score reading, and rehearsal techniques. Practical experience conducting classroom groups. Prerequisite: Music 128, 130.

221. German Diction. (1). A course designed for the vocal performer including a comprehensive study of German consonant and vowel sounds.

222. French Diction. (1). A course designed for the vocal performer including a comprehensive study of French consonant and vowel sounds.

227. Theory III. (2). Review of diatonic harmony; introductory study of chromatic harmony, with emphasis on analysis of related literature and creative writing. Prerequisite: Music 128.

228. Theory IV. (2). Introductory study of contemporary musical techniques with emphasis on analysis of related literature and creative writing. Prerequisite: Music 227.

229. Aural Skills III. (2). Recognition, singing, and dictation of advanced rhythmic, melodic, and harmonic materials. Prerequisite: Music 130.


251. Music Fundamentals for the Classroom Teacher. (3). (See: Music Education 251.)

252. Music Methods for the Classroom Teacher. (3). (See: Music Education 252.)

Upper Division Courses

301. Survey of Vocal Music for Secondary School. (3). (For the elementary vocal major—see: Music Education 301.)

302. Survey of Secondary School Music. (3). (For the elementary instrumental major—see: Music Education 302.)

303. Survey of Vocal Music for Elementary Schools. (3). (For the secondary vocal major—see: Music Education 303.)

304. Survey of Elementary School Music. (3). (For the secondary instrumental major—see: Music Education 304.)

305. Advanced Techniques in Elementary School Music. (2) (See: Music Education 305.)
306. Music Methods for the Kindergarten Teacher. (3). (See: Music Education 306.)

307-308, 407-408. Piano Repertoire. (1-1). Designed to give performing and listening experience to piano majors.

310. Inter-related Arts. (3). Inter-departmental course presenting an aesthetic analysis of three arts. The course will emphasize style in the three arts. (See: English 310.)


315. Music of the Twentieth Century. (2). An aesthetic approach to music of this century, its major composers, stylistic and formal characteristics. Designed primarily for the non-music major who has musical interest and background. Prerequisite: Music 113, or 161, or Humanities 102, or consent of instructor.

316. Symphonic Literature. (2). An advanced course in the great orchestral literature covering the development of the symphony orchestra and its music from the eighteenth-century Mannheim School to the present. Designed primarily for the non-music major who has musical interest and background. Prerequisite: Music 113, or 161, or Humanities 102, or consent of instructor.

323. Form and Analysis. (2). The elements of structure, form, and design in musical composition. Prerequisite: Music 227.

331. History of Music from Antiquity through the Eighteenth Century. (3). An intensive survey of the development and evolution of musical styles and practices in Western civilization from ancient times to the eighteenth century. Lectures, reference readings, and the study of representative music of the various periods and composers. Fall semester only. Prerequisite: Music 113 and 228 or consent of instructor.

332. History of Music from the Eighteenth Century to the Present. (3). A continuation of Music 331. (Spring semester only.) Prerequisite: Music 113 and 228 or consent of instructor.


339. Advanced Techniques in Brass Methods. (1). Special problems and techniques in the teaching of brass instruments. Survey of current materials. Prerequisite: Music 139 or equivalent.


359 & 360. Applied Composition. (2-2). Individual study in fundamentals of musical composition with emphasis on the development and expansion of music materials. Prerequisite: Music 323 or instructor's consent.

361. 18th Century Counterpoint. (2). Contrapuntal devices of the 18th century as found in the works of J. S. Bach. Prerequisite: Music 228.

371. Chromatic Harmony. (2). Advanced study of chromatic harmonic materials of all periods with special attention to the 19th century. Analysis and creative writing will be emphasized. Prerequisite: Music 227.
372. Contemporary Techniques. (2). Advanced study of music from impressionism to the present, with emphasis on related literature and creative writing. Prerequisite: Music 228.

381. Piano Materials and Pedagogy. (2). Discussion and analysis of suitable materials and methods for teaching at elementary, intermediate, and early advanced levels.

382. Piano Literature. (2). Survey of the historical eras of professional piano repertoire.

397-398. Organ Literature and Practice. (1-1). Performance and discussion of works for the instrument of all periods, study of organ design and construction, practice in aspects of service playing such as hymn playing, modulation, accompanying, and improvisation. Prerequisite: Music 228 and Organ 22 or departmental consent. Required of all Organ majors. May be re-elected.


402. Advanced Techniques of Elementary School Music. (2). Emphasis on special problems related to preparation for student teaching; consideration of the instrumental and the general music programs at the elementary level. Includes audio-visual instruction and materials. Prerequisite: Music 202 and 302.


406. Comparative Arts for Teachers. (3). Emphasis on the related arts of music, visual art and literature from two approaches; an approach that shows the elements the arts have in common, with an emphasis on creativity; an approach that examines the relationships of the three areas according to basic philosophies. Attention will be given to materials and activities suitable for use in the classroom at various levels.

423. Opera Literature. (2). A comprehensive survey of Italian, German, French, Russian, English, and American opera literature from the seventeenth century to the present. Not limited to music majors.

424. Oratorio and Cantata Literature. (2). A study of the solo vocal literature of the larger sacred and secular forms from the seventeenth century to the present. Not limited to music majors.

425. Voice Pedagogy. (2). Designed to acquaint the voice major with vocal techniques, concepts, and materials of private and class instruction.

426. Voice Literature. (3). A comprehensive survey of early Italian arias, French chansons, German Lieder, contemporary English songs, and Russian and Spanish literature. Open to non-voice majors.

427. Music Theatre Directing. (2). Coaching, mounting, and staging music-drama productions, with emphasis on acting and directing techniques. Prerequisite: Consent of instructor.
432. (Music or Music Education). Teaching of Music Literature. (2). Designed for the teacher preparing to teach music literature or appreciation. Aesthetic principles in music listening related to the other fine arts, and their application to various levels of teaching. Prerequisite: Consent of instructor.

441. Orchestration. (2). The study of instrumentation, emphasizing idiomatic scoring for various instrumental combinations, with an approach to the problems of full orchestra and band scores. Prerequisite: Music 227.

445. Choral Arranging. (2). Scoring for women's, men's, and mixed choruses. Performance and analysis of students' arrangements in class. (Fall semester only). Prerequisite: Music 138 or consent of instructor. May be repeated for credit.

450. Music Education Workshop. (1-4). Prerequisite: Consent of instructor. May be repeated for credit.

461. Advanced Conducting and Score Reading. (2). Baton technique, score reading, musicianship. Prerequisite: Music 217 or 218.


472. Contemporary Musical Thought in Music Education. (2). A consideration of imaginative and effective techniques of presenting contemporary musical concepts to all age levels in public school music. Prerequisite: Music 323 and consent of instructor.

tional, textural, and dynamic parameters of music. Experimentation with new ways of involving public school students in similar study.


521. Elementary Music Supervision. (3). (See: Music Education 521.)

530. Seminar in Music Theory. (3). An analytical study of the materials used in musical composition from antiquity to the present. The student will analyze music in his own medium, culminating in a presentation to the class; from these presentations a comprehensive synthesis of the compositional procedures in various style periods will be made. The course is designed to develop analytical perspective rather than compositional skills.

531. Developing the Child's Musical Understanding. (3). Definition of understandings necessary for the attainment of musical awareness in the child. Exploration of classroom experiences directed toward the successful development of those understandings through the application of basic learning principles.

532. Music in the Junior High School. (3). To include administrative structures, the curriculum, adolescent development, teaching as behavior, and competencies needed for successful teaching.


541-542. (Music or Music Education). Special Project in Music. (1-3—1-3). Individually supervised study or research with emphasis upon the personal needs of the student. Prerequisite: Consent of instructor.


551. (Music or Music Education). Psychology of Music. (2). Adapted to the viewpoint of the music educator. Emphasis on physics of sound, psychology of performance, and teaching. Aesthetic principles of listening. Prerequisite: Consent of instructor.

552. Introduction to Graduate Study. (3). Techniques of research and development of bibliography in music and music education. Must be elected the first available semester of enrollment.

554. Research Seminar in Music Education. (3). Continued application of techniques of research. Completion of a major research project. Prerequisite: Music 552.

559-560. Advanced Composition. (2-2). Original work in the large forms. Continuation and expansion of 459-460. Prerequisite: Music 460 or equivalent.

571. Philosophy of Contemporary Music Education. (2). A study of historical trends and contemporary philosophies relevant to music education, behavioral objectives, and curriculum planning.

573. Graduate Recital. (2). Performance of a full recital featuring the chief performing medium. Prerequisite: Consent of instructor.

575. (Music or Music Education). Thesis Research. (2).


591-592. Seminar in Music History. (3-3). Areas of interest in music history will be developed as fully as time permits. No effort at a chronological survey will be made. Ideas evoking the most interest, and considered by the instructor to be of the greatest professional benefit, will be taken when interest warrants. Prerequisite: 331 and 332 or consent of instructor.

593. Music of Antiquity through the Renaissance. (3).


596. Music of the Nineteenth Century. (3).

597. Music of the Twentieth Century. (3).
College of Health Related Professions

D. CRAMER REED, M. D., Dean

The College of Health Related Professions was established in 1970 by action of the Kansas Board of Regents and the Kansas legislature. There are four programs of study presently offered. Two lead to the Bachelor of Science Degree: Nursing and Medical Technology. The two-year Certificate of Applied Science is awarded in Dental Hygiene and Inhalation Therapy. Cytotechnology is planned for implementation by the Fall of 1971. Physical therapy is being considered for possible program implementation by the Fall of 1972. Other programs of professional study will be added as they are developed, based on student interest, area requirements, faculty availability, funding capabilities and Board of Regents approval.

All formal health-related programs leading to a degree or certificate from Wichita State University are administered through the College of Health Related Professions. This college is also responsible for the administration and advising of students admitted to the university for the first academic year of the diploma nursing programs conducted by St. Francis and St. Joseph Hospitals and Wesley Medical Center Schools of Nursing.

Counseling: Health Related Programs

The Dean of the College of Health Related Professions and the staff provide general counseling and help in career planning for all health-related professions including medicine, veterinary medicine, dentistry, optometry, pharmacology, osteopathy, physical therapy, occupational therapy, radiologic technology, mortuary science, etc. All premedical and pre dental students entering this university after 1969 are required to maintain a transcript in the office of the dean of Health Related Professions (request your present Dean to forward a copy). An interview with the dean of the College of Health Related Professions is also required one time each semester.

Students interested in professional study in health-related fields will enroll through the University College for their first year, and in most cases will complete undergraduate study in the College of Liberal Arts. Faculty in University College and the respective departments of Liberal Arts advise students regarding specific course
selection and scheduling to facilitate counseling offered by the College of Health Related Professions pertaining to a specific health-related career.

REQUIREMENTS

Admission

A student may be admitted to the College of Health Related Professions after he has completed 24 semester hours at Wichita State University with an overall grade point average of 2.000 or above, and preferably after he has been accepted by the chairman of one of the departments.

Students who transfer to Wichita State University from other institutions may enter the College of Health Related Professions if they are not on probation, and if their academic record meets the above requirements.

Probation and Dismissal Standards

It is expected that students will make satisfactory progress in their studies. A student who fails to do so may be placed on probation at any time and ultimately dismissed from the University.

1) A student will be placed on probation for the next semester in which he enrolls if his cumulative grade point index falls below 2.000.

2) The student remains on probation if he earns at least a 2.000 index in the first semester during which he is on probation and his cumulative grade point index does not yet meet the minimum standards.

3) No student on probation who enrolls in fewer than 7 hours shall be placed on academic dismissal for failure to raise the cumulative grade point index to the required level; however, if such a student has earned 7 or more hours in two or more semesters, the cumulative grade point index including these hours shall be used to determine whether he shall be academically dismissed.

4) A student on probation shall be subject to academic dismissal if his cumulative grade point index fails to meet the required minimum standards; and a student on probation will be dismissed for poor scholarship if he fails to earn at least a 2.000 for any semester on probation.

5) A student who has been dismissed for poor scholarship may enroll only with special permission of the Committee on Admissions and Exceptional programs.

6) Probation is removed when the cumulative grade point index reaches the required level.
Transfer of Credit Within the University

Hours completed in other colleges at WSU shall be transferred for credit to the College of Health Related Professions under the following general rules:

(1) Credit shall transfer when the work offered is applicable to the curriculum as specified and if it constitutes progress toward the student's degree goal.

(2) Not more than eight hours maximum credit shall transfer for applied music and/or art.

Degree Requirements

The Bachelor of Science degrees and Associate of Applied Science Certificates are conferred in this college. The general requirements for graduation as listed on page 58 of the Catalog will apply, combined with requirements specified in the curriculums for Medical Technology and Nursing. The Certificate is awarded to students who fulfill all of the specific requirements of the curriculums of Dental Hygiene and Inhalation Therapy.

HEALTH PROFESSIONS

A survey course is being offered for the first time in the Fall of 1971, and is open to anyone interested in the health-related fields. This course is structured primarily for freshmen and is especially recommended for all College of Health Related students.

100. Introduction to Health Professions. (1). 1R. An examination of the health team concept, the role and relationship of the various providers of health care and the criteria for the selection of a health career. Emphasis will be placed on the health team concept.

208. Pharmacology. (2). Therapeutic terms; drug actions; dosage; toxicology; and the application of all drugs used in the treatment of oral disease.

230. Nutrition. (3). 3R. Service Course. A study of human nutrition; composition and classification of foods; vitamins and their function; food and public health laws; disaster and space nutrition; detailed application of nutrition knowledge to various conditions (prenatal, child, adult, aged).

DENTAL HYGIENE

In addition to fulfilling all requirements for admission to the University, students wishing to enroll in the Dental Hygiene program must apply for and obtain approval of the Admissions Committee, Dental Hygiene Program, 324 N. Emporia, Wichita, Kansas, 67202. An application for admission must be on file in the Dental Hygiene office no later than April 1. A maximum number of 21 students may be admitted to the program each Fall semester.

A college biology (zoology) course, general chemistry, and a college algebra or equivalent course are recommended as foundation classes and may be taken during the summer session or school
year prior to entering the Dental Hygiene program. One year of college is highly recommended prior to applying for admission to the Dental Hygiene Program.

The Dental Hygiene curriculum includes the following thirty-six hours of work, plus the forty-one hours of Dental Hygiene clinical courses. Upon completion of these seventy-seven hours, the student is eligible for the two-year certificate in Dental Hygiene after which the state licensure examination may be taken.

<table>
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<tr>
<th>Hrs.</th>
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<tbody>
<tr>
<td>English 111, College English</td>
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<tr>
<td>Sociology 211, Introductory Sociology</td>
</tr>
<tr>
<td>Biology 223, Human Biology</td>
</tr>
<tr>
<td>Health Professions 230, Nutrition</td>
</tr>
<tr>
<td>Social Work 214, Social Welfare Institution</td>
</tr>
<tr>
<td>Chemistry 103, General Chemistry</td>
</tr>
<tr>
<td>Psychology 111, General Psychology</td>
</tr>
<tr>
<td>Biology 120, Introduction to Microbiology</td>
</tr>
<tr>
<td>Speech 111, Extemporaneous Speech</td>
</tr>
<tr>
<td>Physical Education 115, Pers. &amp; Comm. Health</td>
</tr>
<tr>
<td>Physical Education 117, First Aid</td>
</tr>
</tbody>
</table>

DENTAL HYGIENE (Clinical Curriculum)

100. Dental Anatomy. (4). 2R; 4L. A study of the development, eruption, arrangement, function, structure and characteristics of the teeth is presented through lectures, visual aids and drawing and carving of the teeth. Included is a study of the Anatomy of the Head and Neck. Reproduction of the adult permanent dentition is done in the laboratory.

101. Introduction to Dental Hygiene. (4). 2R; 6L. The student is presented with the basic philosophy of dentistry, dental hygiene and their related arts. Consideration is given to measures which can be employed to prevent oral disease and promote the health of the teeth and adjacent tissues. Laboratory instruction is given in instrumentation for removal of accretions from the teeth. The latter part of the semester is devoted to orientation in clinical procedures.

102. Clinical Dental Hygiene I. (3). 1R; 6L. Initial instruction will relate to typical emergency medical problems which might be encountered in the dental office. The student comes in contact with the patient for the first time. Here the principles taught in the laboratory are applied to both children and adults. Emphasis is placed on instrument techniques and overall treatment of the patient. Lectures and demonstrations are designed to augment the student's clinical practice.

104. Dental Roentgenology. (2). 1R; 3L. The theory and practice of exposing, processing and mounting X-ray films is presented. The laboratory periods are used to gain proficiency in X-ray techniques. Care of the equipment is stressed.

106. Oral Pathology. (2). Normal conditions followed by general pathology as an introduction to dental pathology of the teeth, dental pulp and periodontium, and a consideration of the signs, symptoms, and manifestations of oral lesions will be accomplished through lectures and visual aids.

107. Principles of Chairside Assisting. (3). 2R; 2L. Lectures present use and care of dental instruments and equipment, asepsis and antiseptic techniques. The study of dental materials is included. Instruction is given in practical laboratory phases of modern technique and the manipulation of materials used in dental practice.
Clinical Dental Hygiene II & III. (3-3). 1R; 8L. Students spend three-fifths of their time completing a required amount of work in oral prophylaxis on patients in the dental clinic. The rest of the time is used for (1) field training in hospitals, in public health institutions and private offices (2) in the radiographic laboratory until the student has gained proficiency. One lecture a week is devoted to analyzing interesting cases observed in the clinic.

Clinical Dental Hygiene IV. (6). 1R; 15L. Students spend three-fifths of their time completing a required amount of work in oral prophylaxis on patients in the dental clinic. The rest of the time is used for (1) field training in hospitals, in public health institutions and private offices (2) in the radiographic laboratory until the student has gained proficiency. One lecture a week is devoted to analyzing interesting cases observed in the clinic.

Histology and Embryology. (2). Developmental and microscopic anatomy of the elementary tissues and organs. Comprehensive study of the teeth, their supporting tissues and adjacent structures.

Preventive Dentistry. (2). The preventive aspects of dental caries, its epidemiology and control; the preventive aspects of malocclusion including a description of the development of the dentition and preventive, interceptive, and palliative orthodontic treatment.

Dental Ethics. (2). Laws governing the practice of dentistry and dental hygiene; types of professional work for which students may qualify, the economics and ethics of the professions, the essentials of banking, bookkeeping, office and personnel management, and patient records. History of dentistry and the dental hygiene professions.

Dental Health Education. (3). 2R; 2L. Methods and materials used in dental health education for children and adults. Lectures in related public health problems. The history of the public health movement is developed and the place of the dental hygienist within this framework is emphasized. The course is a workshop with the student participating in the class activity as various aspects of this service are presented. Field work in connection with the schools.

Diploma Nursing

This program is under the administration of the College of Health Related Professions. The student interested in diploma nursing, in addition to fulfilling all requirements for admission to the University, should apply to the hospital School of Nursing of their choice. The affiliating hospitals are St. Francis Hospital, St. Joseph Hospital and Rehabilitation Center, and Wesley Medical Center. Curriculum requirements for the various programs are established jointly by the three hospital Schools of Nursing and the College of Health Related Professions. During the first year the student should acquire a minimum of 30 hours of credit, including all of the required courses and electives prescribed by the particular school of nursing to which the student plans to transfer.

The above one year of college credit, followed by two additional years of professional experience and study at a hospital school of nursing, will qualify a student for a diploma from the school of nursing after which she will be eligible to take the state registered nurse (RN) examination.

It is recommended that prenursing students enroll in Chemistry or Biology during the summer term following high school gradu-
tion. This allows more adequate preparation for the required science courses. Biology 100 or 112 is prerequisite to Biology 223.

Suggested prenursing program:

<table>
<thead>
<tr>
<th>Summer</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Chemistry 103, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Biology 100 or Biology 112</td>
<td>4</td>
</tr>
<tr>
<td>Psychology 111, General Psychology</td>
<td>3-3</td>
</tr>
<tr>
<td>English 111, College English</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 211 (3) or Anthropology 124 (4)</td>
<td>3-4</td>
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</tbody>
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<tr>
<th>FIRST SEMESTER</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Biology 223, Human Biology</td>
<td>5</td>
</tr>
<tr>
<td>Psychology 260 or Ed. Psychology 219</td>
<td>3</td>
</tr>
<tr>
<td>Speech 111, Extemporaneous Speech</td>
<td>2</td>
</tr>
<tr>
<td>Biology 120, Introduction to Microbiology</td>
<td>4</td>
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<thead>
<tr>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>INHALATION THERAPY</td>
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</table>

In addition to fulfilling all requirements for admission to the University, students planning to enroll in the Department of Inhalation Therapy should request a personal interview with the hospital's inhalation therapy program director and obtain approval for enrollment in the inhalation therapy courses. The hospital School of Inhalation Therapy requires the student to submit three letters of recommendation. The cooperating hospitals are St. Francis Hospital, St. Joseph Hospital and Rehabilitation Center, and Wesley Medical Center.

The Inhalation Therapy curriculum includes the following 40 hours of Liberal Arts and Sciences courses:

<table>
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<tr>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Chemistry 103 or 111</td>
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<tr>
<td>Physics 103, Introductory Physics</td>
</tr>
<tr>
<td>Biology 120, Microbiology</td>
</tr>
<tr>
<td>Biology 223, Human Biology</td>
</tr>
<tr>
<td>Mathematics 140*</td>
</tr>
<tr>
<td>English 111, College English</td>
</tr>
<tr>
<td>Speech 111, Extemporaneous Speech</td>
</tr>
<tr>
<td>Psychology 111, General Psychology</td>
</tr>
<tr>
<td>Electives, Humanities and Social Sciences</td>
</tr>
</tbody>
</table>

* Or Math 121 if taken prior to Spring 1970.

In addition to successful completion of the above courses, a student is required to take 208 Pharmacology (from the Health Professions curriculum), and the following 28 hours in the Inhalation Therapy clinical curriculum:

| INHALATION THERAPY (Clinical curriculum)   |      |

111. Introductory Inhalation Therapy Procedures. (4) 3R; 7L. Introduces the student to the hospital environment. Basic Equipment and Procedures: Cylinders, piped systems, humidifying devices, oxygen cannulas, oxygen nasal catheter, oxygen masks and tents, oxygen analyzers, oxygen diluting devices, humidification principles, and administration of gas mixtures; history, ethics and nursing arts.
112. Advanced Inhalation Therapy Procedures. (6). 3R; 13L. Advanced Equipment and Procedures: Bennett respirators. PV-3, PR-1, PR-2, and MA-1; Bird respirators, Mark II, Mark III, Mark VII, Mark VIII, Mark X and Mark XIV; Mörch respirator; Engstrom respirator; and ventilator spirometers. Resuscitators, airway management and ultra-sonic nebulizer therapy.

122. Introductory Clinical Application. (3). 2R; 6L. Clinically oriented program of ward conferences, lectures, case studies and clinical practice. This program is designed to familiarize the student with treatment of cardiopulmonary disorders. Includes rotation through: Surgery, pulmonary function, and obstetrics. Prerequisite: Advanced Inhalation Therapy Procedures—112.

202. General Clinical Application. (4). 3R; 5L. Emphasis on pharmacology of aerosolized drugs; includes a rotation through: Pediatrics, emergency areas, and positive pressure equipment. Prerequisite: Introductory Clinical Application—122.

225. Advanced Pulmonary Physiology. (2). 2R. Lectures from Respiratory Physiology, J. Comroe. Lectures and application in the Pulmonary Function Laboratory. Lectures and application of blood gas and acid-base analyzers. Prerequisite: Human Biology—223, Chemistry—103 or 111.

226. Pathology and Pulmonary Diseases. (3). 3R. Lectures and clinical observation of pulmonary disorders. Causes and mechanisms of development of disease; general and special toxic and pathologic influences of natural and induced agents. A knowledge of pathology recognizes those characteristics of the sick that differ from the norm.

232. Advanced Care of Critically Ill. (4). 3R; 5L. Clinical application for the management of the critical cardiopulmonary patient. Clinical work will be carried out primarily in the Intensive Care and Cardiac Care Units. The student will also be assigned a research problem in this area. Prerequisites: General Clinical Application—202, Advanced Pulmonary Physiology—225.

261. Inhalation Therapy Ethics and Management. (2). 2R. An opportunity for the student to participate in departmental management; also the practice of developing inservice training concepts.

INHALATION THERAPY CLINICAL EXPERIENCE INCLUDES 14 WEEKS IN AN AFFILIATED HOSPITAL TO COMPLETE ACCREDITATION REQUIREMENTS

MEDICAL TECHNOLOGY

The curriculum in this Department is designed for men and women who wish to become professional medical technologists. The first three years of the medical technology curriculum are designed to provide a broadly-based background in chemistry and the biological sciences, as well as opportunity to elect courses in other fields of interest. The fourth academic year is spent in a combined tutorial-didactic experience in an affiliated, approved clinical laboratory.

Upon completion of the academic course work and directed clinical laboratory experience, the student is eligible for a Bachelor of Science Degree in Medical Technology and is eligible to take the qualifying examination of the Registry of Medical Technologists—MT (ASCP).

The general curriculum for this degree is indicated below:
**FRESHMAN YEAR**

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Math. 141, Algebra and Trigonometry *</td>
<td>5</td>
</tr>
<tr>
<td>Chemistry 111, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Biology 112, Introductory Zoology</td>
<td>4</td>
</tr>
<tr>
<td>Speech 111, Extemporaneous Speech</td>
<td>2</td>
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</table>

**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Chemistry 112, General and Inorganic</td>
<td>5</td>
</tr>
<tr>
<td>Biology 201, Introductory Cellular Biology</td>
<td>3</td>
</tr>
<tr>
<td>Biology 223, Human Biology</td>
<td>5</td>
</tr>
<tr>
<td>English 111, College English</td>
<td>3</td>
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**SOPHOMORE YEAR**

**FIRST SEMESTER**

<table>
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<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Chemistry 231, Organic Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Biology 301, Bacteriology</td>
<td>5</td>
</tr>
<tr>
<td>English 211, Advanced Writing</td>
<td>3</td>
</tr>
<tr>
<td>Humanities †</td>
<td>3</td>
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**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Chemistry 232, Organic Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Biology 424, Immunobiology</td>
<td>3</td>
</tr>
<tr>
<td>Humanities †</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences †</td>
<td>6</td>
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**JUNIOR YEAR**

**FIRST SEMESTER**

<table>
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<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Chemistry 323, Introductory Analytical</td>
<td>4</td>
</tr>
<tr>
<td>Biology 302, Pathogenic Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>Biology 401, Genetics</td>
<td>4</td>
</tr>
<tr>
<td>Humanities †</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences †</td>
<td>3</td>
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</table>

**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Electives †</td>
<td>12–15</td>
</tr>
<tr>
<td>Humanities †</td>
<td>3</td>
</tr>
</tbody>
</table>

* Or Math. 121 (3) and Math. 122 (3).
† Electives chosen in the Humanities and Social Sciences must fulfill the University Core Curriculum.
‡ May be selected from the areas of biology, chemistry, mathematics, physics, and others as approved by adviser.

**SENIOR YEAR**

Courses prescribed by the ASCP will be taken in residence in the School of Medical Technology at St. Francis Hospital, St. Joseph Hospital, or Wesley Medical Center, Wichita, Kansas. The student, through the agency of the hospital, will enroll at Wichita State University for this work. This fourth year may, however, be completed at any School of Medical Technology accredited by the Council on Medical Education of the American Medical Association in collaboration with the Board of Schools of Medical Technology of the American Society of Clinical Pathologists (revised to June 30, 1965). The student should make application to the hospital of his choice well in advance of the
completion of his work at the University. The dean of the College of Health Related Professions must be kept informed by the student where the final 30 credit hours of professional training are taken.

CYTOTECHNOLOGY

In anticipation of approval by the Board of Regents, the College of Health Related Professions will offer for the first time a two-year precytotechnology program.

The cytotechnologist works in association with the pathologist in the detection of malignancy or cancer cells in various body fluids, or to identify changes in cast-off body cells. Such specialists become extremely proficient microscopists in the course of screening out slides with normal cells from those with abnormal cells. The cytotechnology student also learns the technique of preparing and staining slides to aid in identification of different forms of malignancy.

Minimal requirements are two years of college or a total of 60 semester credit hours, 12 of which should be in the biological sciences. At least 8 hours of those taken in biological sciences should include laboratory experience.

The Wichita State University precytotechnology program is affiliated with St. Francis Hospital and Wesley Medical Center’s cytotechnology programs, which are approved by the Council of Medical Education of the American Medical Association. The following program sequence, while not obligatory for admission to an approved School of Cytotechnology is recommended, because of the added emphasis on cellular biology and genetics which qualifies the student for a better understanding of the technical and clinical aspects of cytotechnology.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 112, Introductory Zoology</td>
<td>4</td>
</tr>
<tr>
<td>Biology 223, Human Biology</td>
<td>5</td>
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<tr>
<td>Biology 201, Introductory Cellular Biology</td>
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<td>Biology 401, Genetics</td>
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<td>Chemistry 111, General Chemistry</td>
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<td>Chemistry 112, Gen. and Inorganic Chemistry</td>
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</tr>
<tr>
<td>Mathematics</td>
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<tr>
<td>121, Discrete Math 1 (3) or 140, Algebra (3) or 141, Algebra and Trig. (5)</td>
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<tr>
<td>English 111, College English</td>
<td>3</td>
</tr>
<tr>
<td>English 211, Advanced Writing</td>
<td>3</td>
</tr>
<tr>
<td>Speech 111, Extemporaneous Speech</td>
<td>2</td>
</tr>
<tr>
<td>Psychology 111, General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 211, Introductory Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Electives, Including Humanities and Social Sciences</td>
<td>18</td>
</tr>
<tr>
<td>(P. E. not to exceed 4 hours.)</td>
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</tr>
</tbody>
</table>

The third year of training is spent in an approved hospital under the supervision of a specially-trained pathologist and includes formal lectures and laboratory experience in the field. Following this the student is awarded a certificate and the graduate is eligible to take
the registry examination in cytotechnology and to qualify for certification as a registered cytotechnologist—CT(ASCP).

**NURSING—BACCALAUREATE PROGRAM**

Persons interested in the degree nursing program should direct their inquiries to the Chairman, Department of Nursing, Wichita State University.

Wichita State University core curriculum requirements must be satisfactorily completed as well as the following required prenursing courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 103 or 111, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Biology 100 or 112</td>
<td>4</td>
</tr>
<tr>
<td>Biology 223, Human Biology</td>
<td>5</td>
</tr>
<tr>
<td>Biology 120, Introduction to Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 121 or 140</td>
<td>3</td>
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<tr>
<td>Sociology 211, Introductory Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 111, General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 260, Child Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology 202, Cultural Anthropology</td>
<td>3</td>
</tr>
</tbody>
</table>

* Or another math course acceptable to the Department of Nursing.

The student may transfer from a junior or senior college to the Department of Nursing if the above requirements are met.

Application for admission to the Department of Nursing may be submitted after satisfactory completion of the first three semesters of college work, but must be received by May 1 of the year in which enrollment is anticipated. In order to be permitted to enroll in the professional nursing curriculum as a generic baccalaureate candidate, the student must fulfill the following requirements:

1. Have completed or be enrolled in the fourth semester completing the required lower division requirements.
2. Have an overall grade point average of 2.0 or above in all collegiate work completed.
3. Receive consent of the Admission and Progression Committee of the Department of Nursing.

The registered professional nurse who is interested in completing the baccalaureate degree in nursing must fulfill the following requirements prior to admission to the Department of Nursing:

1. Must have completed all of the Wichita State University core curriculum requirements and the required pre-nursing courses.
2. Must have an overall grade point average of 2.0 or above in all college work completed.
3. Must submit a photocopy of his current license to practice as a registered professional nurse.
4. Must submit an official transcript from his school of nursing.
5. Must submit references from the last two employers.
6. Receive consent of the Admission and Progression Committee of the Department of Nursing.
Advanced Credit

Registered nurses who have met all of the aforementioned requirements will be allowed to take advanced standing examinations for credit in some of the required nursing courses. In no instance will the candidate be allowed to obtain more than 33 hours in the nursing major by examination. Credit will be granted only if a grade of C or better is obtained in the examination. A total of 124 hours of credit will be required of all candidates for the degree in nursing.

The Major in Nursing

The baccalaureate degree in nursing is designed to prepare a practitioner for beginning roles in nursing. With additional graduate study the nurse may build upon this basic professional foundation to prepare for clinical specialization, teaching, administration, and/or research. Unless indicated, all courses with a nursing prefix are required. The student in nursing is encouraged to develop a minor in a related field. Recommended minor fields are Anthropology, Biology, Chemistry, Psychology and Sociology. A minor usually consists of fifteen hours, but requirements for the minor should be checked with the specific department.

Courses Open to Non-Nursing Majors

Courses in the Department of Nursing open to non-nursing students are:

Nursing 250 Workshop in Health Related Professions
Nursing 311 Community Health Concepts
Nursing 314 Pathophysiology
Nursing 318 Human Communication in the Health Disciplines
Nursing 450 Workshop in Health Related Professions

The following courses from the Nursing Professional Curriculum are required for the B.S. Degree in Nursing: Nursing 301, 311, 312, 314, 322, 411, 413, 421, 432, 442, and 460.

NURSING (Professional Curriculum)


301. Core Concepts of Nursing. (6). 3R, 3L. A combined theory and practice course in which the beginning professional student is provided the opportunity to develop those beginning knowledges, understandings and skills requisite to professional nursing practice. Emphasis will be given to the professional role and responsibilities, technical skills requisite to non-complex nursing care, communication and interpersonal relationships, the community concept of health care, rehabilitation and health teaching. Prerequisite: Departmental consent.

311. Community Health Concepts. (3). This course provides an introduction to the foundations of public health, biostatistics, epidemiology, ecology, community organizations and organization for health services. Prerequisite: Departmental Consent.
312. Nursing Care of the Adult. (6). 3R, 3L. A combined theory and practice course in which the student is assisted in acquiring those knowledges and skills requisite to assessing the nursing needs of adult patients with medical and/or surgical problems and planning for, giving, and evaluating the nursing care based on this assessment. Special consideration is given to prevention of illness, patient teaching, rehabilitation and the effect of individual differences and pathophysiology upon the therapeutic plan of nursing care. Learning experiences will be provided in a variety of health care agencies. Prerequisite: Departmental Consent.

314. Pathophysiology. (3). Knowledges gained from the basic sciences are utilized in anticipating the physiologic changes associated with gross pathology. The principles underlying selected therapeutic measures are studied as they relate to various pathologic conditions. The student uses this information in predicting health care needs of patients and in planning to meet these needs. Prerequisite: Departmental consent.

318. Human Communication in the Health Disciplines. (3). Elective. The pragmatics of human communication theories and concepts relevant to providing health care. Verbal and non-verbal aspects of intrapersonal and interpersonal communication. Included are professional-patient relationships, teaching and interviewing techniques, and health team concepts. Prerequisite: Departmental consent.

320. Directed Study in Nursing. (1-3). Elective. Individual study of the various aspects and/or problems of professional nursing. Repeatable. Prerequisite: Departmental consent.

322. Psychiatric Nursing. (6). 3R, 3L. Theories, principles and concepts of psychodynamics are studied in relation to behavioral manifestations of stress involving major and minor emotional illnesses. Emphasis is placed on therapeutic use of self in interpersonal processes. Prerequisite: Departmental consent.

411. Nursing Care of the Child. (6). 3R, 3L. A combined theory and practice course in which the student has opportunity to study the child's growth and development from infancy through adolescence with emphasis on the effects of various health problems on the child and his family. The total family organization is studied in relation to its influence on both the well and ill child. Opportunity for nursing practice is provided in selected hospital or community settings. Prerequisite: Departmental consent.

413. Nursing Care of the Mother and Infant. (6). 3R, 3L. A combined theory and practice course which is designed to present the childbearing continuum as it involves the entire family. Specific emphasis is placed on the mother and newborn including both the normal and deviations from the normal. The student has opportunity to work with families in selected hospital and community settings. Prerequisite: Departmental consent.

421. Ecology of the Profession. (2). The evolution of nursing as a profession and current perspectives appraised historically within the social, cultural, economic and political developments of the times. Prerequisite: Departmental consent.

432. Community Health Nursing. (6). 3R, 3L. A combined theory and practice course in which the student has opportunity to apply concepts and principles of community health previously acquired, utilizing a family-centered approach within the framework of both private and public community health care agencies. Emphasis will be given to helping the student develop an understanding and appreciation of an interdisciplinary approach to meeting community health needs. Prerequisite: Nursing 311.

442. Nursing Leadership. (6). 3R, 3L. A combined theory and practice course in which the senior student studies and applies nursing management and leadership principles in a variety of nursing situations. Included in the
course are styles of leadership, performance appraisal techniques, and administrative functions necessary to prepare for independent and creative participation in the community's changing health problems.

450. Workshop in Health Related Professions. (1-4). Elective. The course will focus on relevant topics directly and/or indirectly related to the delivery of health care service.

460. Nursing Research Seminar. (2). Introductory research methodology is presented as a basis for investigating special nursing problems. The course also includes critical evaluation of selected nursing studies, and utilizes the research process as a basis for developing a questioning attitude toward nursing practices and implementing change. Prerequisites: Senior standing or consent.
The Summer School

GORDON B. TERWILLIGER, Ed. D., Director

SUMMER SCHOOL

The University maintains its summer session as an extension of the regular scholastic year. All work is offered by regularly qualified instructors, and the standards of achievement are identical with those required in the academic year. Credits earned in the summer session are accepted by all colleges accredited by or belonging to the associations which accredit the University or in which it has membership.

All the colleges and divisions of the University function during the summer session. Credit toward both undergraduate and graduate degrees may be earned during the summer. A variety of short term workshops and special institutes is also a feature of the summer session.

SUMMER SESSION BULLETIN

The bulletin of the summer session lists dates of enrollment, housing information, fees, and the availability of cultural and recreational opportunities. This bulletin will be mailed to those requesting it.

For the bulletin or information not covered by it, please write to the Director of the Summer Session, Wichita State University, Wichita, Kansas 67208.

ADMISSION REQUIREMENTS AND ENROLLMENT

The Rules governing admission to the summer session are the same as those for the regular session.

The student may enroll in as many credit hours as the number of weeks for which he is enrolled. Dates for registration are published in the Bulletin of the Summer School.

FEES

For information regarding fees, see page 47.

CENTER FOR URBAN STUDIES

The Center for Urban Studies is an interdisciplinary organization which was established to give special attention to the problems of metropolitanism and to carry on both independent and contract
research. The staff work with the faculty and graduate students in making studies of economic, sociological, and cultural problems, as well as governmental problems. A central library of specialized materials on urban and regional problems is being established at the Center, and the staff is available to assist in conducting seminars, workshops and conferences for officials and interested citizens.

The role of the Center for Urban Studies is to stimulate University faculty members, graduate students, and other informed and interested citizens to investigate, analyze, and report upon metropolitan problems; to develop explanatory hypotheses, alternative solutions, and the probable consequences of such proposals; to provide seminars and conferences for the study of problems; and to provide information on the areas that have been considered.
INDEX

A

Academic Appeals, Court of Student ........................................ 64
Accounting Department:
  Certificate of Public Accountant .................................. 191
  Courses ............................................................. 192
  Curricular Emphasis ......................................... 189
  Minor .............................................................. 191
Administration Department:
  Courses ............................................................. 194
  Curricular Emphasis ......................................... 189
  Educational Administration and Supervision ............ 219
Administration of Justice ......................................................
  Major ............................................................. 117
  Minor ............................................................. 117
Administrative Officers .......................................................... 7
Admission Requirements .......................................................... 42
  Advanced Standing ........................................... 44
  College of Business Administration ..................... 187
  College of Education ......................................... 208
  College of Fine Arts ........................................ 275, 293
  College of Liberal Arts and Sciences ................. 108
  Graduate School ................................................... 46
  School of Engineering ...................................... 252
  Summer School ................................................. 331
  University College .............................................. 97
Advanced Placement Credit ...................................................... 45
Advanced Standing, Admission to ........................................... 44
Advanced Standing Examination ............................................ 45
Aeronautical Engineering Department:
  Courses ............................................................. 262
  Requirements ...................................................... 255
Aerospace Studies Department:
  Air Force ROTC .................................................. 215
  AFROTC College Scholarship .................................. 217
  Courses ............................................................. 217
  Extracurricular Activities .................................. 217
  Flight Instruction Program ................................ 216
  Four-Year Program ............................................. 216
  General Military Course .................................... 216
  Pay and Allowances .......................................... 217
  Professional Officer Course ................................ 216
  Two-Year Program ............................................. 216

INDEX 333
Afro-American Studies ........................................ 113
Aid, Student .................................................. 71
American Studies Department:
    Courses ................................................................ 119
    Major ................................................................... 119
    Minor .................................................................. 119
Anthropology Department:
    Courses ................................................................ 120
    Major ................................................................... 120
    Minor .................................................................. 120
Applied Music Instructors ........................................ 38
Applied Music Regulations ...................................... 295
Art Collections of the University .............................. 277
Art Department:
    Bachelor of Art Education Requirements .............. 284
    Bachelor of Fine Arts Requirements .................... 277
    Courses .............................................................. 286
    Degrees ............................................................. 275
    General Requirements ........................................ 276
    Major, Liberal Arts ............................................. 112
    Minor, Liberal Arts ............................................. 112
Art Education:
    Bachelor of Art Education Requirements .............. 285
    Courses .............................................................. 218
Assistantships:
    Clerical ............................................................ 70
    Departmental ..................................................... 70
    Graduate .......................................................... 70
    Library ............................................................. 71
    Technical .......................................................... 70
Attendance ............................................................. 55
Audit Course Fees .................................................. 48
Auditor, Regulations Concerning .............................. 51
Awards ................................................................... 72
    Sorority and Fraternity ........................................ 66

B
Bachelor of Art Education Requirements .................. 284
Bachelor of Arts in Education Requirements ............ 208
Bachelor of Business Administration Requirements .... 188
Bachelor of Fine Arts Requirements ........................ 277
Bachelor of Music Education Requirements .............. 299
Bachelor of Music Requirements ............................. 298
Bachelor of Science:
    Aeronautical Engineering .................................... 255
    Biology .............................................................. 123
    Business Administration .................................... 187
    Chemistry .......................................................... 127
    Electrical Engineering ....................................... 256
    Geology ............................................................. 136
## College of Education:

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accreditation and Certification</td>
<td>207</td>
</tr>
<tr>
<td>Admission Requirements</td>
<td>208</td>
</tr>
<tr>
<td>Baccalaureate Requirements</td>
<td>208</td>
</tr>
<tr>
<td>Combined Curricula</td>
<td>213</td>
</tr>
<tr>
<td>Courses</td>
<td>217</td>
</tr>
<tr>
<td>Degree Requirements</td>
<td>208</td>
</tr>
<tr>
<td>Department Majors and Minors</td>
<td>215</td>
</tr>
<tr>
<td>Elementary Teaching Certificate</td>
<td>209</td>
</tr>
<tr>
<td>Junior High School, Teaching</td>
<td>212</td>
</tr>
<tr>
<td>Objectives</td>
<td>207</td>
</tr>
<tr>
<td>Requirements</td>
<td>208</td>
</tr>
<tr>
<td>Secondary Teaching Certificates</td>
<td>211</td>
</tr>
<tr>
<td>Specialized Fields</td>
<td>208</td>
</tr>
<tr>
<td>Teaching Fields</td>
<td>212</td>
</tr>
</tbody>
</table>

## College of Engineering:

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admission</td>
<td>252</td>
</tr>
<tr>
<td>Aeronautical Engineering Courses</td>
<td>262</td>
</tr>
<tr>
<td>Common Sequence of Courses</td>
<td>254</td>
</tr>
<tr>
<td>Curricula</td>
<td>254</td>
</tr>
<tr>
<td>Electrical Engineering Courses</td>
<td>266</td>
</tr>
<tr>
<td>Engineering Graphics Courses</td>
<td>268</td>
</tr>
<tr>
<td>Entrance Requirements</td>
<td>252</td>
</tr>
<tr>
<td>Industrial Engineering Courses</td>
<td>268</td>
</tr>
<tr>
<td>Mechanical Engineering Courses</td>
<td>271</td>
</tr>
</tbody>
</table>

## College of Health Related Professions:

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advising</td>
<td>317</td>
</tr>
<tr>
<td>Cytotechnology</td>
<td>325</td>
</tr>
<tr>
<td>Dental Hygiene</td>
<td>319</td>
</tr>
<tr>
<td>Inhalation Therapy</td>
<td>322</td>
</tr>
<tr>
<td>Department of Nursing</td>
<td>326</td>
</tr>
<tr>
<td>Diploma Nursing</td>
<td>321</td>
</tr>
<tr>
<td>Medical Technology</td>
<td>323</td>
</tr>
<tr>
<td>Dental Hygiene Courses</td>
<td>320</td>
</tr>
<tr>
<td>Inhalation Therapy Courses</td>
<td>322</td>
</tr>
<tr>
<td>Nursing Courses</td>
<td>327</td>
</tr>
</tbody>
</table>

## College of Liberal Arts and Sciences (See Fairmount, College of)

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Curricula, College of Education</td>
<td>213</td>
</tr>
<tr>
<td>Combined Student Loan Fund</td>
<td>88</td>
</tr>
<tr>
<td>Communications Requirements</td>
<td>58</td>
</tr>
<tr>
<td>Continuing Education, Division of</td>
<td>104</td>
</tr>
<tr>
<td>“Core” Curriculum Requirements</td>
<td>58</td>
</tr>
<tr>
<td>Correspondence Courses</td>
<td>58, 104</td>
</tr>
<tr>
<td>Counseling</td>
<td>61</td>
</tr>
<tr>
<td>Course Numbers Explained</td>
<td>52</td>
</tr>
<tr>
<td>Courses:</td>
<td></td>
</tr>
<tr>
<td>Change of</td>
<td>56</td>
</tr>
<tr>
<td>Dropping of</td>
<td>56</td>
</tr>
<tr>
<td>Eligibility for</td>
<td>52</td>
</tr>
</tbody>
</table>
Engineering (See School of)........... PAGE
Engineering Graphics Courses (Industrial Engineering)........... 268

English, Language and Literature Department:
Courses .............................................. 131
Major .................................................. 130
Minor .................................................. 131

Enrollment Summary (Inside Back Cover)
Entrance Physical Examination ................................... 65
Examination, Advanced Standing .................................. 45
Examinations, Proficiency (School of Music) .................... 294
Examinations, Rules Regarding ..................................... 57
Excess Hours, Regulation ......................................... 53
Exemptions for Superior Achievement ............................. 54
Extension Courses .......................................... 58, 104

F
Faculty ...................................................... 8
Fairmount College of Liberal Arts and Sciences:
Admission Requirements ........................................ 108
Curriculum .................................................. 116
Degrees .................................................... 109
Field Major .................................................. 112
Major Requirements .......................................... 111
Minor Requirements .......................................... 111
Requirements ................................................ 109
Special Programs of Study ..................................... 111
Transfer of Credit ........................................... 109

Fees:
Campus Privilege ............................................ 48
Departmental ............................................... 48
Miscellaneous ............................................. 49
Tuition ...................................................... 48
Fellowships, Graduate ........................................ 88
Field Major ................................................. 112
Fields of Study Prescribed ..................................... 48
Financial Aids and Awards ..................................... 71
Fine Arts, Bachelor of, Requirements .......................... 277
Fine Arts, College of (See Art Department and School of Music)
Foreign Students, Admission ................................... 61
Foundations for Religious Education ............................ 96
Fraternities, Social and Honorary ................................ 66
French:
Courses .................................................... 171
Major ...................................................... 170
Minor ...................................................... 170

Freshman Courses:
Definition ............................................... 52
Eligibility for ............................................. 52

G
General Music Requirements .................................... 293

INDEX
For Graduation, Required ........................................ 57
Maximum per Semester ........................................ 53
Residence, Required in .......................................... 58
Upper Division, Required ......................................... 58
Housing ............................................................... 63
Humanities Requirements ......................................... 58
Human Relations ...................................................... 60

I
Incomplete, Regulations Regarding ................................ 51
Industrial Education Department:
Courses ..................................................... 226
Major ......................................................... 226
Minor ......................................................... 226
Industrial Engineering:
Courses ..................................................... 268
Requirements ............................................... 257
Inhalation Therapy ............................................. 322
International Students ......................................... 61
Italian Courses .................................................. 172

J
Job Opportunities .................................................. 62, 70
Journalism Department:
Courses ..................................................... 147
Major ......................................................... 147
Junior Courses:
Definition ..................................................... 52
Eligibility ...................................................... 52

L
Laboratory Science Requirement ................................ 58
Language Requirements, Liberal Arts ......................... 109
Latin American Studies ......................................... 112
Latin and Greek:
Courses ..................................................... 173
Major ......................................................... 173
Minor ......................................................... 173
Law, Pre- ....................................................... 114
Liberal Arts and Sciences (See Fairmount, College of) ....
Library Assistants ............................................... 71
Library Science Courses ........................................ 229
Linguistics:
Major ......................................................... 149
Minor ......................................................... 149
Living Accommodations ......................................... 63
Loan Fund:
Combined ..................................................... 88
Special ......................................................... 90
Logopedics Department:
Corrective Training ........................................... 231
Courses ................................................................. 231
Major ................................................................. 230
Minor ................................................................. 231

M
Major (See Various Colleges and Departments)
Make-Up Examinations, Regulations .................................... 57
Mathematics Department:
Courses ................................................................. 151
Major ................................................................. 150
Minor ................................................................. 151
Mathematics Requirements ............................................ 58
Mathematics Requirement, Liberal Arts ................................. 109
Mechanical Engineering:
Courses ................................................................. 271
Requirements .......................................................... 259
Medical Examinations .................................................. 65
Medical Technology:
Curriculum ............................................................ 323
Medicine, Pre-
................................................................. 114
Military Science Department:
Courses ................................................................. 237
Description ............................................................ 235
Summer Camp ........................................................ 236
Minors (See Various Colleges and Department)
Miscellaneous Fees .................................................... 49
Miscellaneous Organizations ........................................... 67
Music, Bachelor of ..................................................... 298
Music Department:
Courses ................................................................. 301
Major ................................................................. 297
(See, also, School of Music)
Music Education:
Bachelor of ............................................................ 299
Courses ................................................................. 237
Music Instructors, Applied ............................................. 38

N
Natural Science Requirements ........................................... 58
Non-Credit Courses .................................................... 52
Non-Resident Fees ..................................................... 48
Nursing Programs ....................................................... 326

O
Officers, Administrative .................................................. 7
Officers, Board of Regents ............................................. 7
Optometry, Pre-
................................................................. 114
Orchestral Instrument Curricula ...................................... 302
Organ Majors Curriculum .............................................. 302

INDEX 341
Organizations:

<table>
<thead>
<tr>
<th>Organization</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honorary</td>
<td>67</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>67</td>
</tr>
<tr>
<td>Regulations Concerning</td>
<td>66</td>
</tr>
<tr>
<td>Social</td>
<td>66</td>
</tr>
<tr>
<td>Orientation</td>
<td>60</td>
</tr>
</tbody>
</table>

P

Personal Counseling                        61
Pharmacy, Pre-                             114

Philosophy Department:

<table>
<thead>
<tr>
<th>Type</th>
<th>Course Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major</td>
<td></td>
<td>155</td>
</tr>
<tr>
<td>Courses</td>
<td></td>
<td>155</td>
</tr>
<tr>
<td>Minor</td>
<td></td>
<td>155</td>
</tr>
</tbody>
</table>

Physical Activities Requirements          59
Physical Education Department:

<table>
<thead>
<tr>
<th>Type</th>
<th>Course Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major</td>
<td></td>
<td>241</td>
</tr>
<tr>
<td>Minor</td>
<td></td>
<td>242</td>
</tr>
<tr>
<td>Professional Courses</td>
<td></td>
<td>242</td>
</tr>
<tr>
<td>Service Courses</td>
<td></td>
<td>241</td>
</tr>
</tbody>
</table>

Physical Examination Requirements        65

Physics Department:

<table>
<thead>
<tr>
<th>Type</th>
<th>Course Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courses</td>
<td></td>
<td>158</td>
</tr>
<tr>
<td>Major</td>
<td></td>
<td>158</td>
</tr>
<tr>
<td>Minor</td>
<td></td>
<td>158</td>
</tr>
</tbody>
</table>

Piano Major, Curriculum                     301

Police Science (Administration of Justice):

<table>
<thead>
<tr>
<th>Type</th>
<th>Course Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courses</td>
<td></td>
<td>117</td>
</tr>
<tr>
<td>Major</td>
<td></td>
<td>117</td>
</tr>
<tr>
<td>Minor</td>
<td></td>
<td>117</td>
</tr>
</tbody>
</table>

Political Science Department:

<table>
<thead>
<tr>
<th>Type</th>
<th>Course Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courses</td>
<td></td>
<td>161</td>
</tr>
<tr>
<td>Major</td>
<td></td>
<td>160</td>
</tr>
<tr>
<td>Minor</td>
<td></td>
<td>161</td>
</tr>
<tr>
<td>Portuguese</td>
<td></td>
<td>174</td>
</tr>
</tbody>
</table>

Pre-Dental                                    114
Pre-Freshman Period                           98
Pre-Law                                       114
Pre-Medical                                   114
Pre-Optometry                                 114
Pre-Pharmacy                                  114
Prescribed Fields of Study                    57
Pre-Theological                               115
Pre-Veterinary                                114
Prizes                                        72
Probation, Rules Regarding                    52

Psychology Department:

<table>
<thead>
<tr>
<th>Type</th>
<th>Course Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courses</td>
<td></td>
<td>165</td>
</tr>
<tr>
<td>Major</td>
<td></td>
<td>165</td>
</tr>
<tr>
<td>Minor</td>
<td></td>
<td>165</td>
</tr>
</tbody>
</table>
Public Accountant, Certificate of Certified ........................................... 191
Public Service ................................................................. 115

R

Reading Improvement Laboratory .................................................... 63
Recommended High School Preparation ........................................... 98
Refund of Fees ................................................................. 50
Regents, Board of ....................................................................... 7
Registration ................................................................................ 47

Regulations:
  Admission to Graduate School .................................................... 46
  Advanced Placement .................................................................. 45
  Advanced Standing .................................................................... 44
  Applied Music ......................................................................... 295
  Attendance ................................................................................ 55
  Auditors .................................................................................. 51
  Catalog for Graduation ............................................................. 59
  Change of Course ..................................................................... 56
  Classification of Students ......................................................... 52
  Credit by Examination ............................................................... 45
  Credit—No Credit .................................................................... 51
  Credit Points ............................................................................ 52
  Dismissal .................................................................................. 52
  Dropping of Course ................................................................... 56
  Eligibility for Courses ............................................................... 52
  Entrance Physical Examination .................................................... 65
  Graduation Requirements ........................................................... 57
  Honors Courses ........................................................................ 116
  Hospitalization, Student ............................................................. 65
  Hours of Credit ......................................................................... 57
  Housing, Women ....................................................................... 63
  Incomplete, Make-Up ................................................................. 51
  Loans to Students ..................................................................... 88
  Majors and Minors, Transfers ..................................................... 59
  Organizations ........................................................................... 67
  Probation .................................................................................. 52
  Repetition of Course ................................................................ 51
  Residence .................................................................................. 47
  Scholarship ............................................................................... 50
  Student Responsibility ............................................................... 55
  Transfer Students ...................................................................... 44
  Upper Division Courses ............................................................. 58
  Withdrawal from University ......................................................... 56

Religion Department:
  Courses .................................................................................... 169
  Major ....................................................................................... 168
  Minor ....................................................................................... 168

Requirements:
  Admission ................................................................................. 42
Graduation, General ........................................ 57
Prescribed Fields of Study ................................ 57
(See, also, various Colleges, Schools and Departments)
Resident Fees .............................................. 48
R. O. T. C. (See Aerospace Studies and Military Science)
Romance Languages Department ......................... 170
Rules Regarding Examinations .............................. 57
Rules Regarding Scholarship ............................... 50

Scholarships, Rules Regarding ............................ 50
Scholarships:
  Graduate .................................................. 88
  Undergraduate ........................................... 73
School of Music:
  Admission .................................................. 293
  Applied Music Regulations ............................... 295
  Bachelor of Music Requirements ......................... 298
  Bachelor of Music Education Requirements ............. 299
  Courses ...................................................... 301
  General Music Requirements ............................. 298
  Music Major, Liberal Arts ............................... 297
  Music Minor, Liberal Arts ................................ 298
  Proficiency Examinations ................................ 294
Secondary Education Courses ............................. 245
Secondary Teaching Certificate .......................... 211
Secretarial Training:
  Certificate of Applied Science ......................... 190
Senior Courses:
  Definition .................................................. 53
  Eligibility .................................................. 53
Social Organizations ........................................ 67
Social Science Requirements .............................. 59
Social Studies:
  Major ....................................................... 214
  Minor ....................................................... 215
Social Work:
  Courses ..................................................... 180
  Major ....................................................... 180
  Minor ....................................................... 180
Sociology Department:
  Courses ..................................................... 177
  Major ....................................................... 177
  Minor ....................................................... 177
Sophomore Courses:
  Definition .................................................. 52
  Eligibility for ............................................. 52
Sororities, Social ........................................... 67
Spanish:
  Courses ..................................................... 175

INDEX
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major</td>
<td>174</td>
</tr>
<tr>
<td>Minor</td>
<td>175</td>
</tr>
<tr>
<td>Special Examinations</td>
<td>57</td>
</tr>
<tr>
<td>Special Loan Funds</td>
<td>90</td>
</tr>
<tr>
<td>Special Programs, Liberal Arts</td>
<td>111</td>
</tr>
<tr>
<td>Speech, Language, and Hearing Disorders (See Logopedics)</td>
<td>229</td>
</tr>
<tr>
<td>Speech Defects, Corrective Training for</td>
<td>231</td>
</tr>
<tr>
<td>Speech Department:</td>
<td></td>
</tr>
<tr>
<td>Courses</td>
<td>181</td>
</tr>
<tr>
<td>Major</td>
<td>180</td>
</tr>
<tr>
<td>Minor</td>
<td>181</td>
</tr>
<tr>
<td>Statistics</td>
<td>154</td>
</tr>
<tr>
<td>Student Academic Appeals, Court of</td>
<td>64</td>
</tr>
<tr>
<td>Student Aid</td>
<td>71</td>
</tr>
<tr>
<td>Student Employment</td>
<td>62, 70</td>
</tr>
<tr>
<td>Student Government</td>
<td>64</td>
</tr>
<tr>
<td>Student Health and Hospitalization</td>
<td>65</td>
</tr>
<tr>
<td>Student Housing</td>
<td>63</td>
</tr>
<tr>
<td>Student Loans</td>
<td>88</td>
</tr>
<tr>
<td>Student Personnel and Guidance Courses</td>
<td>249</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>60</td>
</tr>
<tr>
<td>Student Responsibility</td>
<td>55</td>
</tr>
<tr>
<td>Student Services:</td>
<td></td>
</tr>
<tr>
<td>Campus Activities Center</td>
<td>65</td>
</tr>
<tr>
<td>Counseling</td>
<td>61</td>
</tr>
<tr>
<td>Employment</td>
<td>62, 70</td>
</tr>
<tr>
<td>Health and Hospitalization</td>
<td>65</td>
</tr>
<tr>
<td>Housing</td>
<td>63</td>
</tr>
<tr>
<td>Orientation</td>
<td>61</td>
</tr>
<tr>
<td>Reading Improvement Laboratory</td>
<td>63</td>
</tr>
<tr>
<td>Student Government</td>
<td>64</td>
</tr>
<tr>
<td>Teacher Placement</td>
<td>62</td>
</tr>
<tr>
<td>Veteran’s Affairs</td>
<td>63</td>
</tr>
<tr>
<td>Student Teaching</td>
<td>208</td>
</tr>
<tr>
<td>Students, Classification</td>
<td>52</td>
</tr>
<tr>
<td>Summer School:</td>
<td></td>
</tr>
<tr>
<td>Bulletin</td>
<td>331</td>
</tr>
<tr>
<td>Information</td>
<td>331</td>
</tr>
<tr>
<td>Superior Achievement, Exemptions for</td>
<td>54</td>
</tr>
</tbody>
</table>

**Teacher Education Courses:**

- Aerospace Studies                                                  | 217  |
- Art Education                                                       | 218  |
- Educational Administration and Supervision                         | 219  |
- Educational Psychology                                              | 221  |
- Elementary Education                                                | 223  |
- Foundations of Education                                            | 248  |
- Industrial Education                                                | 226  |
- Library Science                                                     | 229  |
- Logopedics                                                          | 229  |

**INDEX** 345