This catalog becomes effective September 1, 1968.

This catalog is for information only and does not constitute a contract.
<table>
<thead>
<tr>
<th>TABLE OF CONTENTS</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calendar for 1968-1969</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><strong>Wichita State University</strong></td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>37</td>
</tr>
<tr>
<td>Admission Requirements</td>
<td>38</td>
</tr>
<tr>
<td>Admission to Graduate School</td>
<td>41</td>
</tr>
<tr>
<td>Registration</td>
<td>42</td>
</tr>
<tr>
<td>Residence Defined</td>
<td>42</td>
</tr>
<tr>
<td>Fees</td>
<td>43</td>
</tr>
<tr>
<td>Regulations Governing Scholarship</td>
<td>46</td>
</tr>
<tr>
<td>Requirements for Graduation</td>
<td>54</td>
</tr>
<tr>
<td>Student Personnel Services</td>
<td>56</td>
</tr>
<tr>
<td>Organizations</td>
<td>61</td>
</tr>
<tr>
<td>Assistantships and Student Employment</td>
<td>64</td>
</tr>
<tr>
<td>Financial Aids and Awards</td>
<td>66</td>
</tr>
<tr>
<td>Foundations for Religious Education</td>
<td>85</td>
</tr>
<tr>
<td><strong>University College</strong></td>
<td></td>
</tr>
<tr>
<td>Requirements</td>
<td>87</td>
</tr>
<tr>
<td>Special Programs of Study</td>
<td>92</td>
</tr>
<tr>
<td>Courses</td>
<td>96</td>
</tr>
<tr>
<td><strong>Fairmount College of Liberal Arts and Sciences</strong></td>
<td></td>
</tr>
<tr>
<td>Requirements</td>
<td>102</td>
</tr>
<tr>
<td>Transfer of Credit Within the University</td>
<td>105</td>
</tr>
<tr>
<td>Special Programs of Study</td>
<td>105</td>
</tr>
<tr>
<td>Departments, Majors, Minors, Courses</td>
<td></td>
</tr>
<tr>
<td>American Civilization</td>
<td>109</td>
</tr>
<tr>
<td>Anthropology</td>
<td>110</td>
</tr>
<tr>
<td>Biology</td>
<td>113</td>
</tr>
<tr>
<td>Chemistry</td>
<td>116</td>
</tr>
<tr>
<td>Economics</td>
<td>119</td>
</tr>
<tr>
<td>English Language and Literature</td>
<td>119</td>
</tr>
<tr>
<td>French</td>
<td>154</td>
</tr>
<tr>
<td>Geology and Geography</td>
<td>124</td>
</tr>
<tr>
<td>German</td>
<td>128</td>
</tr>
<tr>
<td>Subject</td>
<td>Page</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>History</td>
<td>130</td>
</tr>
<tr>
<td>Italian</td>
<td>156</td>
</tr>
<tr>
<td>Journalism</td>
<td>133</td>
</tr>
<tr>
<td>Latin and Greek</td>
<td>156</td>
</tr>
<tr>
<td>Mathematics</td>
<td>135</td>
</tr>
<tr>
<td>Medical Technology</td>
<td>140</td>
</tr>
<tr>
<td>Philosophy</td>
<td>140</td>
</tr>
<tr>
<td>Physics</td>
<td>143</td>
</tr>
<tr>
<td>Police Science</td>
<td>145</td>
</tr>
<tr>
<td>Political Science</td>
<td>145</td>
</tr>
<tr>
<td>Psychology</td>
<td>150</td>
</tr>
<tr>
<td>Religious Education</td>
<td>153</td>
</tr>
<tr>
<td>Romance Languages</td>
<td>154</td>
</tr>
<tr>
<td>Sociology</td>
<td>159</td>
</tr>
<tr>
<td>Spanish</td>
<td>157</td>
</tr>
<tr>
<td>Speech</td>
<td>162</td>
</tr>
<tr>
<td><strong>COLLEGE OF BUSINESS ADMINISTRATION</strong></td>
<td></td>
</tr>
<tr>
<td>Objectives and Programs</td>
<td>169</td>
</tr>
<tr>
<td>Regulations</td>
<td>170</td>
</tr>
<tr>
<td>Curricular Programs</td>
<td>172</td>
</tr>
<tr>
<td>Certificate of Applied Science</td>
<td>173</td>
</tr>
<tr>
<td><strong>DEPARTMENTS, MAJORS, MINORS, COURSES:</strong></td>
<td></td>
</tr>
<tr>
<td>Accounting</td>
<td>174</td>
</tr>
<tr>
<td>Administration</td>
<td>177</td>
</tr>
<tr>
<td>Economics</td>
<td>181</td>
</tr>
<tr>
<td>Secretarial Training</td>
<td>184</td>
</tr>
<tr>
<td><strong>COLLEGE OF EDUCATION</strong></td>
<td></td>
</tr>
<tr>
<td>Accreditation and Certification</td>
<td>187</td>
</tr>
<tr>
<td>Requirements</td>
<td>188</td>
</tr>
<tr>
<td>Teaching Fields</td>
<td>191</td>
</tr>
<tr>
<td>Departmental Majors and Minors</td>
<td>194</td>
</tr>
<tr>
<td><strong>DEPARTMENTS, MAJORS, MINORS, COURSES:</strong></td>
<td></td>
</tr>
<tr>
<td>Aerospace Studies</td>
<td>196</td>
</tr>
<tr>
<td>Art Education</td>
<td>199</td>
</tr>
<tr>
<td>Educational Administration and Supervision</td>
<td>194</td>
</tr>
<tr>
<td>Educational Psychology</td>
<td>199</td>
</tr>
<tr>
<td>Elementary Education</td>
<td>201</td>
</tr>
<tr>
<td>Industrial Education</td>
<td>203</td>
</tr>
<tr>
<td>Library Science</td>
<td>205</td>
</tr>
<tr>
<td>Logopedics</td>
<td>206</td>
</tr>
<tr>
<td>Military Science</td>
<td>210</td>
</tr>
</tbody>
</table>

WICHITA STATE UNIVERSITY
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music Education</td>
<td>212</td>
</tr>
<tr>
<td>Physical Education, Health, and Recreation</td>
<td>215</td>
</tr>
<tr>
<td>Secondary Education</td>
<td>220</td>
</tr>
<tr>
<td>Social and Philosophical Foundations of Education</td>
<td>222</td>
</tr>
<tr>
<td>Student Personnel and Guidance</td>
<td>223</td>
</tr>
<tr>
<td><strong>College of Fine Arts</strong></td>
<td></td>
</tr>
<tr>
<td>Department of Art</td>
<td>225</td>
</tr>
<tr>
<td>Requirements</td>
<td>226</td>
</tr>
<tr>
<td>Courses</td>
<td>228</td>
</tr>
<tr>
<td>School of Music</td>
<td>236</td>
</tr>
<tr>
<td>Requirements</td>
<td>237</td>
</tr>
<tr>
<td>Applied Music Regulations</td>
<td>245</td>
</tr>
<tr>
<td>Major, Minor, Courses</td>
<td>252</td>
</tr>
<tr>
<td><strong>School of Engineering</strong></td>
<td></td>
</tr>
<tr>
<td>Requirements</td>
<td>260</td>
</tr>
<tr>
<td>Curricula</td>
<td>260</td>
</tr>
<tr>
<td><strong>Departments, Courses:</strong></td>
<td></td>
</tr>
<tr>
<td>Aeronautical Engineering</td>
<td>265</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>268</td>
</tr>
<tr>
<td>Engineering Graphics</td>
<td>271</td>
</tr>
<tr>
<td>Engineering Mechanics (Graduate)</td>
<td>268</td>
</tr>
<tr>
<td>Industrial Engineering</td>
<td>271</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>272</td>
</tr>
<tr>
<td><strong>Summer School</strong></td>
<td>275</td>
</tr>
<tr>
<td><strong>Index</strong></td>
<td>277</td>
</tr>
</tbody>
</table>

WICHITA STATE UNIVERSITY
CALENDAR FOR 1968-1969

1968

Aug. 17 .................................. All applications for admission for fall semester should be filed with the University not later than this date.

Sept. 11, 12, 13, 14,
Wed., night through
Saturday ................................ Registration for first semester

Sept. 16, Monday ................. Classes begin
Oct. 26, Saturday .................. Final date for removing incompletes
Nov. 8, Friday ....................... Mid-term reports
Nov. 22, Friday ....................... Final date for non-penalty grades
Nov. 28, 29, 30, Thursday,
Friday, Saturday ................. Thanksgiving recess
Dec. 2, Monday .................... Advising for preregistration for second semester
Dec. 20, Friday ................... Preregistration ends
Dec. 21, Saturday ............... Christmas recess ends at close of classes

Jan. 6, Monday .................. Classes resume
Jan. 11, Saturday ................. Classes close
Jan. 13, 14, 15, 16, 17, 18,
Monday, Tuesday,
Wednesday, Thursday,
Friday, Saturday ................. First semester final examinations
Jan. 25, 27, 28, 29,
Saturday, Monday,
Tuesday, Wednesday .......... Registration for second semester
Jan. 25—8:00 a.m.—1:00 p.m.
Jan. 27—Day and evening
Jan. 28—Day and evening
Jan. 29—8:00—Noon

Jan. 30, Thursday .................. Classes begin
March 15, Saturday .................. Final date for removing incompletes
March 28, Friday ................. Mid-term reports
March 29, Saturday ............... Spring recess begins at close of classes
April 7, Monday ................... Classes resume
April 12, Saturday ............... Final date for non-penalty grades
April 28, Monday ............... Advising for preregistration for fall semester
May 2, Friday ...................... May festival
May 16, Friday ................... Preregistration ends
May 20, Tuesday .................. Classes close
May 21, 22, 23, 24, 26, 27,
Wednesday, Thursday,
Friday, Saturday,
Monday, Tuesday .......... Second semester final examinations
June 1, Sunday ....................... Commencement exercises, 6:00 p.m.
June 6, 7, Friday and
Saturday .................. Summer school registration
June 9, Monday .................... Summer school classes begin
July 4, Friday ..................... Holiday
Aug. 1, Friday ....................... Summer session closes
Aug. 3, Sunday .................... Summer session commencement

1969

Jan. 6, Monday .................. Classes resume
Jan. 11, Saturday ................. Classes close
Jan. 13, 14, 15, 16, 17, 18,
Monday, Tuesday,
Wednesday, Thursday,
Friday, Saturday ................. First semester final examinations
Jan. 25, 27, 28, 29,
Saturday, Monday,
Tuesday, Wednesday .......... Registration for second semester
Jan. 25—8:00 a.m.—1:00 p.m.
Jan. 27—Day and evening
Jan. 28—Day and evening
Jan. 29—8:00—Noon

Jan. 30, Thursday .................. Classes begin
March 15, Saturday .................. Final date for removing incompletes
March 28, Friday ................. Mid-term reports
March 29, Saturday ............... Spring recess begins at close of classes
April 7, Monday ................... Classes resume
April 12, Saturday ............... Final date for non-penalty grades
April 28, Monday ............... Advising for preregistration for fall semester
May 2, Friday ...................... May festival
May 16, Friday ................... Preregistration ends
May 20, Tuesday .................. Classes close
May 21, 22, 23, 24, 26, 27,
Wednesday, Thursday,
Friday, Saturday,
Monday, Tuesday .......... Second semester final examinations
June 1, Sunday ....................... Commencement exercises, 6:00 p.m.
June 6, 7, Friday and
Saturday .................. Summer school registration
June 9, Monday .................... Summer school classes begin
July 4, Friday ..................... Holiday
Aug. 1, Friday ....................... Summer session closes
Aug. 3, Sunday .................... Summer session commencement

6 WICHITA STATE UNIVERSITY
### ADMINISTRATIVE OFFICERS OF THE UNIVERSITY—1967-1968

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emory Lindquist</td>
<td>President</td>
</tr>
<tr>
<td>Jackson O. Powell</td>
<td>Vice-president—Academic Affairs, Director of Summer Session</td>
</tr>
<tr>
<td>Roger D. Lowe</td>
<td>Assistant to the President for Finance and Operations and Business Manager</td>
</tr>
<tr>
<td>John Breazeale</td>
<td>Dean of the Graduate School</td>
</tr>
<tr>
<td>Francis Jabara</td>
<td>Dean of the College of Business Administration</td>
</tr>
<tr>
<td>Leonard M. Chaffee</td>
<td>Dean of the College of Education</td>
</tr>
<tr>
<td>Charles V. Jakowatz</td>
<td>Dean of the School of Engineering</td>
</tr>
<tr>
<td>Walter Duerksen</td>
<td>Dean of the College of Fine Arts</td>
</tr>
<tr>
<td>J. K. Sowards</td>
<td>Dean of the Fairmount College of Liberal Arts and Sciences</td>
</tr>
<tr>
<td>J. Robert Berg</td>
<td>Dean of University College</td>
</tr>
<tr>
<td>James J. Rhatigan</td>
<td>Dean of Students</td>
</tr>
<tr>
<td>Josephine Fugate</td>
<td>Dean of Women</td>
</tr>
<tr>
<td>Carl Fahrbach</td>
<td>Director of Admissions and Records</td>
</tr>
<tr>
<td>Laura M. Cross</td>
<td>Associate Director of Admissions</td>
</tr>
<tr>
<td>C. Edward Carroll</td>
<td>Director of Libraries</td>
</tr>
<tr>
<td>John Gaddis</td>
<td>Physical Plant Administrator</td>
</tr>
<tr>
<td>Frederick Sudermann</td>
<td>Director of Research and Governmental Programs, Assistant to the Dean of Graduate School</td>
</tr>
<tr>
<td>Helen Crockett</td>
<td>Director of Continuing Education</td>
</tr>
<tr>
<td>George Worden</td>
<td>Director of Information Services</td>
</tr>
<tr>
<td>Noah Allen</td>
<td>Director of Athletics</td>
</tr>
</tbody>
</table>

### BOARD OF REGENTS OF THE STATE OF KANSAS—1967-1968

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>John F. Eberhardt</td>
<td>Chairman, Wichita</td>
</tr>
<tr>
<td>James J. Basham, M. D.</td>
<td>Fort Scott</td>
</tr>
<tr>
<td>Henry A. Bubb</td>
<td>Topeka</td>
</tr>
<tr>
<td>Arthur H. Cromb</td>
<td>Mission Hills</td>
</tr>
<tr>
<td>C. N. Cushing</td>
<td>Downs</td>
</tr>
<tr>
<td>T. J. Griffith</td>
<td>Manhattan</td>
</tr>
<tr>
<td>Dwight D. Klinger</td>
<td>Ashland</td>
</tr>
<tr>
<td>Lawrence D. Morgan</td>
<td>Goodland</td>
</tr>
<tr>
<td>Eldon Sloan</td>
<td>Topeka</td>
</tr>
<tr>
<td>Max Bickford</td>
<td>Executive Officer</td>
</tr>
</tbody>
</table>


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 Mechanics and Materials and Assistant to the Administrator 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 and Dean of the Graduate School (1959). B.S., Millsaps College, 1947; M.S., University of Alabama, 1951; Ph.D., University of Virginia, 1955.

Brennan, Daniel J., Associate Professor of Geology (1964). B.S., University of Notre Dame, 1951; M.S., South Dakota School of Mines and Technology, 1953; Ph.D., University of Arizona, 1957.


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


Brown, Donald M., Assistant Professor of Geology (1966). B.S., Mount Union College, 1942; M.S., Ohio State University, 1948.

Brumaghim, Joan, Assistant Professor of Psychology (1968). B.A., Allegheny College, 1962; M.S., Purdue University, 1965.

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.


Campbell, James H., Assistant 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. and Ohio University, 1953; M. A., The Ohio State University, 1963.

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


Chakales, L. S., Assistant Professor of Journalism (1965). B. A., Rollins College, 1936.


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 and Assistant Dean of College of Business Administration (1958). B. S., University of Wichita, 1955; M. S., University of Illinois, 1958; Ph. D., ibid., 1962.

Christian, Robert V., Jr., Professor and Head of Department of Chemistry (1946). B. S., University of Wichita, 1940; Ph. D., Iowa State College, 1946.


Cohen, Benjamin Bernard, Professor of English (1960). A. B., University of Maryland, 1943; M. A., ibid., 1944; Ph. D., Indiana University, 1950.

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


Corbin, Harry F., University Professor (1946). A. B., University of Wichita, 1940; B. D., University of Chicago, 1943; LL. B., University of Kansas, 1949. (Leave of Absence—Second Semester, 1967-1968.)

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

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


Cress, Allan M., Professor and Head 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.


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


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

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.

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

Duersken, Walter, Professor of Music and Dean of College of Fine Arts (1932). B. P. S. M., University of Wichita, 1931; M. M., Northwestern University, 1938.
Duggan, Bessie L., Assistant Professor of Speech (1964). B.S., Kansas State Teachers, Emporia, 1954; M.S., ibid., 1957; Specialist, Southern Illinois University, 1961.

Dunn, Colon H., Professor and Head of Department of Electrical Engineering (1959). B.S. John Brown University, 1942; M.E.E., Rensselaer Polytechnic Institute, 1953.

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


Earnest, Olen J., Assistant Professor of Psychology (1964). B.A., University of Wichita, 1959.

Elerat, Alan R., Assistant 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, Assistant Professor of English (1964). B.A., University of Minnesota, 1955; M.A., ibid., 1957; Ph.D., ibid., 1961.

Eversman, Walter, Associate Professor of Aeronautical Engineering (1964). B.S.A.E., Purdue, 1959; M.S., Engineering Mechanics, Stanford University, 1961; Ph.D., University of Kansas, 1958.

Fahrbach, Carl G., Assistant Professor and Director of Admissions and Records (1964). B.S., Kansas State Teachers College, Emporia, 1948; M.S., ibid., 1951; Ed.D., University of Kansas, 1958.


Farnsworth, David N., Professor and Head of Department of Political Science (1956). B.A., University of Wichita, 1953; A.M., University of Illinois, 1955; Ph.D., ibid., 1959.


Fishelson, Joseph E., Visiting Professor of Administration (1967). J.D., University of Wisconsin, 1936.
FitzGerald, Wayne M., Jr., Assistant Professor of Mechanical Engineering (1963). B. S. M. E., Oklahoma State University, 1958; M. S. M. E., University of Wichita, 1962; M. S., ibid., 1963.

Fleming, David G., Assistant Professor of Speech and Drama (1953). B. A., Adelphi College, 1951; M. A., Cornell University, 1953. (Leave of Absence—1967-1968.)

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


Foster, Donald L., Assistant Professor of Physics (1966). B. A., Reed College, 1957.

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


Fricka, 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, 1961.

Fugate, Josephine B., Professor of Mathematics and Dean of Women (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.


Gerling, Amy G., Professor and Acting Head of Department 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.

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


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

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


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


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


Grandgenett, Donald J., Assistant Professor of Secondary Education (1967). B.S., University of Omaha, 1959; M.S., ibid., 1965; Ed.D., Arizona State University, 1967.

Gray, James, Assistant Professor of History (1963). B.A., University of California, Los Angeles, 1954; Ph.D., ibid., 1966.

Green, David H., Assistant Professor of Music Theory (1967). B.M., Boston University, 1962; M.A., ibid., 1964.


Griffith, Kathryn, Associate Professor of Political Science (1957). A.B., University of Wichita, 1947; M.P.A., Syracuse University, 1954; Ph.D., University of Chicago, 1967.


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

Hanes, William E., Colonel, U.S. Air Force, Professor of Aerospace Studies (1967). B.S., University of Oregon, 1953; Command and General Staff College, 1944; Académie Instructor Course, Air University, 1949; Air Command and Staff College, 1958.


Hansan, John, Assistant Professor of Men’s Physical Education (1964). B.S., University of Kansas, 1962; M.S., ibid., 1963.

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 Mechanics and Materials 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, K. Peter, Assistant Professor of Economics (1967). B.A., University of Puget Sound, 1963; M.A., University of Nebraska, 1966.


Hardy, James Lynn, Associate Professor and Head of Department of Music Education (1965). B.S.M.E., Southwest Missouri State, 1948; M.M.E., University of Kansas, 1956.

Harlow, Dorothy, Assistant Professor of Administration (1968). A.B. in Ed., University of Wichita, 1961; M.S., Wichita State University, 1965.

Harnsberger, John L., Associate Professor of History (1962). B.A., Hamline University, 1948; M.A., University of Minnesota, 1950; Ph.D., ibid., 1956.


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


Henderson, Patrick C., Assistant Professor of History (1967). B.A., St. Mary’s College of California, 1948; Ph.D., The University of New Mexico, 1966.
Herman, David T., Professor and Head of Department of Psychology (1949). A. B., Indiana University, 1940; M. A., ibid., 1942; Ph. D., ibid., 1947.


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

Hoag, 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 Head of Division 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 and Head of Department of Anthropology (1959). B. S., Northwestern University, 1950; Ph. D., ibid., 1957.

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


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


Irwin, Orvis C., Adjunct Professor of Logopedics (1959). B. A., Baldwin-Wallace College, 1914; M. A., Columbia University, 1924; Ph. D., Ohio State University, 1929.

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.
Jakowitz, 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.


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, Ellen M., Assistant Professor, Library, and Head of Circulation Department (1959). A. B., Friends University, 1939; B. S. in L. S., University of Illinois, 1941.

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.


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 Director of Placement (1965). A. B., University of Wichita, 1959; M. Ed., ibid., 1962.


Kelly, Joseph, Assistant Professor of German (1967). M. A., Wayne State University, 1964.


Kirkpatrick, Robert P., Associate Professor of Men’s Physical Education and Golf Coach (1949). B. A., University of Wichita, 1941; Ed. M., Boston University, 1948.


Klingsporn, Melvern J., Assistant Professor of Psychology (1965). A. B., University of Nebraska, 1957; M. A., ibid., 1962; Ph. D., ibid., 1965.


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.


Laptad, Richard C., Assistant Professor of Men’s Physical Education (1965). B. S., University of Kansas, 1957; M. S., ibid., 1962.


Leslie, John H., Jr., Assistant Professor and Head of Department of Industrial Engineering (1962). B. S. I. E., University of Wichita, 1961; M. S. M. E., ibid., 1964. (Leave of Absence—1967-1968.)

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


Lindquist, Emory, University Professor and President (1953). A. B., Bethany College, 1930; B. A., Oxford University, 1933; M. A., ibid., 1937; Ph. D., University of Colorado, 1941; LL. D., Augustana College, 1952; L. H. D., Bethany College, 1963.

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


Lundgren, Jan, Assistant Professor of Art Education (1966). B. A. E., University of Kansas, 1961; M. S., ibid., 1966.


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

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


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, Scholarship Coordinator, and Assistant Dean of College of Liberal Arts and Sciences (1948). A. B., University of Wichita, 1932; M. A., ibid., 1950.

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

Mayer, Ellen, Instructor in German (1965). B. M., Oberlin College, 1943; M. M., Michigan State University, 1944.

Mayer, Peter, Assistant Professor of Political Science (1964). A. B., San José State College, 1959; M. A., University of California, Berkeley, 1961; Ph. D., ibid., 1964.

Meeker, Frank R., Assistant Professor and Assistant Director of Records (1967). B. A., University of Kansas City, 1957; M. A., ibid., 1962.


Merrill, Walter M., Professor and Head of Department of English (1959). B. S. L., Northwestern University, 1937; A. M., Harvard University, 1941; Ph. D., ibid., 1946.


Mickel, Howard A., Assistant Professor of Religious Education (1965). B. A., Nebraska University, 1949; M. A., Northwestern University, 1951; B. D., Gettysburg Theological Seminary, 1953.


Miller, William E., Associate Professor and Acting Head of Department of Logopedics (1949). B. S., University of Wichita, 1940; M. A., ibid., 1947; Ph. D., Northwestern University, 1950.

Millett, John H., Professor of Political Science (1957). A. B., Beloit College, 1940; M. A., University of Cincinnati, 1942; Ph. D., University of Illinois, 1950.


Mood, Robert Gibbs, Professor of English (1936). A. B., Southwestern University, 1920; A. M., Columbia University, 1925; Ph. D., University of Illinois, 1939.


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.


Myers, Walter J., Assistant Professor of Trumpet (1963). B. S., Ohio State University, 1959; M. M. E., University of Colorado, 1961; M. M. Performance, University of Colorado, 1966.

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.


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.


WICHITA STATE UNIVERSITY 23

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.


Olson, Richard E., Assistant Professor of Economics (1964). B. S., University of Nebraska, 1955; M. S., ibid., 1961; Ph. D., ibid., 1965.

Ordway, Robert, Associate Professor of Sociology (1967). B. A., Phillips University, 1954; B. D., Garrett Biblical Institute, 1958; M. A., Butler University, 1959; Ph. D., Michigan State University, 1964.

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


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


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


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 Education, Vice President—Academic Affairs, and Director of Summer School (1950). B. S., Southeastern State College, Oklahoma, 1941; M. S., Syracuse University, 1947; Ph. D., ibid., 1950.

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


Rahhal, As'ad Adib, Assistant Professor of Political Science (1965). B. A., American University of Beirut, 1955; M. A., ibid., 1956; Ph. D., Syracuse University, 1960.

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


Reed, Paul E., Assistant Professor of Piano (1966). B. M., Drake University, 1956; M. M., ibid., 1957.


Rhatigan, James J., Assistant 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.

Ricketts, Faye Margaret, Associate Professor and Head of Department of Secretarial Training (1931). A. B., Business Administration, University of Wichita, 1927; M. B. A., University of Texas, 1932.


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

Robertson, James P., Distinguished Professor of Orchestra and Conducting and Director of University Symphony (1949). A. B., Drury College 1932; B. M., ibid., 1936; M. A., Teachers College, Columbia University, 1943.


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.


Ross, Richard, Assistant Professor of Aeronautical Engineering (1965). B.S.A.E., University of Wichita, 1956; M.S.A.E., University of Southern California, 1958.


Ryan, Robert M., Associate Professor of Economics (1946). B.S., Michigan State Normal College, 1934; B.C.S., Detroit Business University, 1936; M.A., Wayne University, 1946.

Saad, Farouk F., Instructor in Mathematics (1967). B.S.E., Indiana Institute of Technology, 1965; M.S., Wichita State University, 1967.

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 Head of Department of Biology (1958). B.A., University of Missouri at Kansas City, 1948; M.A., ibid., 1950; Ph.D., Kansas State University, 1958.

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


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


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


Sherwood, Joan, Instructor in English (1968). B. S., Kansas State University, 1956; M. A., Wichita State University, 1967.

Simon, Clarence T., Adjunct Professor of Logopedics (1958). B. A., Wittenberg University, 1919; M. A., Northwestern University, 1922; Ph. D., University of Iowa, 1925; Sc. D., Wittenberg University, 1954.


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 Mechanics and Materials (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 and Head of Department 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.

Snyder, Peter David, Assistant Professor of Cello (1967.) B. M., California Institute of Arts, 1965.


Soper, Fred J., Assistant Professor of Accounting and Director of Center for Management Control (1960, 1963). B. S., University of Kansas, 1955; M. B. A., University of Wichita, 1962; CPA Certificate, Kansas.
Sowards, J. Kelley, Professor of History and Dean of Fairmount College of Liberal Arts and Sciences (1956). A.B., University of Wichita, 1947; M.A., University of Michigan, 1948; Ph.D., ibid., 1952.

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.

Spomer, Marvin J., Associate Professor of Art Education and Head of Department of Art (1965). B.F.A., University of Nebraska, 1958; M.S., University of Kansas, 1964.


Steffen, Harry E., Associate Professor of Administration (1962). B.S., University of Colorado, 1942; M.S., ibid., 1948.


Strange, John M., Associate Professor of Art (1944). B.F.A., University of Oklahoma, 1931; M.S., Fort Hays Kansas State College, 1938.


Sudermann, Frederick, Assistant Professor of Political Science, Assistant to the Dean of the Graduate School, and Director of Research and Governmental Programs (1964). B.A., University of Wichita, 1958; M.A., ibid., 1960.

Sumrall, John, Jr., Assistant Professor of Clarinet (1967). B.M., Eastman School of Music, 1959; M.M., ibid, 1963.

Sun, Fang Toh, Visiting Professor of Aeronautical Engineering (1967). B.S. National Tsing Hua University, China, 1938; M.S.E., University of Michigan, 1947; Ph.D., ibid., 1966.


Sward, Sidney B., Assistant Professor of Men's Physical Education (1967). B.S., University of Illinois, 1957; M.S., ibid., 1958; Ph.D., ibid., 1967.

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

Taggart, Elizabeth, Instructor in English (1967). B.S., Kansas State University, 1954.
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.


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, Ross McLaury, Professor and Head of Department of American Civilization (1939). A.B., University of Oklahoma, 1930; M.A., ibid., 1933; Ph.D., State University of Iowa, 1938. (Leave of Absence—Second Semester, 1967-1968.)

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


Teresa, George W., Associate Professor of Biology (1963). B.S., Arkansas A & M College, 1952; M.S., University of Arkansas, 1955; Ph.D., Kansas State University, 1959.

Terflinger, Curtis D., Associate Professor of Administration (1957). B.A., University of Kansas, 1953; LL.B., ibid., 1955.

Terrell, William T., Assistant Professor of Economics (1967). B.S., Oklahoma State University, 1958; M.S., ibid., 1961.

Terwilliger, Gordon B., Professor of Graduate Music Studies and Director of Graduate Music (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.


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


Ungs, Thomas D., Associate Professor of Political Science (1960). B.A., University of Iowa, 1951; M.A., ibid., 1952; Ph.D., ibid., 1957.


Unruh, Henry, Jr., Professor of Physics (1901). A.B., University of Wichita, 1950; M.S., Kansas State University, 1952; Ph.D., Case Institute of Technology, 1960.

Van Keuren, Katharine, Associate Professor, Library (1945). A.B., Fairmount College, 1922; M.A., Columbia University, 1938.


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

Wall, Lillian, Assistant Professor of Spanish (1963). B.A., Kansas Wesleyan, 1932; M.S., Kansas State Teachers College, Emporia, 1953.

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


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.


Welsbacher, Richard C., Associate 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.

Weston, John R., Assistant Professor of Administration (1967). B.S.A., University of Toronto, 1961; Ph.D., Michigan State University, 1967.


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

Wilkes, Mary Nell, Assistant Professor of Secretarial Training (1956). B.S., Texas Women's University, 1939; M.B.E., University of Colorado, 1961.


Wilson, Herman, Assistant Professor of Men's Physical Education and Track Coach (1967). B.S., Kansas State College, 1952; M.S., ibid., 1963.


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

Worden, George, Assistant Professor of Speech and Director of Information Services (1967). A.B., Hope College, 1959.

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


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.


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.

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.

Cox, A. D., Retired Assistant Professor of Industrial Arts Education (1952). B.S., Kansas State Teachers College of Pittsburg, 1925; M.A., University of Wichita, 1940.

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.


Hannum, Clair A., Professor Emeritus of Biology (1946). B.S., University of Washington, 1923; M.S., ibid., 1924; Ph.D., ibid., 1942.

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.

Isley, M. Alice, Retired Reference Librarian (1911). M.L.S., honoris causa, University of Wichita, 1932.


Pouliot, Adrian, Professor Emeritus of Music Theory and Piano (1942). B.M. University of Kansas, 1922; Diploma, University of Montpellier (France), 1918; M.M., Northwestern University, 1941.

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.


**APPLIED MUSIC INSTRUCTORS—1967-1968**

Ator, Mary
Bickford, Mary
Brown, Dee Ann
Callan, Edward
Canady, Don
Cruit, Marilyn
Duerksen, Tim
Garrison, Michael E.
Gruett, Mark
Halgedahl, Howard

Howe, Carolyn
Jamison, Ines
Jorgensen, Richard
Lee, Robert E.
McPherson, Richard
Miller, Marguerite
Mossbarger, David
Pease, Beatrice
Popesko, Ronald
Wilson, Max R.

**LECTURERS—1967-1968**

Andreas, Dr. Paul W.—Medical Technology
Arnold, Stephen A.—Anthropology
Atwood, Robert B.—Medical Technology
Bachus, Nancy—Economics
Barber, Garth G.—Speech
Barrett, Russell M.—Police Science
Barrett, Shirley—Medical Technology
Bauman, Alice—Physical Education
Beauchamp, Herbert—Medical Technology
Benedict, Esther E.—Mathematics
Bennion, Patricia A.—Mathematics
Bevis, Clyde E.—Police Science
Blackwood, Wallace B.—Mathematics
Blakemore, Glen A.—Speech
Bonnici, Charles—Medical Technology
Booth, Larry L.—Speech
Brake, Dorothy—Medical Technology
Briggs, Pearlanna—English
Brinton, Thomas F.—Sociology
Britton, Regina—Art
Brooks, Nancy F.—Sociology
Bull, David E.—Geology
Burchfield, Anne—Medical Technology
Burger, Sister Ann Catherine—Medical Technology
Campbell, Paul W.—Education
Cardenas, Michael—Mathematics
Carpenter, Marguerite L.—University College
Carr, Dennis—Medical Technology
Carroll, Robert—Speech
Carter, Dale B.—Chemistry
Christian, Betty—Elementary Education
Clark, Elizabeth—Speech

Collins, Ron—Medical Technology
Compton, Barbara—Medical Technology
Cook, Dawson—Engineering Graphics
Cook, Virginia—Medical Technology
Copeland, Kathryn—Medical Technology
Cottingham, Judy—Medical Technology
Crews, Robert T.—Medical Technology
Criss, Rev. Carthur P.—Religious Education
Danielson, Richard E.—Medical Technology
Dibbern, Paulette—Medical Technology
Dillon, Betty F.—History
Dirks, Dr. A. W.—Education
Dopps, Gwen—Medical Technology
Duvall, Connie—Speech
Eckert, Dr. William G.—Medical Technology
Edwards, James W.—Journalism
Farmer, Dr. Floyd M.—Education
Feeney, Richard T.—Mathematics
Findley, Rev. W. Cecil—Religious Education
Frahm, Robert—Medical Technology
Friedel, Karl W.—Speech
Garofalo, Frank—Journalism
Gass, Marcelle—Secretarial Training
Gerlach, Dr. E. Hugh, Jr.—Medical Technology
Glaes, Robert—Journalism
Glenn, William M.—Speech
Glover, Herschel L.—Education
Goering, Dr. Robert C.—Medical Technology
Goldberg, Donald R.—Mechanics and Materials
Gordono, Esther—Medical Technology
Hamilton, Beryl A.—Political Science
Haney, Philip E.—Accounting
Hannon, Floyd B.—Police Science
Harrison, William L.—English
Haws, Nina—Education
Hogan, Mary Alice—Medical Technology
Holmes, Jeanette R.—Anthropology
Humann, Paul H.—Speech
Hunter, Ruby—Medical Technology
Issacs, Carl D.—Mathematics
James, Lyle R.—Anthropology
James, Stuart—Medical Technology
Jensen, Franklin L.—English
Johnson, Kathryn—Medical Technology
Jones, Betty—Medical Technology
Jones, John C.—Medical Technology
Jones, Jordan D.—Police Science
Joubert, Rev. Gerard R.—Religious Education
Keenan, Dr. William J.—Medical Technology
Kidd, Andrea—Medical Technology
Kirkpatrick, Merrell E.—Police Science
Kice, Nancy Jane—Medical Technology
Kiser, Wendell L.—Mathematics
Knauss, Dixie—Medical Technology
Klahn, Jacqueline M.—Education
Lank, Claudette—Medical Technology
Lester, Dr. John R.—Psychology
Lyse!l, John—Industrial Engineering
McBride, Omalou—Medical Technology
McConachie, Bettie—Physical Education
Major, Frances—English
Malcolm, Patricia—Physical Education
Mann, Vivian E.—Art
Mao, Dr. Peter T. H.—Medical Technology
Martin, Thomas W.—University College
Martinez, Frank—Spanish
Maurer, Charles J.—Engineering Graphics
Miller, Robert E.—Mathematics
Minard, Barbara—Medical Technology
Moore, Betty J.—Sociology
Moore, Jean Oliver—Speech
Moorman, Dale—Medical Technology
Muelling, Dr. R. J.—Medical Technology
Musser, Bill—Medical Technology
Myers, James E.—Physical Science Survey
Nathan, C. Henry—Speech
Nellans, Mary Lou—Medical Technology
Nix, Carol—Medical Technology
Noone, James J.—Speech
Otey, Chris—Medical Technology
Overstake, Charles F.—Logopedics
Palton, Dwight, Jr.—Mechanics and Materials
Pease, Beatrice Sanford—Music
Pelsue, Wesley—Education
Pippin, Raymond E.—Industrial Engineering
Platt, Charles W.—Journalism
Ponds, Jeannie A.—English
Powell, William O.—Engineering Graphics
Prather, John—Speech
Ralstin, Robert L.—Logopedics
Ratzlaff, Melvin E.—Engineering Graphics
Reals, Dr. William J.—Medical Technology
Reed, Anthony Craig—Journalism
Rennert, Hermut H.—English
Reynolds, Everett—Speech
Richardson, Robert W.—Industrial Education
Richert, Anton S.—University College
Riddel, James V.—Speech
Roe, J. Myrne—Speech
Rogers, Jo Ann—Journalism
Roller, Francis M.—Mathematics
Ross, Ralph M.—History
Roth, Dave—Medical Technology
Royal, S. J.—Speech
Ruthven, Dr. Leslie—Psychology
Sandlin, John N.—Art
Scherrer, Philip—Economics
Schmidt, Louis—Medical Technology
Schon, George—German
Schuh, Marcel E.—Speech
Sherwood, Joan S.—English
Shotts, Camille—Medical Technology
Sifford, Carolyn—University College
Silliman, Dr. Y. E.—Medical Technology
Slay, Annie-Therese—French
Smith, Clifton—Political Science
Smith, John—Medical Technology
Stafford, Elizabeth L.—University College
Stedl, John L.—Mathematics
Stephan, Robert T.—Speech
Strobel, Etta Marie—Medical Technology
Swanson, Janis—Medical Technology
Swanson, Sanford E.—Anthropology
Taylor, Charles W.—Medical Technology

WICHITA STATE UNIVERSITY
Taylor, Dr. Richard J.—Medical Technology
Taylor, Dr. Ruth S.—Medical Technology
Trachtman, Bernard H.—Industrial Education
Trager, Ruth—Medical Technology
Tregallas Loren—Industrial Education
Vogt, Dr. Harold W.—Psychology

Voth, Ken—Medical Technology
Wagner, Barbara—Medical Technology
Watkins, Aileen—Education
Wheeler, Leslie J.—Police Science
White, Claude G.—Medical Technology
Whitton, Leon K.—Logopedics
Zeitner, Peter O. A.—German
Wichita State University

DESCRIPTION OF THE UNIVERSITY

Wichita State University traces its origin to Fairmount College, which was founded by the Congregational Church in 1895. In 1926, the citizens of Wichita approved the proposal that Fairmount College become a municipal institution. The Municipal University of Wichita was established that year. The Kansas legislature and the citizens of Wichita agreed in 1963 that the University should be added to the Kansas state system of higher education. Wichita State University came into being on July 1, 1964, as an associate of the University of Kansas, with the Kansas Board of Regents as its governing body. The campus is situated in the northeastern section of the city. Its 45 buildings house the classrooms, laboratories, shops, and offices required by the programs of eight schools and colleges. These academic units are the University College, Fairmount College of Liberal Arts and Sciences, College of Business Administration, School of Engineering, College of Education, College of Fine Arts, Graduate School, and the Summer School. Baccalaureate degrees are offered by the faculties in the schools and colleges of Liberal Arts, Business Administration, Engineering, Education, and Fine Arts. These same programs offer a variety of studies leading to master's degrees, and a specialist's degree, which are conferred through the Graduate School, and a program of studies which may lead to the doctor of philosophy in logopedics. The Division of Student Services has special responsibility for student welfare.

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), and the American Chemical Society Committee for the Professional Training of Chemists.

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

The faculty and administration of the University have since the inception of Fairmount College identified with the tradition of liberal education. Indeed they are dedicated to the furtherance of the University ideal: To the transmission of knowledge, to the stimulation of critical faculties, to the development of values, to the
practice of good citizenship, to the pursuit of a sense of vocation, and, in general, to the creation of an academic fellowship of ideas, to nurture the individual and promote the good society. The program in general education subscribed to by the academic faculties of the University is in testament to that commitment.

The nature of its calling causes to devolve upon this urban establishment for higher learning certain other obligations. It must not only respect learning; it must provide opportunities for advanced and professional study; it must make available its specialized facilities to other elements of the society, and make arrangements for continuing educational possibilities for young working adults and for persons in their late maturity; and it must stimulate research and inquiry. These obligations are, in truth, a general statement of the mission of the University.

NEW RESOURCES

Faculty resources have been augmented by the addition of six distinguished professorships, made available through annual contributions by the Kansas Board of Regents, The Fourth National Bank and Trust Company of Wichita, Kansas Bankers Association, Institute of Logopedics, and the WSU Endowment Association.

The University Press of Kansas, established in 1967 as a publisher of scholarly books, is operated jointly by the three state universities in Kansas. It is the first university press in the United States to be operated on a statewide level under the specific sponsorship of all the state’s universities.

Recent new physical resources include the addition of the rolling 140-acre Crestview campus, doubling acreage available for campus growth and development.

The Olive W. Garvey Laboratory for Advanced Research (formerly the Midwest Medical Research Foundation) was acquired through a gift to the University by the Garvey Foundation. Facilities are used primarily for graduate and faculty research.

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 Director 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.

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 15 for fall registration and January 15 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 Director 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 petitioner should present his case through the Director 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 Battery, the freshman reading test, and a Health Certificate, as a part of their enrollment in University College. The dean of University College will send all freshman 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 admissions 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 university 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 transferred complete the pattern required at Wichita State University, the requirement of additional work is at the discretion of the department 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. No one may apply for permission to take an advanced standing examination until he has a minimum of 15 semester hours of credit at Wichita State University. If the request for an examination is approved by the committee, the student will pay the Controller the $5.00 fee. Upon presentation of
the receipt from the Controller, 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 on the CEEB test score 2 or 3 will receive three hours credit for English 111 and will also go into English 211 to complete their six hours core requirement in composition; those scoring 4 or 5 will receive credit for both English 111 and 211, thus completing their composition requirements. Students planning to major in English may be permitted to enroll in English 225 in lieu of 211 upon recommendation of the English Department.

ADMISSION TO GRADUATE SCHOOL

Applications 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 not already in the Office of Admissions and Records at Wichita State University.

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.

Wichita State University offers graduate work in the following departments: Accounting, Administration, Aeronautical Engineering, Anthropology, Art, Biology, Chemistry, Economics, Electrical

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

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 above 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 Director of Admissions and Records. If the student disagrees with the residency determination of the registrar as herein provided, he shall within 30 days from the date of opening of such semester or term give notice in writing to the registrar of appeal to the Committee of said registrar’s decision. If notice of said appeal is not given in writing within 30 days, the determination of the registrar 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 Office of Admission and records.

FEES

Incidental Fee

Resident (Graduate and Undergraduate) ......................... $8 per cr. hr.
Nonresident (Graduate and Undergraduate) ....................... $23.35 per cr. hr.

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 $2.40 per credit or clock hour during the regular semesters and $2.15 during the summer session, in accordance with University policy. The fee will be distributed to pay for Parking, Student Union, and Library Revenue Bonds, and for Student Health Services, Athletic Admissions, forensic, student government association, University Forum, student publications, concerts, drama, opera productions, etc.

WICHITA STATE UNIVERSITY 43
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.

Departmental Fees

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

3. 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.

4. Aerospace Studies fee—$9.50; Military Science ROTC 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></th>
<th>Regular Semester</th>
<th>Summer Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident and Nonresident</td>
<td>$10.00</td>
<td>$5.00</td>
</tr>
<tr>
<td>Organ (University)</td>
<td>5.00</td>
<td>3.00</td>
</tr>
</tbody>
</table>

Instrumental 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 ........................................ $5.00
A fee of $5.00 is charged for every examination administered for advanced standing credit, payable in advance of the examination.

Identification Card Fee ......................................... $1.00
The I. D. Fee is charged at the initial enrollment only for a permanent I. D. card.

Transcript ........................................................ $1.00
A fee of $1.00 is charged for each transcript after the first copy which is prepared without cost.

Teacher Placement Fee ......................................... $2.00
A fee of $2.00 per student is charged for those requesting teacher placement service.

Testing Fee ....................................................... $5.00
A fee is charged for residual testing.

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 collection. A committee consisting of the Assistant to the President—Business Manager, the Vice-President—Academic Affairs, 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.

WICHITA STATE UNIVERSITY 45
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.)

Refunds

In case of withdrawal from the University within thirteen days after the first day of classes, the total amount of incidental, campus privilege, private lessons and practice room rental fees paid by the student will be refunded to the student upon his application, except for $15 of nonreturnable fees. In case of withdrawal after the thirteenth day after the first day of classes, and during the first one-third of the semester or summer session, one-half the amount of incidental, campus privilege, private lesson, and practice room rental fees paid by the student will be refunded to the student upon application, except for $15 of nonrefundable fees. In both cases, for students carrying seven hours or less, the nonreturnable fee is $5. No refund of fees is made to the student withdrawing after the first one-third of the semester or summer session.

Continuing Education

Credit Courses per semester credit hour:

| Resident (Graduate and Undergraduate) | $8.00 |
| Nonresident (Graduate and Undergraduate) | 23.35 |

The Campus Privilege Fee is required of every student enrolled for work on or off the Wichita State University campus at the rate of $2.40 per credit or clock hour during the regular semester and $2.15 during the summer session, in accordance with University policy.

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

REGULATIONS GOVERNING SCHOLARSHIP

GRADING NOTATION

Grades are A, B, C, D, I, F, WF, Wd, Au., and Cr.

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.

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. Courses in Secretarial Training may not be audited.

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

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 SUSPENSION STANDARDS

Probation

(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 requirements of the college in which he is enrolled.

(2) Probation is removed when the cumulative grade point index reaches the required level.

(3) 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.

(4) A student on probation 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

(1) A student on probation shall be subject to academic dismissal 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.

(2) A student who has failed to meet minimum scholastic requirements is subject to such supervision as the faculty of his college and the university may determine. The faculty by its designated representative may: 1. Academically dismiss such a student from the University, 2. It may set aside the dismissal and continue him on probation, or 3. It may readmit on final probation an academically dismissed student.

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 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 academically dismissed.

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.
CLASSIFICATION OF STUDENTS

Students are 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 below.

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 42 for special conditions under which seniors may be admitted to graduate courses.

Students with completed prerequisites in industrial education, language, mathematics, natural sciences, aerospace studies, and military science courses may be admitted to upper division courses in sequence for upper division credit. Lower division students who have completed Adm. 266 may be admitted to Adm. 366 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) Exemption 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

Each year a limited number of exceptional freshmen are invited to participate in the University Honors Program. Students not admitted to the program as entering freshmen may be admitted to the program if they demonstrate superior performance and potential in their studies at the University. Exceptional transfer students may also be invited to participate.

HONORS COURSES

Specially designated honors sections, at both lower division and upper division levels, are normally offered each semester. These sections are restricted to honors students and are gauged to meet the needs of the superior student.

Honors courses, which are not regular class work but are individual programs of study carried by the student as original projects under the direction of a professor, are also open. These courses are intended to permit individual research or other creative projects. A student need not be in the general honors program, as described above, to enroll in individual projects. Any student who has attained junior standing and whose record shows a cumulative grade index of at least 3.00 is eligible to apply for admission to an Honors Course in the field of his major study. The course may be pursued for one or two years. During that time the student's grade index shall not fall below 2.80.

The application for admission to an Honors Course must include a written statement of the proposed project for individual study. This must be recommended by the dean of the college, the head of the department, and the instructor under whom the work will be taken. The application must be filed with the Honors Coordinator not later than the beginning of the senior year and be approved by the Honors Committee.

Academic credit up to a maximum of six semester hours may be earned in an Honors Course, with individual departments determining the maximum credit which may be earned in that department. Upon completion of all requirements, the student will be graduated with honors in the field of his major study, and his diploma will carry a statement to that effect. Should he fail to secure honors, credit will be applied toward the regular degree.

To secure graduation with honors, the student must complete his project to the satisfaction of the faculty adviser, write a thesis or its equivalent on his study, and pass an oral examination over his thesis and his major field.

A committee of three shall be appointed by the Honors Committee to conduct the oral examination.
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 expected 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 Office of Admissions and Records.

(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 corresponding 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 Wd, WF, Au, 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 date of admission to any institution of collegiate rank was on or after September, 1958.

A credit point index of 2.000 or better must be achieved in the student's major.

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.

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: 120 (3) or 121 (3), 141 (5); alternates: Any mathematics course taken for degree credit.


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

(d) Engineering: 300 (3).

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

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

* 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 requirement: Otherwise they must complete the requirement with one of the additional English courses listed above under "Communications."

** For English Majors and Minors.
(b) Speech: 111 (2), additional courses: 212 (2), 228 (3).

(VII) 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 (2), 332 (3); ensembles and applied music where background justifies. Speech: 143 (3).

(b) History: 101 (4), 102 (4), 113 (2), 114 (2), 131 (4), 132 (4), and all upper division courses except 300 and 498.

(c) Literature (English or foreign): English 103 (3), 104 (3), 221 (3), 222 (3), 223 (3), 240 (3), 251 (8), 252 (3), 309 (3), plus all literature courses as alternates; French, German, or Spanish literature courses.

(d) Philosophy and Religion: Philosophy, all courses; Religious Education 125 (2), 130 (3), 230 (2), 240 (2), 260 (3), 333 (3), 337 (3), 340 (2), 360 (3), 446 (3).

(e) American Civilization: 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: 124 (3). All other anthropology courses may be counted after the student has completed Anthropology 124.

(b) Economics: 221 (3), 222 (3), any upper division course.

(c) Political Science: 100 (3), 121 (3), 211 (3).

(d) Psychology: 111 (3), 112 (2), 246 (3).

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

(V) Physical Activities: 4 hours. At least 2 hours must be in one subdivision. (Must be taken in at least four separate semesters.)

(a) Aerospace Studies: † All courses.

(b) Military Science: † All courses.

(c) Physical Education: (men), any of the 101-108 series, (1) each; only 1 hour in each varsity activity may be taken in the P.E. 101-4 series; (women), any of the 101-108 series, (1) each.

(d) Marching Band (1).

Any student who has passed his twenty-fifth birthday prior to

*** 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.

† For the purpose of satisfying the Physical Activities requirement, one semester of Aerospace Studies or Military Science will be counted as one hour of Physical Activities credit.
the beginning of a semester is excused from the physical activities requirement.

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.

HONORS

Graduation With Honors

Degrees are conferred with honors 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.

The Dean's List

To recognize meritorious academic achievement and to stimulate those who have the capacity for superior work, a dean's list is published each semester, citing for recognition students in the upper ten percent in each college, but no student with a credit point index of less than 3.25 is so cited.

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

Pre-Freshman Period

Pre-freshman orientation has the following purposes: To acquaint the new student with college life, organization, and regulations; to learn as much as possible about the new student through counseling and testing; to acquaint students with each other; and to encourage development of community spirit through a planned social program.

Continuing Orientation

To help new students make the most effective use of their university experience, a continuing orientation program is provided. See UNIVERSITY COLLEGE section on Orientation and Advising for a detailed description.

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.

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.

FOREIGN STUDENTS

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

(1) Graduation from an accredited high school or college.
(2) A certificate of proficiency in the English language.
(3) Notarized statement of financial responsibility in an amount of $1,900.00 or more to cover at least one academic year's expenses.
(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 Foreign Student Adviser.

PLACEMENT OFFICE—STUDENT EMPLOYMENT

The University Placement Office has three functions:

(1) To help students find part-time jobs to earn part of their expenses. While the University does not guarantee jobs, students who want to work can usually find employment, either on or off campus. Inquiries are invited.

(2) To help seniors find career opportunities by campus interviews with national, state, and local firms, and by individual listings. Counseling and other aids are available.

(3) To perform the same functions as above for alumni of the University.

The Placement Office actively promotes opportunities for students in the above areas. (Teacher Placement is handled separately.) Students are encouraged, however, to avoid excessive work schedules. Academic progress may suffer, which in turn may result in an extra semester or summer session expense. Students are urged to assess their academic ability, class schedule, and financial need carefully before deciding to work more than 20 hours per week. Students on scholastic probation are not allowed to hold a campus job. They must be enrolled in a minimum of 12 hours to be eligible for campus employment.

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 1968-69 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 halls—Fairmount Towers and Wheatshocker.
   (c) Fraternities.

2. University-registered housing. Apartments, single rooms, houses, etc., which have been properly inspected for basic health and safety requirements and 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.

2. 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.

3. 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 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—$800.00 per year or $400.00 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, Congress, and Student-Faculty Court carry out the executive, legislative, and judicial functions respectively.

In addition to sponsoring such student activities as Freshman Orientation, Homecoming, Hippodrome, Parents Day, and May Day, the Congress, 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.

STUDENT HEALTH AND HOSPITALIZATION

Wichita State University maintains a Student Health Service staffed by Lew Purinton, M.D., Director; Floyd Grillot, M.D.; Edward Halpin, M.D.; John Kiser, M.D.; Bruce Meeker, II, M.D.; William Nixon, M.D.; Austin Adams, M.D., Psychiatrist; Wanda Maltby, R.N.; and Sonya Porter, R.N. 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 Hospital Surgical Medical plan. 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 stocks 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

Six national sororities are recognized by the Panhellenic Council at the University: Alpha Chi Omega, Alpha Kappa Alpha, Alpha Phi, Delta Delta Delta, Delta Gamma, and Gamma Phi Beta. Six national fraternities are recognized by the Interfraternity Council: Beta Theta Pi, Delta Upsilon, Kappa Sigma, Phi Delta Theta, Sigma Alpha Epsilon, and Sigma Phi Epsilon. In addition, one local fraternity and two national fraternities have been recognized by the Student Government Association and are in the process of being recognized by Interfraternity Council: Sigma Chi Sigma, 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

A chapter of the National 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
**Delta Sigma Rho-Tau Kappa Alpha**—Forensics
**Eta Kappa Nu**—Electrical Engineering
**Gold Key**—Interdepartmental
**Honors Society**—Honor Students
**Kappa Delta Pi**—Education
**Kappa Kappa Psi**—Bandsmen
**Kappa Mu Psi**—Radio-TV
**Kappa Pi**—Art
**Lambda Alpha**—Anthropology
**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)**
**Phi Delta Kappa**—Education
**Phi Alpha Theta**—History
**Phi Mu Alpha Sinfonia**—Music
**Phi Sigma Tau**—Philosophy
**Pi Mu Epsilon**—Mathematics

62 WICHITA STATE UNIVERSITY
Pi Sigma Alpha—Political Science
Psi Chi—Psychology
Spurs—Sophomore Women
Sigma Alpha Eta—Speech and Hearing
Sigma Delta Pi—Spanish
Sigma Gamma Epsilon—Geology
Sigma Gamma Tau—Aeronautical Engineering
Sigma Pi Sigma—Physics
Tau Beta Pi—Engineering
Tau Beta Sigma—Band (women)
Zeta Phi Eta—Speech Arts

OTHER ORGANIZATION AND ACTIVITIES

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
Anchorettes
Angel Flight
Anthropology Club
Army Blues
Arnold Air Society (AFROTC Cadets)
Associated Women Students (A.W.S.)
Baha’i
Baptist Student Union
Campus Activities Center Program Board
Campus Crusade for Christ
Canterbury Club
Chemistry Club
Chess Club
Christian Science Club
Debate Society
Deseret
Dialectica (Philosophy)
Engineering Council
Film Society
Flying Club
Geology Club
Graduate Club
Industrial Arts Club
Institute of Electronics and Electrical Engineers
Inter-Fraternity Council
International Club
Inter-Resident Council
Inter-Varsity Christian Fellowship
Kappa Phi
le Cercle Francais
Lutheran Chapel and Student Center
Men's Physical Education Major's Club
Negro Students to Reality
Newman Club
Orchesis (Modern Dance)
Parnassus
Pershing Rifles
Pep Council
Political Science Club
Psychology Club
Scabbard and Blade
Shoutin' Shockers
Sky Diving Club
Spanish Club
Student Affiliate Chapter of American Chemical Society
Student Branch of the Association for Childhood Education
Student Government Association
Student Music Educators National Conference
Student NAACP
Student National Education Association
Student Peace Union
Student Religious Liberals (Unitarian Universalist)
Students for a Democratic Society
Sunflower
Timothy Club
United Christian Fellowship
University Fencing Club
Varsity Rifle Team
Women's Panhellenic Council
Women's Physical Education Major's Club
Women's Recreational Association (W.R.A.)
Young Democrats
Young Republicans
Young Women's Christian Association (Y.W.C.A.)

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 $2000. 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.)

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 $800 per year.

Students who submit scholarship applications as of February 15, and/or who submit National Defense Student Loan applications by June 1, will be considered for these grants if they qualify under the requirements by 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 Oppor-
tunity 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” include 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 and Industry.

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 AID

Regents' 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 bases for selection of the recipient will be scholastic achievement and financial need. The final date for application is February 15.

**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 February 15.

**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 February 15.

**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 seniors on the basis of their high school records, entrance examinations and need. College Entrance Examination Board Scholastic Aptitude Test results must accompany applications which must be submitted prior to 1 March.

The 2-year scholarship is awarded to WSU sophomore students on the basis of their college records, ROTC performance, competitive examinations and need. Applications must be made prior to 15 January.

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 February 15.

**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 August 15.

**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 February 15.

**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 February 15.

**The Boeing Company Scholarships**

The Boeing Company contributes $2,497.50 annually for nine scholarships of $277.50 each, which award substantially covers 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: (a) Engineering, with particular emphasis on aeronautical, mechanical, or electrical engineering; (b) mathematics; (c) physics; (d) business administration with particular emphasis on accounting, marketing or production.

In selecting the winner of the scholarship 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.

Applications must be made on the Boeing Scholarship blank in addition to the regular scholarship blank no later than February 15.

**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 February 15.

**Wichita Chapter of Certified Public Accountants Scholarships**

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 Anna 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 February 15.

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 scholarship 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 February 15.

Flora Colby Clough Scholarship

Established in 1918, the interest on $500 to be awarded to a young woman in the Fairmount College of 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 February 15.

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.

Grand Army of the Republic Living Memorial Scholarship: For a lineal descendent 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 February 15.

Fairmount Towers Scholarships

Established in 1967 by the operators of Fairmount Towers to provide accommodations for one male student and one female student in Fairmount Towers. These scholarships, in the amount of $1,000.00 each, shall be awarded by the Scholarship Committee upon recommendation of the appropriate agency of the University.

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 Franklin Scholarship

The O. M. Franklin Serum Company provides one or more scholarships of $250.00 annually to entering freshmen majoring in chemistry. Final date for application is February 15.

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 bases 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 February 15.

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 $5,000 ($1,250 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 February 15.
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.

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 February 15.

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 February 15.

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 February 15.

Kansas Federation of Women's Clubs 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 February 15.

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 February 15.

**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 February 15.

**The Henry W. Lawrence Photographic Journalism Scholarship**

Established in 1955. Awarded annually to a student with a major or minor in journalism and whose special interest is photography. Stipend $150.

**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 February 1 and December 1 for the Spring Semester.

**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 February 15.

**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 February 15.

**The Pearl J. Milburn 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 activities, 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 February 15.

**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.

**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. Bases for selection will be academic achievement, activities record, personal achievement, and financial need. Final date for application is February 15.

**The Panhellenic Scholarship for Women**

The Panhellenic Women's Scholarship, established in 1966, provides a stipend of $150 to apply to the fall semester. The scholarship is open to women with sophomore standing and a grade point average of 3.000 or better and financial need. Final date for application is February 15.

**Payne Memorial Business Education Scholarship**

Established in 1959 in honor of Mr. and Mrs. B. C. Payne. The scholarship is available to business education students. The bases for selection of the winner will be academic achievement and financial need. The stipend is $120. The final date for application is February 15.

**The Pansy Pelzel Award of Kappa Kappa Iota Sorority**

This grant of $50 is awarded to a senior woman who is planning to teach. The bases upon which selection of the scholarship winner
will be made are academic and financial need. The final date for application is November 15.

**The Personnel Management Association of Wichita Scholarship**

Established in 1967 by The Personnel Management Association of Wichita for students interested in Personnel Administration, Labor Relations, or Industrial Relations. This scholarship will pay $150 a semester to a qualified junior and senior. Final date of application is February 15.

**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 February 15.

**Ritchie Brothers Construction Company Scholarships**

The Ritchie Brothers Construction Company will annually award two scholarships, one to a Negro Male and one to a son or daughter of an employee. Both carry stipends of up to $300 for the year. Bases for selection will be scholarship, need and character. Final date for application is February 15.

**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 secretarial 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 February 15.

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 February 15.

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 February 15.

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 February 15.

Wall Memorial Scholarship

This scholarship, given in memory of Lillie Striegel Wall and Henry V. Wall, is awarded to a junior or senior student majoring
in foreign languages who plans to teach foreign languages. Preference will be given to the senior student. The stipend of $200.00 will be awarded upon basis of need, promise as a teacher, and academic achievement. G.P.A. 3.000 or better. Final date for application is February 15.

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 February 15.

The Women's Aeronautical Association of Kansas Flying Award

Established in 1953 by the Women's Aeronautical Association of Kansas. This scholarship carries a stipend of $600 ($150 at the beginning of each of four semesters). Award is made to a junior or senior student with a 2.5 academic record who has been accepted by the Air Force ROTC for advanced contract and who is recommended for strong leadership qualities by the Commanding Officer of the Air Force ROTC unit of the University. Final date for application is August 15.

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 February 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 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 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 per cent, payable annually.

C. U. W. Scholarship and Loan Fund

Established in 1952 by the Council of University Women and consists 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.

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.

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.

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 does not commence until one year 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—June 1.
- For Spring Semester—December 1.
- For Summer Sessions—May 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.

WICHITA STATE UNIVERSITY 83
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 6 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 $1000 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 (6% maximum) during this period. The student begins repayment to the lender when he graduates or withdraws from school. During the repayment period, the Federal Government will pay part of the interest (3%) on the unpaid balance.

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

J. R. BERG, Ph. 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 requirement 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 remedial, technical and two-year programs.

REQUIREMENTS FOR ADMISSION

FRESHMAN

(1) Make application to the Admissions Office, Wichita State University, listing any college or university attendance since graduation from high school. A high-school transcript must also be sent to this office.

(2) Take the American College Test and HAVE RESULTS SENT TO WICHITA STATE UNIVERSITY. Registration blanks and information are available through high school counselors and the Testing Office, Wichita State University. (See EXCEPTION for transfer students below.)

(3) Take the Cooperative Reading Test given by Wichita State University. Contact our Testing Office for arrangements. (See EXCEPTION for transfer students below.)

(4) Present a certificate signed by a licensed physician (M. D.) stating that you are free from tuberculosis and/or other contagious diseases.

TRANSFER STUDENTS

(1) EXCEPTION: Any student transferring 24 or more acceptable hours from another college or university is not required to take the two entrance tests listed above.
(2) All transfer students admitted on probation are enrolled in University College.
(3) Transfer students with 24 or more acceptable hours, and not on probation, are eligible to apply for admission to a baccalaureate degree college.

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, exclusive of general science.

PROBATION AND SUSPENSION 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 suspended 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 Suspension Standards** in the general section of this catalog for regulations concerning:

- (a) removal of probation
- (b) continuing on probation
- (c) maximum allowable load while on probation
- (d) readmission after suspension

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

---

* 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.
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 sent to the student.

ORIENTATION AND ADVISING PROGRAM

A selected group of experienced faculty members, familiar with the problems of freshmen, meet with them individually and in small groups through the Orientation and Advising Program. Each adviser is provided with an evaluation of his advisee's high school work, his abilities as indicated by the entrance examinations, and autobiographical information. Through frequent appointments with his adviser during the year, the freshman is assisted in choosing courses best suited to his individual abilities and educational goals; through attendance at Orientation meetings with the rest of the freshman class, he learns to understand University regulations and to assume the responsibilities of a University student.

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. Students must complete all six steps of the withdrawal procedure listed in general regulations section of the catalog.

SCHEDULE

Minimum requirements for the Bachelor's degree are 124 semester hours and 248 credit or grade points. 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 well enroll in any of the courses selected from the 45 hours of required courses listed under the "University Requirements for Graduation," found on page 54, 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. A sample first semester schedule is shown below; second semester sequences in most areas follow numerically upon the first semester. For example,
in most cases, courses numbered 101, 111, 141, 193, etc., below are followed in the second semester by courses numbered respectively 102, 112, 142, 194, etc.

SAMPLE FIRST SEMESTER SCHEDULE

The student must enroll in two or more large auditorium classes. In any given semester there is wide choice, for example:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psych. 111, General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Sci. 101, Physical Science</td>
<td>5</td>
</tr>
<tr>
<td>Hist. 101, History of Civilization</td>
<td>4</td>
</tr>
<tr>
<td>Hum. 102, Man and the Arts</td>
<td>4</td>
</tr>
<tr>
<td>Phil. 121, General Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>Hist. 131, Amer. Hist.</td>
<td>4</td>
</tr>
<tr>
<td>Anthro. 124, Anthropology</td>
<td>3</td>
</tr>
</tbody>
</table>

6-9+

* Science, Engineering and Business majors substitute laboratory science and/or Mathematics.

Additional and/or alternative general courses (selected upon the advice of adviser):

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education: Physical Education, R. O. T. C., or Marching Band</td>
<td>1</td>
</tr>
<tr>
<td>Psych. 60, Reading Improvement Techniques</td>
<td>1</td>
</tr>
<tr>
<td>Engl. 80, Writing Improvement Techniques</td>
<td>3</td>
</tr>
</tbody>
</table>

(For additional general courses, see page 54.)

Recommended Major and Professional Courses:

**LIBERAL ARTS AND SCIENCES**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory science</td>
<td>5</td>
</tr>
<tr>
<td>Mathematics (for which eligible)</td>
<td>3-5</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>5</td>
</tr>
<tr>
<td>Other liberal arts, English 111, or Speech 111</td>
<td>3-2</td>
</tr>
</tbody>
</table>

**BUSINESS ADMINISTRATION**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math. 121, Discrete Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>(Secretarial Science, see department head.)</td>
<td></td>
</tr>
</tbody>
</table>

**TEACHER EDUCATION**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psych. 111, General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 111, College English</td>
<td>3</td>
</tr>
</tbody>
</table>

**PHYSICAL EDUCATION**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phys. Ed. 115, Pers. &amp; Community Health</td>
<td>3</td>
</tr>
<tr>
<td>Phys. Ed. 118, Fundamentals, Major Sports</td>
<td>3</td>
</tr>
</tbody>
</table>

**INDUSTRIAL EDUCATION**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ind. Ed. 111, Introduction</td>
<td>2</td>
</tr>
<tr>
<td>Ind. Ed. 120, General Drafting</td>
<td>3</td>
</tr>
</tbody>
</table>

**ENGINEERING**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math. (for which eligible)</td>
<td>3-5</td>
</tr>
<tr>
<td>Engr. Dwg. 110, Graphics</td>
<td>1</td>
</tr>
</tbody>
</table>

**FINE ARTS—ART**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. 101, 102, Hist. of World Art</td>
<td>3-3</td>
</tr>
<tr>
<td>Art 165, Basic Art I or</td>
<td>3</td>
</tr>
<tr>
<td>Art 171, Basic Art II</td>
<td>3</td>
</tr>
</tbody>
</table>
FINE ARTS—MUSIC

Mus. 111, Ensemble .................................................. 1
Mus. 113, Music Literature ........................................... 2
Mus. 127-129, Music Theory (prerequisite, Piano) .............. 4
Applied Music .......................................................... 2

STUDENT PERSONNEL SERVICES

While this office serves all students, it is especially important to freshmen in these areas:

- Housing
- Scholarships and Loans
- Part-time Employment
- Student Government and Associations
- Social Organizations
- Health, Hospitalization, and Insurance
- Personal and Vocational Counseling
- Bookstore
- Food Service
- Recreation Areas
- Foreign Student Advising
- University Forum

(Detailed information precedes the section on University College in this catalog.)

PREPARATION FOR DEGREE-GRAZTING COLLEGES

All credits accumulated in University College (except courses numbered 99 or less) apply toward a degree, if acceptable to the degree-granting college of the student's choice.

General

After a freshman has 24 hours of credit and a minimum grade point average of 1.700, he is eligible to transfer from University College to a degree college; College of Education requires 2.00.

Specific

In addition, some of the colleges have specific requirements. A freshman must consider these carefully with his adviser when selecting courses during his first year. (Descriptions of degree colleges follow the University College section in this catalog.)

Students failing to complete requirements for acceptance in the baccalaureate college of their choice by the time they have accumulated 72 credit hours will be withdrawn from the University. Only the Dean of University College is involved in such action. This ruling also applies to the Division of Continuing Education.

Procedure for Transfer to Baccalaureate College

(1) During the semester in which he will complete 24 hours, the freshman is to consult his adviser concerning his eligibility for a degree college.
(2) After consulting his adviser, and during preregistration for the next semester, he is responsible for reporting first to the University College Dean’s Office to request transfer to his chosen degree college, then to that college’s Dean’s Office for interview.

(3) Transfer will be made IF THE STUDENT IS ELIGIBLE after his grades for the semester are recorded and his overall index has been calculated; and if he is accepted by the degree college of his choice.

(4) NO TRANSFER WILL BE MADE UNLESS THE STUDENT FOLLOWS THE ABOVE INSTRUCTIONS.

Readmission on Probation

Students may apply for readmission after the suspension period has elapsed and each case will be considered on its individual merits. All students readmitted to University College are placed on probation and their registration will be in a course of study specifically approved by the Dean of University College to assist the student in achieving academic success. Petitions for readmission must be on file at least 30 days before the beginning of the term for which admission is desired.

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.

Police Science

Courses in police science are designed to meet the growing demand for trained personnel in the field of law enforcement. The program has three specific objectives: (1) effective law enforcement, (2) specialized techniques in combating crime, and (3) general basic training for police executives. While Wichita police officers will continue to have priority for enrollment in this program, other University students may be permitted to enroll provided: (1) they obtain clearance from the Wichita Police Department; and (2) they are in good academic standing. Students desirous of earning a four-year degree in the College of Liberal Arts and Sciences, with a 21 semester-hour minor in Police Science, may transfer from University College upon completion of the two-year program:

The prescribed curriculum follows:

<table>
<thead>
<tr>
<th>Core Curriculum</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 111</td>
<td>3</td>
</tr>
<tr>
<td>Speech 111</td>
<td>2</td>
</tr>
<tr>
<td>Science</td>
<td>5</td>
</tr>
<tr>
<td>Humanities</td>
<td>6-8</td>
</tr>
<tr>
<td>Psychology 111</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 111</td>
<td>3</td>
</tr>
</tbody>
</table>
Remainder of the Program

Police Science ................................................ 24
Political Science 100 or 121; 441 ............................. 6

One course from each of the following groups:
  Psychology 246 (3), 275 (3), 444 (3).
  Sociology 334 (3), 339 (2), 340 (2), 341 (2).
Electives to complete a total of 64 hours for the degree.

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.

Liberal Arts and Sciences courses include the following thirty hours:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 111, College English</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 111, Introductory Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Biology 223, Human Biology</td>
<td>5</td>
</tr>
<tr>
<td>Biology 130, Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 412, or Public Health, or Elective</td>
<td>2</td>
</tr>
<tr>
<td>Chemistry 103, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Psychology 111, General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Biology 120, Introduction Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>Speech 111, Extemporaneous Speech</td>
<td>2</td>
</tr>
</tbody>
</table>

Completion of the above in addition to forty-two hours of Dental Hygiene courses (pages 96, 97) results in the student being eligible for the two-year certificate in Dental Hygiene and for the state licensure examination.

Nursing

For those students who wish to enter the field of nursing, a broad program in general education is recommended. For this purpose, fulfillment of the requirement of the university core curriculum provides a sound basis for entry into the nursing program. From the latitude provided in the core curriculum it is recommended that emphasis be placed upon courses in the natural sciences and social sciences. The following are required and recommended courses.

Natural Sciences and Mathematics

Required courses:   Recommended courses:
Chemistry          Nutrition
Microbiology or Bacteriology Physics
Biology or Zoology  Mathematics
Anatomy and Physiology Organic Chemistry

UNIVERSITY COLLEGE 93
Programs in preparation for nursing include the following:

(1) In cooperation with the St. Joseph, St. Francis, and Wesley Schools of Nursing, prospective student nurses apply concurrently for admission to the local Schools of Nursing and Wichita State University or any other accredited college or university where the above program might be available. During her first year, the student should acquire a minimum of 30 hours of credit including all of the above required courses and electives from the recommended list. Such college credit followed by two additional academic years of clinical study at the school of nursing will qualify a student for the R.N. diploma from the School of Nursing, and will provide a foundation for completion of the work necessary to comply with the degree requirements at the University, by which the Bachelor of Arts Degree may be conferred.

(2) In cooperation with the University of Kansas and other accredited schools of nursing offering the baccalaureate degree, two years or 60 semester hours of courses from those indicated above as required and recommended can be taken at Wichita State University toward the degree of Bachelor of Science in Nursing granted by such accredited colleges and universities offering the baccalaureate degree.

(3) Students with the R.N. diploma may proceed with the General Nursing Program by taking additional work in the sciences, social sciences, and humanities. The university does not award credit for clinical or professional courses taken at a diploma school of nursing. Credit for such work is usually obtained by validation or the passing of advanced standing examinations by those schools offering the baccalaureate degree.

Preprofessional Programs of Study

The core curriculum studies offered in University College are applicable to most of the preprofessional 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.

Premedical, Predental, Preveterinary

In general, a broad education with prescribed studies in the sciences is required for preprofessional programs in medicine, dentistry and veterinary medicine, with emphasis upon courses of study which develop disciplined thinking, intelligent appreciation of values, and sympathetic understanding of man and society. The adviser should be consulted for specific programs of course work.

Other preprofessional programs that may be pursued include pharmacy, optometry, osteopathy, theology, mortuary science, public service and social work.

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.

Transfer of Credit to a Degree-Granting College

Students who accumulate credits in the Division of Continuing Education and who subsequently wish to work toward a degree in one of the other colleges must transfer to the appropriate college and meet all of its degree requirements.
Residence and Extension Credit

All credit courses offered 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.

UNIVERSITY COLLEGE COURSES AND SPECIAL PROGRAMS

COMMUNICATIONS

111. College English. (3). Planning, writing, and criticizing compositions. Drills in standard English, literary models, classroom discussions, and conferences.

DENTAL HYGIENE

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. 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 pathosis 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 antisepctic 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.

108. Emergency Procedures in Dental Office. (1). This course begins with first aid measures as set forth by the American Red Cross. The student is exposed to basic first aid techniques during the first half of the semester. The latter part of the semester is specifically related to typical emergencies in the dental office.

202. Clinical Dental Hygiene II. (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.

203. Clinical Dental Hygiene III. (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.

205. 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.

206. 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.

207. 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.

208. Pharmacology. (2). Therapeutic terms; drug actions; dosage; toxicology, and the application of all drugs used in the treatment of oral disease.

209. 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.

HUMANITIES

102. Man and the Arts. (4). Aesthetic expression involving an analysis of appreciation in three major areas of creativity: literature, music, and the visual arts. Students will be expected to attend occasional concerts and operas, art exhibitions, and films, most of which will be scheduled at optional times.
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.

POLICE SCIENCE

The courses in police science are given by officers of the Wichita Police Department, the Legal Department of the City of Wichita, and the University faculty.

MINOR. The minor consists of 21 hours in Police Science.

Lower Division Courses *

106. Traffic Control. (3). Teaches the three phases of traffic control: Engineering, education, and enforcement. Problems of traffic direction and regulation with special emphasis on safety.


123. Contact and Interview Techniques. (3). A presentation of useful and practical techniques for the police officer to employ in daily contacts with all people to enable him to gain the most truthful information pertaining to the successful completion of his job. Starts with the new officer casually talking to citizens he meets in his daily routine and continues through all phases of interrogation up to and including the detective questioning suspects and the use of the Polygraph (lie detector).

124. Personal Identification. (3). Methods useful in the search for persons wanted, using general physical description, detailed characteristics of various parts of the human body, including fingerprints, their comparison and classification, as well as the use of habits, peculiarities, and habitats of the individual.

221. Criminal Law. (3). Analysis and interpretation of criminal law, procedure and evidence, offenses and the elements of offenses; the laws of arrest, search and seizure; power of law enforcement officers; development, admissibility, and presentation of evidence; testimony, demeanor, and procedure.

243. Special Investigation. (3). Techniques of investigation; identifying, collecting, and preserving evidence; sources of investigative information.

244. Introduction to Scientific Crime Detection. (3). Scientific aids as utilized by law enforcement agencies in the investigation of crimes. This includes their application in the field as well as the laboratory and their presentation in court.

245. Investigative Photography. (3). Photography as applied in law enforcement, both in the laboratory and the field. This includes the use of specialized equipment and diagramming the crime scene.

* Prerequisite for all courses: Approval of Chief of Police, City of Wichita, through Dean, University College.

REMEDIAL SERVICES

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. (2). 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.

Math. 70. Intermediate Algebra. (3).° For students with one year of high school algebra. May be used, in meeting department prerequisites, in place of the third half unit of high school algebra. Prerequisite: One unit of high school algebra.

° Hours do not apply toward a Wichita State University degree.

SCIENCE

Neither of these courses satisfies the laboratory science requirement for graduation:

101. Physical Science. (5). 5R; D. Man in the physical world; offering some basic concepts in the physical sciences.

102. Biological Science. (5). 5R; D. Man in the living world. An introduction to the basic concepts of the biological sciences, with emphasis upon man himself.
Regardless of the area of this 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.

Even though one ultimately specializes in advanced professional fields of study, he is always a member of his society. To understand it—its heritage, its traditions, its environment, its ways of doing things, or its problems—requires a liberal education which is conducive to creative citizenship. The ability to interrelate the world’s many phenomena, to cherish beauty, to communicate interestingly and intelligently—these and related abilities are enhanced by liberal education in the arts and sciences. In a very real sense, a liberal education is a liberating experience, for through its processes and methods, one discovers the key for opening the doors to exciting new discoveries throughout his life—he is freed from the limits of his past and invigorated by the potential of his future. Indeed, the professions themselves are increasingly aware of the value of basing specialized competence on general intellectual competence.

While vocational preparation as such is not the prime concern of the Fairmount College of Liberal Arts and Sciences, students frequently are interested in preparing themselves as undergraduates for further study, at the graduate level, in the programs and departments of the College. Many aim at a teaching or research career in one of the several subject matter fields, or perhaps at a position in industry or business. Others are interested in using undergraduate liberal arts and sciences as a springboard for specialized preparation in such fields as medicine or medical technology, nursing, pharmacy, law, dentistry, theology, public service, social work, and many others.

And, of course, the liberal arts and sciences are recommended for the student who does not particularly aim at a specified career objective, but who seeks merely the thrill of discovery and of new ideas.
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.

A student will be placed on probation at the end of his first semester in Fairmount College of Liberal Arts and Sciences if he does not have a cumulative grade point index of 1.700 for 25 to 63 credit hours and 2,000 for 64 or more credit hours.

DEGREE REQUIREMENTS

The Bachelor of Arts, Bachelor of Science and Bachelor of Science in Medical Technology 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 49. 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 Mathematics 120-122, or 121-122, or either 141, 142, or the equivalents. (Note: Students planning to major in Mathematics, the Natural Sciences, or Philosophy should take Mathematics 141, a five-hour course. All Mathematics courses listed above 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 or 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

The College of Liberal Arts and Sciences offers majors in the following fields: American Civilization, Anthropology, Art, Art History, Biology, Chemistry, Classical Languages, Economics, English,

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, 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: biology, chemistry, geology, mathematics, medical technology, 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.

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. 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.

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 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.

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:

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.

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 preprofessional education, there are marked differences in specific requirements. The advisers in the various preprofessional fields and closely related departments will provide specific information relative to courses and requirements.

MEDICAL TECHNOLOGY

The Fairmount College of Liberal Arts and Sciences offers in cooperation with St. Francis Hospital, St. Joseph Hospital, and Wesley Medical Center in Wichita the Bachelor of Science degree in Medical Technology. The first three years of this program are taken at the Wichita State University and the last year at the affiliating hospital. The curriculum for this degree is described below.
## FRESHMAN YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>FIRST SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math. 141, Algebra and Trigonometry</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Chem. 111, General Chemistry</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Biol. 111, Introductory Botany</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Speech 111, Extemporaneous Speaking</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Phys. Ed. 101</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 112, General and Inorganic Chemistry</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Biol. 112, Introductory Zoology</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Eng. 111, College English</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Phys. Ed. 102</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

## SOPHOMORE YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>FIRST SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 231, Organic Chemistry</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Biol. 201, Introductory Cellular Biology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Eng. 211, Advanced Writing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Phys. Ed. 103</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Modern Foreign Language</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 232, Organic Chemistry</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Phys. Ed. 104</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Modern Foreign Language</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

## JUNIOR YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>FIRST SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 323, Introductory Analytical Chemistry</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Biol. 223, Human Biology</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Biol. 301, Bacteriology</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Courses must be selected from the following: 302, 312, 324, 325, 343, 401, 425.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Humanities or Social Science</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

## SENIOR YEAR

Courses as prescribed by the ASCP will be taken in residence in the School of Medical Technology, St. Francis Hospital, St. Joseph Hospital, or Wesley Hospital, Wichita, Kansas. The student, through the agency of the hospital, will enroll at Wichita State University for this work. This fourth year may 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.)

## 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 understand-

* Electives chosen in the Humanities and Social Sciences must fulfill the University Core Curriculum.
ing 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 to 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 head of the department of Religious Education. 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 162. 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 189.

LIBERAL ARTS AND SCIENCES CURRICULUM

SPECIAL INTERDEPARTMENTAL COURSES

Honors 300. Honors Colloquium (1-3).

Honors 301. Special Studies (1-5). A broad approach to the special problems of one of the major divisions of knowledge, i.e., humanities (301A), social science (301B), science (301C). Designed for non-majors in the subject.

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.

AMERICAN CIVILIZATION

The program in American Civilization 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. Civil. 301 (2-4), 9 hours from Amer. Civil. 311, 312, 411, 412, and Amer. Civil. 498 and 499 (required); 18 hours to be chosen from at least three of the following groups:

- English: 251, 252, 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

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

301. Introduction to American Studies. (2). An examination of the American Civilization 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 commingling 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 Civilization. (3). Seminar and individual conferences organized around a problem or problems presented by a representative figure, theme, or period (i.e.), 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 Archeology (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. Paleoanthropology. (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


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 graduate standing.

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.

327. Primitive Religion. (2). 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.


337. North American Archeology II. (3). Analysis of Woodland, Mississippian, 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 dept. 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 Ed. 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 or graduate standing.

455. Perspectives of Human Design and Behavior. (3). Survey of concepts from anatomy, medicine, biology, anthropology, neuropsychology—concerned with human form and behavior. Discussion of individual differences. Consent required. (Also P. E. 455.)

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: 8 hours of Anthropology.


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.

505. Museum Methods. (3). An introduction to museum techniques, exhibit design and evaluation, preservation of collections, the role of the museum in teaching anthropology. Prerequisite: Department consent; may be repeated once.

537. Special Problems in Anthropology. (1-3). Intensive study on advanced theoretical questions in cultural anthropology or archaeology. Prerequisite: 5 hours of Anthropology.
548. Recent Developments in Anthropology. (2). A review of the latest discoveries and interpretations in the science of man. Prerequisite: 5 hours of Anthropology.

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.

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.

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.

130. 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).

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.

225. Comparative Anatomy. (5). 3R; 4L. An intensive study of representative chordates, with emphasis on vertebrate anatomy. Prerequisite: Biol. 201.

Upper Division Courses

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. 225, 309, 310, 330, or 402.

312. Parasitology. (3). 1R; 6L. The parasites of man and other vertebrate hosts. Prerequisite: Biol. 225 or 309.

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.

401. Genetics. (5). 4R; 3L. The mechanisms of heredity and variation in plants and animals with a critical review of the concept of the gene. Prerequisite: Biol. 201.


410. Animal Behavior. (5). 3R; 4L. Physiological basis, sensory reception, orientation and ethology. Prerequisite: Biol. 320 or consent.

411. General Ecology. (4). 2R; 6L. Principles of plant and animal ecology with field work as an integral part of the laboratory. Prerequisite: Biol. 201.


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.

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 relationships 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.


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 coordinating mechanisms which will stress the essential unity of nervous and endocrine function. Prerequisite: Biol. 320 or 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 232, 324, 346, and the necessary prerequisites which include Mathematics 244 (or equivalent) and one year of college physics.

A major with a Bachelor of Science degree includes, in addition to the B. A. requirements, Chemistry 411, and a minimum of five hours chosen from Chemistry 412 through 459. These must be selected so as to provide at least four credit hours of lecture and one credit hour of laboratory work. A reading knowledge (or two semesters) of German is required. Additional physics and mathematics beyond the minimum requirements are strongly recommended. This curriculum meets the standards of the American Chemical Society Committee on 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 4 or 5 hours from Chemistry 231, 302, 304, and 323.

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. Credit will not be granted for both Chem. 103 and Chem. 111.
111. General Chemistry. (5). 3R; 4L. The general laws of chemistry and the non-metals and their compounds. Prerequisite: 1.5 units of high school algebra or 1 unit and Math. 70. 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. 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. Preparation and identification of typical organic compounds of the aliphatic and aromatic series. 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. (4-4). 3R; 3L-3R; 3L. Introductory physical chemistry for students having a background in physics and calculus. Prerequisite: Chem. 231, Math. 244 (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.

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. (2). 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 and emission 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. (2). Prerequisite: Consent of instructor.

533. Qualitative Organic Analysis. (3). 1R; 6L. Identification of organic compounds. Prerequisite: Consent of instructor.

534. Quantitative Organic Analysis. (2). Prerequisite: Consent of instructor.

535. Physical Organic Chemistry. (2). Prerequisite: Consent of instructor.

539. Special Topics in Organic Chemistry. (1 to 3). Prerequisite: Consent of instructor.
541. Advanced Physical 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.

549. Special Topics in Physical Chemistry. (1 to 3). Prerequisite: Consent of instructor.

561. Advanced Biochemistry. (3). 2R; 3L. 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

No difference is implied between 300 and 400 courses in the English curriculum. All are open to juniors and seniors alike and may be offered for graduate credit unless otherwise indicated.

Major: A major consists of 33 hours and must include 221, 222, 225, 251, 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.

Not counted on the regular English major are 111, 248, and 315. 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: 221, 222, 251; and at least six hours of upper division work.

Not counted on the regular minor: 111, 248, and 315.

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; 222 or 251; 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: 315; and 461 or 462; 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: 225; 251 or 252; 221 or 222; 315; 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; 251; 221 or 222; 315; 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.

211. Advanced Writing. (3). Prerequisite: English 111 and sophomore standing. Recommended for non-English majors.

221 & 222. Survey of Major English Writers. (3-3). First semester: from the beginnings through the eighteenth century. Second semester: nineteenth century to the present. Required of all English 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.

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). Designed for majors and non-majors who wish to study the best work of Shakespeare's whole career in one semester. May not be offered for credit by students who attain credit in English 433 or 434.

251. American Literature from Poe to Twain. (3).

252. American Literature from James to the Present. (3).

255. American Democracy. (3). Same as Political Science 211 (which see for description).

Upper Division Courses

301. Major American Authors. (3). The works of one or more outstanding figures in American literature.

302. American Fiction. (3).

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 offered for graduate credit.

313 & 314. Creative Writing: Workshop in Poetry. (3-3). May not be offered for graduate credit.

315. The Structure of English. (3). Introduction to the new grammar, including linguistic and grammatical concepts and sentence analysis. Not credited toward an English major or minor, except in the College of Education. May not be offered for graduate credit.

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 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 1925. (3).

342. Modern British and American Literature from 1925 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.


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).


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).

462. Theory of Language. (3).


475 & 476. Independent Reading. (1-3; 1-3). Designed for majors and non-majors who want to pursue special reading or research projects in areas not normally covered in course work. Admission to courses is determined by the departmental Honors Committee. 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.

Additional Honors Work: Certain upper division courses may be designated as Honors courses in English and enrollment limited to students selected by the departmental Honors Committee.

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.

501h. Graduate Studies in Twentieth-Century British Literature. (3). Yeats, Joyce, Lawrence, Auden, Spender, and others.

502 & 503. Graduate Survey of 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.

504a. Graduate Studies in Drama. (3). Selected topics in the history and nature of dramatic literature. With departmental consent, may be repeated for credit.

504b. 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.

504c. Graduate Studies in Poetry. (3). Selected topics in forms, techniques, and history of poetry. With departmental consent, may be repeated for credit.

504d. Graduate Studies in Criticism. (3). Selected topics in the theory and practice of literary criticism. With departmental consent, may be repeated for credit.

504e. Graduate Studies in Linguistics. (3). Selected topics in theories of language and methods of linguistic study. With departmental consent, may be repeated for credit.
506. 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 main-
tained.

509 & 510. Creative Writing. (3-3). Students who plan to offer a novel, play,
or other creative writing as a thesis will be permitted to do creative writing for
graduate credit. The department reserves the right to refuse, without prejudice
to the student's Master of Arts program, any applicant for this work whose
success seems doubtful.

511. Directed Reading. (1-3). Designed for graduate students who want to
pursue special research in areas not normally covered in course work. Pre-
requisite: Departmental consent.

520. 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.

531. 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.

575. Master's Essay. (1-3).

FRENCH (See Romance Languages)

GEOLOGY AND GEOGRAPHY

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 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
Geology 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. Students with a major in geology may not present a minor in geography for graduation.

GEOLOGY

Lower Division Courses

105. Introduction to Geology. (3). 2R; 2L. A short elementary course in physical and historical geology, emphasizing the practical aspects of the science. Not for major credit. Not open to students with credit in Geol. 111. Field trip(s) required.

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. Astronomy. (3). 2R; 2L. An introductory study of extraterrestrial realms and materials, including the solar and galactic systems, their apparent origins, development histories, components, and motions. Prerequisite: Math. 141. Does 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: Geog. 201 or Geol. 112. 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. 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; 2L. 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, 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: Geog. 201 or Geol. 112.

443. Subsurface Geology. (3). 2R; 3L. All subsurface methods, including laboratory, logging, testing, treatment, valuation, and mapping methods. Prerequisite: Geol. 226 and Physics 124. 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. Prerequisites: 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. Prerequisite: 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 five 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.

530. Igneous and Metamorphic Petrography. (4). 2R; 4L. An introduction to the study of mineral composition and textures of igneous and metamorphic rocks as displayed in thin sections. Modes of genesis are studied by giving consideration to the mineral grain relations and to gross field aspects of rock units. Prerequisite: Geology 425 and consent of instructor.

532. Sedimentary Petrography. (3). 1R; 6L. Detailed macroscopic and microscopic examination of sedimentary materials. Prerequisite: Geology 425 and instructor's consent. Field trip(s) required at the option of the 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. Paleoecology. (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; 2L. 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.

235. 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: Math. 121 or equivalent. 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 major in German consist of a minimum of 24 hours beyond the level of German 112 and including German 325 and 327. In addition, the student should elect courses in one other foreign language, English language and literature, history, and philosophy.

Minor. A minor in German consists of a minimum of 11 hours beyond the 112 level, to include German 225 and one upper division literature course, and excluding German 321.

Note: Students who plan to teach German in Kansas High Schools must also have a minor in a High School teaching field. They 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**

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; diction 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 apply on German minor.)

325-326. Advanced Composition and Grammar. (2-2). Prerequisite: German 226 or department consent.


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.
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.

History 311, 312, 313 and 314 may be used to fulfill lower division, but will not apply to the upper division requirements for a major in History.

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 (open to freshmen and sophomores only). 102: 1648 to the present (open to freshmen and sophomores only).

113 & 114. English History. (3-3). 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.

125 & 126. History of the Americas. (3-3). A survey of the history of the New World with some emphasis on institutional development and interrelationships. 125: Prehistory to 1826. 126: 1826 to the present.

131 & 132. History of the United States. (4-4). 131: Survey from the colonial period through the Civil War (open to freshmen and sophomores only). 132: Survey from Reconstruction to the present (open to freshmen and sophomores only).


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 & 302. The Ancient Mediterranean World. (3-3). 301: The ancient Near East and the Greek world to the death of Alexander the Great. 302: The Hellenistic Age: The Roman Republic and Empire to 565 A.D.


311 & 312. The Rise of the Western World. (3-3). A course designed for juniors, seniors and honor students covering western civilization through lectures, assigned readings of historical classics and group discussions. Not offered for graduate credit and closed to students with credit for History 101 and 102. Does not apply for upper division credit for a major in History.

313 & 314. History of the United States. (3-3). 313: Discovery, exploration, colonization, the national period and the Civil War. 314: Reconstruction, economic and social development of the nation, and the rise of the United States to a dominant world power. These courses are open to juniors, seniors, and honor students only; not offered for graduate credit and closed to students with credit in History 131 and 132. Does not apply for upper division credit for a major in History.

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 & 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 Whig victory of 1840, with emphasis on the growth of American Nationalism.
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.)

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.


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).

432. The United States, 1877 to 1900. (3). Economic, constitutional and political evolution of American society caused by the impact of immigration, urbanization, industrialization, and extensive commercial agriculture.

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.

436. Age of Enterprise and Economic Consolidation. (3). Economic development of the United States from the Civil War to the present.

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 American South, 1607 to Present. (3). Emphasis upon factors which created a unique Southern civilization and events which have drawn the New South closer to other sections of the nation.

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.

446. Agricultural History of the United States, 1607 to Present. (3). Emphasis on the important economic and social role played by farmers in the creation of American society.


450. The French Revolution and the Napoleonic Period. (3).


452. Modern France. (3). The development of modern France from the end of the First Empire through the advent of the Fifth Republic.

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.

457. Social and Intellectual History of Europe. (3). The major intellectual and social currents of European history and their connection to historical events.

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.

495. Special Topics in History. (1-3).

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

531 & 532. Seminar in American History. (3-3). Includes both United States history and Inter-American relations. Prerequisite: Consent of department. May be repeated for credit.

553 & 554. Seminar in Modern European History. (3-3). Prerequisite: Consent of department. May be repeated for credit.

555. Seminar in Ancient-Medieval History. (3-3). 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 24 hours, including Journ. 115, 226, 247, and 448, and a concentration of not less than 15 hours in one additional field of study in a school or college of the
University. Subject to departmental approval in individual cases, certain courses in other fields, particularly Art, Business, Economics, Education, English, History, Political Science, Psychology, Sociology, Speech and Foreign Languages, may be applied to the journalism major requirements. In addition, one of the following sequences must be completed:

**News-Editorial Sequence:** Journ. 330, 336, 444.

**Radio-Television Sequence:** Journ. 325, Speech 114, Speech 224, Speech 314.

**Advertising-Public Relations Sequence:** Journ. 238, 439, 450.

**Photojournalism:** Journ. 232, 233.

### Lower Division Courses

115. **Introduction to Mass Communication.** (2). 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: Journ. 115 or department consent. 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: Department consent.

233. **Advanced Photojournalism.** (3). 2R; 3L. Application of still and motion picture techniques to the preparation of news, feature and documentary material for print media and television. Prerequisite: Journ. 232 and department consent.

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.

247. **Journalism Research.** (2). Required for the major in journalism. Introduction to basic research technique and sources of particular value to the professional journalist, and their application in the preparation of several research papers.

### Upper Division Courses

325. **Radio and Television News.** (3). 2R; 3L. Reporting and writing news with emphasis on the special requirements of broadcast media.

330. **Advanced Newswriting and Reporting.** (3). 2R; 3L. Reporting and writing the more demanding types of material: feature, interpretive and public affairs stories, editorials and interviews. Prerequisite: Journ. 226.

336. **Editing.** (3). 2R; 3L. Selection, evaluation and preparation of copy and pictures for publication; copyreading, rewriting, headline and caption writing, page makup. Prerequisite or concurrent: Journ. 330.

360. **Journalism Internship.** (1-4). On-the-job experience and training in news, advertising or public relations. Although the Journalism Department will assist to the extent possible, students are expected to secure their own positions in these fields.
427. Writing for Magazines. (2). Researching and writing non-fiction articles for submission to magazines and newspapers. Enrollment limited, with preference to journalism majors. Prerequisite: Department consent.

439. Advanced Advertising. (3). Techniques of copywriting; selection and presentation of sales messages; analysis and critique of advertising materials and campaigns with emphasis on factors influencing management decisions. Prerequisite: Journ. 338.

440. Student Publications. (3). For those who are or plan to be journalism teachers or advisors to high school or college student publications. Instruction in staff organization, production techniques and editorial aspects of school newspapers and yearbooks.

444. Policies and Problems in Mass Communications. (3). Functions and responsibilities of mass media management; development and direction of policy, with stress on legal and ethical considerations. Prerequisite: Journ. 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: Department consent.

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.

450. Public Opinion, Public Relations, and Propaganda. (3). Survey of current practices and problems in the field of public opinion and mass persuasion, with emphasis on various public relations functions, communication and publicity techniques; analysis of relationships with news media, government, employees, stockholders, consumers and other groups; consideration of propaganda campaigns and techniques with a view to developing skill in identifying and analyzing biased communications. Prerequisite: Department consent.

LATIN AND GREEK (See Romance Languages)

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, the major requires the completion of Mathematics 244 and 253, and 15 semester hours of upper division work which must include Mathematics 313, 335 and 336. In addition, Philosophy 325 is required. The foreign language should be French or German.

For the B. S. degree, the major requires Mathematics 244 and 253 and 21 semester hours of upper division work, which must include Mathematics 313, 335, 336, and 346. In addition, Philosophy 325 and 9 additional hours of upper division credit in Philosophy or in one of the natural or social sciences are required. The foreign language must be French or German. The student who is interested in Statistics should include 371, 471, and 472 in his pro-
gram. The student who is interested in Applied Mathematics should include Mathematics 452 in his program. Those students preparing to teach mathematics should include Mathematics 311 and 315 in their programs.

MINOR: A minor in mathematics requires a minimum of 15 semester hours of credit courses, including 3 hours of upper division work.

For students intending to major in the College of Liberal Arts or certain other programs in the University (see appropriate sections of the Catalog), high school mathematics work (or its equivalent) amounting to less than 1½ years of algebra and 1 year of geometry is considered an entrance deficiency and should be made up by some form of remedial work. Placement is made in credit courses as follows:

1. Students with high school prerequisites for Math. 120 or 121 may register for this course without examination.
2. Students with high school prerequisites for Math. 141 may register in this course upon passing the appropriate departmental placement examination.
3. Students without high school prerequisites but with equivalent knowledge may be placed in 120 or 121 or 141 upon passing the appropriate departmental placement examination.
4. Students with high school work equivalent to 141 may be granted placement in 142 by passing a placement examination over the material of 141.
5. Special cases may be placed at any other appropriate level by the department.

For those students with entrance deficiencies, 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 prerequisites, 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.

70. Intermediate Algebra. (3).* For students with one year of high school algebra. May be used, in meeting department prerequisites, in place of the third half unit of high school algebra. Prerequisite: One unit of high school algebra.

* Hours do not apply toward a Wichita State University degree.
Lower Division Courses

120. Discrete Mathematics and Algebra. (5). The content of Mathematics 121 together with the content of Mathematics 70. Prerequisite: 1 year of high school algebra and 1 year of high school geometry. (Only three hours applies toward a Wichita State University degree.)

121. Discrete Mathematics I. (3). Set theory, probability, and the elements of statistics. Prerequisite: One and one-half units of high school algebra.

122. Discrete Mathematics II. (3). Linear algebra and related topics. Prerequisite: 120 or 121 and one unit of high school geometry.

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 and one unit of high school geometry and a satisfactory score on the departmental placement exam.

142. Introductory Analysis I. (5). Analytic geometry and the Calculus in an inter-related form. Prerequisite: Mathematics 141 with a C or better.

181. Honors Analysis I. (3). An introductory study of mathematical analysis. Prerequisite: Honors standing and 141 or high school equivalent, or consent.

182. Honors Analysis II. (3). A continuation of 181. Prerequisite: Mathematics 181 or consent.

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 or 182 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 or 246, with a C or better.

245. Survey of Analysis. (3). A brief but careful introduction to mathematical analysis intended for students of humanities and social sciences. Prerequisite: Mathematics 122 with a C or better. Credit in both 245 and 142 is not allowed.

246. Calculus. (5). A continuation of Mathematics 245 designed to complete a study of elementary mathematical analysis. May be used in place of 243 in meeting prerequisites for other courses. Prerequisite: Mathematics 245 and consent.

253. 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.

281. Honors Analysis III. (3). 281 completes the materials of 142-243-244 and may be used as the equivalent of 244 in meeting prerequisites. Prerequisite: 182 with B or better, or the equivalent in high school preparation and consent of the department.

282. Honors Analysis IV. (3). Further topics in analysis and linear algebra, appropriate for honors students. Prerequisite: 281.

Upper Division Courses

303-304. Topics in Modern Mathematics. (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.

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 244 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.

335-336. **Intermediate Analysis I and II.** (3-3). A detailed study of limits, continuity, the Riemann integral, the calculus of functions of several variables, line and surface integrals. Prerequisite: Mathematics 244 with a C or better. For 336, a C or better in 335 and 253. (335 not for major graduate credit.)

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.** (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.

380. **Introduction to Computer Science.** (3). The arithmetic and logic of computers. Prerequisite: Mathematics 244 or 245 or consent of department.

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 in prerequisite course or consent of department.

447. **Vector Analysis and Fourier Series.** (3). Line and surface integrals with applications to engineering. Applications of Fourier Series. Prerequisite: Mathematics 244 with a C or better or consent of department. (No credit for Mathematics majors.) Not open to students with credit in 450.

452. **Numerical Analysis.** (3). Prerequisite: Mathematics 335 with a C or better or consent of department.

454. **Linear Algebra II.** (3). A continuation of Mathematics 253. Prerequisite: Mathematics 253 and 313.

471-472. **Probability and Statistics.** (3-3). A course in the theory of the subject. Prerequisite: 335 with C or better.

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.** (3-3). A study of the foundation of analysis and of the fundamental results of modern real analysis. Prerequisite: Mathematics 336 or consent of department.
503-504. Abstract Algebra. (3-3). A treatment of the standard basic topics in abstract algebra. Prerequisite: Mathematics 313 or consent of department.

505-506. Complex Analysis. (3-3). Theory of analytic functions. Prerequisite: Mathematics 335 or consent of department.

507-508. Topology. (3-3). Point set and algebraic topology. Prerequisite: Mathematics 335 or consent of department.

520. Proseminar. (1). Required of all graduate majors in their first 12 hours. 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 instructor.

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 instructor.

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 instructor.


STATISTICS

The courses in statistics listed here are offered by the Mathematics Department. No major or minor is offered. For information, consult the Mathematics Department. Statistics courses are counted as mathematics for the purpose of all “maximum hour” limitations.

Noncredit Courses

71. Statistics for Graduate Students. (0). 3R. Elementary statistics for graduate students who need only a rudimentary knowledge of the subject.

Lower Division Courses

271-272. Elementary Statistics I and II. (3-3). In 271, elementary descriptive statistics; probability; binomial and normal distributions; elementary problems of statistical inference; linear correlation and regression. In 272, analysis of variance. Prerequisite: Mathematics 121 or 141. Not open to students with Mathematics 243 or 245 or to mathematics majors.
Upper Division Courses

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.

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 105.

MUSIC

See page 239 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. General Philosophy. (3). An introduction to the philosophic 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. Philosophy in the Twentieth Century. (3). An introduction to philosophy through the main currents of present-day thought.

225. Logic. (3). An introduction to the basic principles of rational thinking, with an emphasis on argument forms, deductive techniques, and methods of proof.

* When applicable, Philosophy 490 (Special Studies), can be substituted for one or more of the required courses, with the approval of the department.
226. Introduction to Philosophy of Science. (3). A study of the basic philosophic 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.

313. Social and Political Philosophy. (3). An examination of various philosophical theories of the state and society.

325. Symbolic Logic. (3). Symbolic techniques used in establishing basic logical principles in demonstrations and in constructing rigorous proofs.

331. Ancient Philosophy: Thales to Plotinus. (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: Berkeley to Kant. (3). A study of the philosophers of the modern period with an emphasis on the doctrines of Berkeley, Hume, and Kant.

335. Nineteenth Century Philosophy: Hegel to Nietzsche. (3). A study of the later modern period, selected from such authors as Hegel, Fichte, Schelling, Schopenhauer, Kierkegaard, Pierce, James, 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 Pragmatism. (3). An examination of the major philosophic movement of America, and its consequences in regard to the doctrines of behaviorism, operationalism, utilitarianism and democracy.

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). A continuation of Philosophy 325, including areas such as the logic of relations, properties of formal deductive systems, identity and definite description, alternative notations, the theory of types, logical paradoxes, etc. Prerequisite: 325 or 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.

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.
503. Selected Topics in Logic. (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 243-244), 311, 333-334, 339-340, and 454, Math 335 plus 3 additional hours of upper division Math, 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 to Physics 124: Physics 123 or 243.

225. Topics in Classical Physics. (2). Prerequisite: Physics 124 or 244. Corequisite: Math 142, or 251.

243-244. 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. Beginning with the Fall semester of 1968, the prerequisite to Physics 243 will be: High school physics, Introductory Physics 103, or junior standing in the University. Corequisite 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.

* 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 or 252.

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 or 252 with a grade of C or better.

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 or 252 with a 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 or 252.

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 or 252.

380. Special Studies in Physics. (1 or 2). May be repeated, but total credit may not exceed two hours. Prerequisite: Department consent.

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.


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 349.
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. 349; 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 department consent, and Math. 349.

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. 349 and 450.


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.

POLICE SCIENCE

The courses in Police Science are given by officers of the Wichita Police Department, the Legal Department of the City of Wichita, and the University faculty. The prerequisite for enrollment in any police science course is consent of the Chief of Police and the Dean of University College.

MINOR: The minor consists of 21 hours in Police Science. (See course offerings listed under University College.)

POLITICAL SCIENCE

MAJOR: A major consists of 30 hours. Requirements are as follows: Pol. Sci. 100, 345 or 444, 447 or 449; 3 hours each from Groups 2, 3, 4, and 5; and enough additional hours to complete the 30-hour major requirement. (Note: Pol. Sci. 121 or 211, but not both, may count toward a major.)
MINOR: A minor consists of Pol. Sci. 100; 3 hours from Group 1; and 9 additional hours, 6 of which must be upper division.

1. (Political Theory) 345, 444, 446, 447, 449, 458.
4. (International Relations) 335, 336, 433, 434, 436.
5. (Public Administration) 321, 441, 455, 464, 473, 474, 480.
6. (Special Courses) 150, 450, 499.

Lower Division Courses

100. Patterns of Politics. (3). An analysis of basic patterns of political systems and political behavior. Designed for the general student whether or not he desires to take advanced work in Political Science.

121. American Government. (3). The basic principles, structure and functions of government in our national society. (Formerly offered as Pol. Sci. 221.)

150. Workshop. (1-4). Prerequisite: Consent of instructor.

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. Prerequisite: Sophomore standing.

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. Prerequisite: Sophomore standing. (Formerly offered as Pol. Sci. 319.)

226. Introduction to Comparative Analysis. (3). An introduction to methods, problems and prospects of comparative, or cross-national, analysis, past and present. An examination of techniques and selected problems of the comparison of political systems by structure and function, an examination of the use of concepts of development and modernization for explaining diverse systems. Recommended for those intending to take further work in comparative politics, as well as those desiring an overall survey of method of comparative analysis. Prerequisite: Sophomore standing.

227. Comparative Analysis of Western Democracies. (3). Utilizing experience from Great Britain, France, the British-speaking Commonwealth and Western Europe, an analysis of the characteristics of these systems. Prerequisite: Sophomore standing.

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. Prerequisite: Sophomore standing.

* Prerequisite may be waived by department consent.

Upper Division Courses

Pol. Sci. 100 is a prerequisite for all upper division courses except 345, 441, 444, 450 and 453.

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.

146 FAIRMOUNT COLLEGE
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. Prerequisite: Pol. Sci. 227 and 228.

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 jurisdical 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.)

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 affect these institutions and processes will be studied.

429.° International Communism: The Party-States, Issues and Prospects. (3). “Fraternal” relations among the party-states, in theory and practice; emphasis on factors which have created friction, and those which make for greater cohesion within the international movement.

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 Russian to Soviet foreign relations and policy aims; execution of foreign policy in selected areas. Prerequisite: Pol. Sci. 335 or 336.

441. Municipal Government and Administration. (3). The development and status of American municipal corporations; the various municipal units (cities, school districts, and others); intergovernmental relations; contemporary urban and metropolitan problems of government and administration.

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 party-states. The contributions of Marx, Engels, Kautsky, Bernstein, Luxemburg, Lenin, Trotsky, Stalin, Mao, Khrushchev, Tito, Togliatti, etc. Prerequisite: Pol. Sci. 444.


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 & 452.° Constitutional Law. (3 & 3). The course will utilize the case method and is concerned principally with the important and unique role of the Supreme Court as a policy-making body in the American system of government. In 451 emphasis is placed upon cases dealing with the separation of powers, federalism, judicial review, and the development of significant case law in fields outside of civil rights. The Bill of Rights guarantees, the Fourteenth and Fifteenth Amendments, and the use of the Commerce Clause as a legislative vehicle for expanding the concepts of due process and equal protection are dominant concerns in 452, in which the emphasis is upon civil liberties and civil rights.

453. Law and Society. (3). An analysis of our legal system in operation. Includes study of 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. (Note: Not open to students with prior credits in business law.)

454.° The Judicial Process. (3). Focuses upon the behavior and policy-making role of the courts in the American system. Selected areas of case law are utilized to illustrate important aspects and problems of the judicial process. (Supplements P. S. 451.)

455. Administrative Law. (3). A study of the administrative powers and procedures in the American national government and of the relevant experience of some other democracies such as Britain, France, Germany and Italy, with special attention to the legal and administrative methods of achieving a responsible bureaucracy and of balancing public interest with private rights. Prerequisite: Senior or Graduate standing.

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. Prerequisite: Pol. Sci. 321.

473 & 474. Seminar: Current Problems in Public Administration. (3-3). Problems of contemporary public administration with emphasis on effective citizenship. Readings and field contacts. Prerequisite: Department consent.

480. Government Administration and Public Policy. (3). The problems of government encountered in the administration of public policy. The approach will be analytical rather than descriptive. Prerequisite: Pol. Sci. 321, or consent of instructor.

485. Modern Federalism and the Policy Process. (3). The theory and practice of federalism continues to be a vital force shaping American institutions, political processes, and policy-making. In this course selected areas of public policy are singled out for detailed examination, both as to substantive content, and the continuing process of development, change, and application within the context of a federalist political system. The student is expected to make himself expert in one policy field, demonstrating his mastery in a term paper and class presentation.

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.

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). Student will select one major problem area, research its political implications (stability and control) in the U.S.S.R. 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.

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.

575 & 576. Thesis. (2-2). *Prerequisite may be waived by department consent.

PSYCHOLOGY

Major: The major consists of a minimum of 24 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. The minor for students majoring in Psychology will be required at the discretion 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, or consent of instructor.

343. Experimental Psychology. (3). Laboratory study of behavior stressing experimental design and research techniques. Prerequisite: Psych. 112 and 342.

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.

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: Psychology 275, 444, and 463.

410. History of Psychology. (3). Psychological theory and experimentation from ancient to modern times. Prerequisite: 10 hours of Psychology.

444. Introduction to Psychopathology. (3). Individual differences and their relation to "normal" behavior. Prerequisite: Psych. 111.

454. Psychological Testing and Measurement. (3). A survey of the psychological foundation of tests and the interpretation and evaluation of test findings. Prerequisite: Psych. 112, 212, 342 or consent of instructor.

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 instructor.

460. Developmental Psychology. (3). Survey of theories of child development and applications to special aspects of the developmental process. Prerequisite: Psych. 260.


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 department consent 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: 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: 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: 502 and consent of instructor.

518. Personality Assessment Laboratory. (2). 4L. Practical experience in administration, scoring and communication of personality measures. Prerequisite: 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: Psychology 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: 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: 526 or concurrent enrollment in 526, and consent of instructor.

542. Advanced Psychological Statistics. (3). Design, analysis, and evaluation of behavioral research data. Required of all majors. Prerequisite: Consent of instructor.

549-550. Seminar in Psychology. (3-3). Intensive survey of basic areas in psychology with stress on recent developments. Required of all graduate majors in psychology. Prerequisite: Consent of instructor.

551. Seminar in Physiological Psychology. (3). Intensive study of theory and research in physiological factors in behavior. Prerequisite: 350 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.

152 FAIRMOUNT COLLEGE
573. Seminar in Motivation and Emotion. (3). Intensive study of theory and research in motivational and emotional processes. Prerequisite: 473 and consent of instructor.


RELIGIOUS EDUCATION

The program in religious education offers a general survey of religious life and thought, of Biblical history and literature, and their significance in the life of today. The courses in this program are not primarily professional in character. Religion is recognized as one of the great phenomena of human life, and religious literatures are studied for the light they shed on political and social movements and as cultural background.

Major: The primary goal of the program is to help students reach a better understanding of the role of religion in human culture and experience. Therefore, it is by design that the program offers a "combined major" consisting of no less than 24 hours; 15 in Religious Education and 9 in a related field.

Of the 12 upper division hours required in the major field at least 9 must be in Religious Education.

Minor: The minor consists of 15 hours in Religious Education courses, chosen in consultation with the student's advisor.

Lower Division Courses


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.

230. Old Testament Interpretation. (2). An attempt to understand the people and the problems of the Old Testament. Emphasis will be on the Pentateuch, the prophets, and an understanding of major Biblical concepts.

240. New Testament Interpretation. (2). The letters of Paul, the Johannine literature and history outside the Synoptic Gospels will be emphasized. Such major Biblical concepts as sin, grace, savior, church, will be examined critically in terms of the Biblical text.

260. Western Religious Thought. (3). An historical and critical study of the main currents of thought in the West. Emphasis will be on primary forces and personalities which gave background shape and development to the Hebrew-Christian tradition.

Upper Division Courses

301-302. Ancient Mediterranean World. (3). (Same as History 301-302.)

305. New Testament Greek. (2). (Same as Greek 332.)

323 & 324. Medieval History. (3-3). (Same as History 323-324.)

333. Comparative Religion. (3). A rapid survey of the religious experiences of people in their efforts to secure and conserve the essential values of life.
336. **History of Religions 1**. (3). Emphasis on historical insights useful for understanding religion in its cultural setting and the development of major religious concepts.

337. **History of Religions 2**. (3). Continuation of 336, 1.

340. **Current Religious Issues**. (2). Emphasis will be on important questions which affect the American scene such as the ecumenical movement, recent court decisions, varieties of current religious dissent, protest, relevance.

360. **Religious Thought in the 19th and 20th Century**. (3). A study through the writings of representative thinkers of major trends, developments and movements such as the Social Gospel, Modernist-Fundamentalist Controversy, the Ecumenical Movement, "the Catholic-Protestant dialogue."

399. **The Bible as Literature**. (3). (Same as English 399.)

424. **Reformation**. (2). (Same as History 324.)

446. **Philosophy of Religion**. (3). An examination of some basic religious problems such as the nature and grounds of religious belief, religious language, the existence and nature of God, human immortality, the problem of evil.

466. **Biblical Ethics and Social Problems**. (3). An examination of ways in which the Bible has been read for insight into moral problems in contemporary society. The writings of social analysts, theologians and various religion bodies will be read. Problem areas of special concern will be marriage and family, economic life, politics, race relations, international relations.

475. **Independent Work**. (1-3). Especially designed for those working for a combined major. A major project relating the work of two departments is required.

**ROMANCE LANGUAGES**

**French**

**Major:** A major in French consists of 24 semester hours beyond French 112 or its equivalent and must include French 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 12 hours beyond the French 112 level and must include French 221, 222, or the equivalent, 336, and one upper division French literature course, exclusive of Major Topics.

**Note:** 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 strongly recommended that majors who are planning to teach take French 310 and 336. 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.

221-222. Intermediate French Reading and Grammar. (3-3). Intensive reading of French literary works and grammar review. Prerequisite: French 112 or equivalent. (221 is not open to students with prior credit in French 223.) May be used to meet the foreign literature requirement.

225. Intermediate French Conversation and Composition. (2). Oral assignments will involve some regular work in the language laboratory. Prerequisite: French 112 or equivalent.

232. French Civilization. (2). The background of history, art, and institutions. Prerequisite: 221 or 225 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. Directed studies in any field or period agreed upon. Total credit not to exceed 4 hours. Prerequisite: French 222 with a “C” or better 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.


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. (2). An introduction primarily to the historical phonology and morphology of the Romance Languages, with particular emphasis on French and Spanish. Prerequisite: French 303 or Spanish 335 or consent. (Same as Spanish 435.)

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 consent.
230. Intermediate Italian Grammar and Composition. (3). Prerequisite: Italian 112 or equivalent.
331. Introduction to Italian Literature. (3). Prerequisite: Italian 224 or consent.

Latin and Greek

MAJOR: The major in Latin consists of 30 hours, including at least 10 hours of upper division courses.

It is recommended that Latin majors take History 307 and 308 (Roman) and History 323 and 324 (Medieval).

MINOR: A minor in Latin consists of 15 hours or, if high school equivalent is accepted, of 12 hours beyond the 112 level. In either case a 300 course must be included.

Latin

Lower Division Courses

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

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.
441-442. Seminar in Latin Literature. (3-3). Each semester one of the following subjects will be studied on a rotating schedule: Plautus, Terence, Petronius, Apuleius, Lucretius, Tacitus and Pliny, Horace and Juvenal, and Prose Composition. May be repeated for credit.
Greek

Lower Division Courses


223. Intermediate Greek. (3). Plato and Herodotus. Prerequisite: Greek 111-112.

224. Intermediate Greek. (3). Homer's Iliad. Prerequisite: Greek 223.

Upper Division Courses


332. Advanced Greek. (3). Thucydides. Prerequisite: Greek 331.

Spanish

Major: 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.

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 consult with a Spanish department counselor before enrolling in Spanish courses.

Note: Majors who plan to teach Spanish should qualify to teach at least one other foreign language. They 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.

Minor: 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.
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 Reading. (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 consent. Should be taken with Spanish 230.

230. Intermediate Spanish Grammar and Composition. (3). Prerequisite: Spanish 221 or 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 consent.

326. Advanced Grammar and Composition. (3). Prerequisite: Spanish 230 or 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 consent.

333. Great Themes of Spanish Literature. (2).

334. Contemporary Spanish Theatre. (3).

335. Spanish Phonetics and Diction. (2). Prerequisite: Any 200-level course or consent.

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.

424. Contemporary Spanish Novel. (3). Prerequisite: Any 300-level Hispanic literature course.

426. Spanish Civilization. (2). 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. Prerequisite: Any 300 or 400-level Hispanic literature course or consent.

427. Ibero-American Civilization. (2). Intensive study of Ibero-American culture, including the historical and geographical factors in its development, and its contributions to world civilization. Prerequisite: Any 300 or 400-level Hispanic literature course or consent.

433. Introduction to Romance Linguistics. (2). 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 consent. (Same as French 435).

Graduate Courses


526. Grammar and Stylistics. (3). Intensive study of advanced grammar and stylistic usage.

531. 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.

532. Seminar in Spanish-American Literature. (3). (a) Colonial Period; (b) Contemporary Novel; (c) Short Story; (d) Poetry; (e) Modernism; (f) Essay; (g) Theater.

SOCIOMETRY

MAJOR: A major consists of at least 30 hours including Soc. 111, 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. 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. 111, and a minimum of 6 hours of upper division courses. No social work courses may be counted on the minor.

Lower Division Courses

111. Introductory Sociology. (3). Human group life, man's adjustment in groups, the characteristics of various groups, the processes of social organization and social change.

210. Sociology of Childhood. (2). Group influences upon the child in contemporary American culture and their implications for society. Prerequisite: Soc. 111.

213. Sociology of Aging. (2). Social aspects of an aging population, including extent of social participation and various community programs for the aging. Prerequisite: Soc. 111.
222. Problems of American Society. (3). The analysis of social conditions related to personal and social maladjustment in American Society. Prerequisite: Soc. 111.

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. 111.

Upper Division Courses

310. Sociological Statistics. (3). Statistical applications to sociological problems. Parametric measures including significance of differences and correlation. Nonparametric measures such as binomial expansion and chi-square. Prerequisite: Soc. 111.

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. 111.

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. 111.

320. Social Behavior and Control. (3). The meaning of social control, the means of social control, social institutions as agents of social control, propaganda, public opinion, and mass media of communication. Prerequisite: Soc. 111.

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. 111.

322. Deviant Behavior. (3). The structure, dynamics, and etiology of those behavior system 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. 111.

323. Sociology of Law. (2). The study of law and legal institutions within their social context. Prerequisite: Soc. 111.

326. Social Foundations of Political Behavior. (3). Social and cultural factors in the determination of political behavior. The analysis of political influence in terms of informal social contact, local leadership and the mass media. Prerequisite: Soc. 111.

330. Social Stratification. (2). An analysis of status, class, and caste in various societies, especially American society. The relationship of stratification to the various social institutions. Prerequisite: Soc. 111.


333. Rural Sociology. (3). The sociology of rural life—its social groups, institutions, and social relations. Prerequisite: Soc. 111.

334. Urban Sociology. (3). Urban population, urban organization, urban institutions, and programs of city planning. Prerequisite: Soc. 111.

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. 111.
338. Medical Sociology. (2). 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. 111.


340. Criminology. (2). The extent and nature of criminal behavior and societal reactions to it. Prerequisite: Soc. 111.

341. Contemporary Corrections. (2). Historical and contemporary programs for the treatment of offenders, viewed as societal reactions to criminal behavior. Prerequisite: Soc. 339 or 340.

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. Sociology of Small Groups. (2). Patterns of interaction in small groups, including leadership, decision making, formal and informal structures, morale and the function of organization. Prerequisite: Soc. 111.

445. History of Social Thought. (3). Social theory from ancient to modern times. Prerequisite: 8 hours of sociology.

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. (1 to 3). Prerequisite: 12 hours of sociology and department consent. May be repeated for credit not to exceed a total of 6 hours.

486. Sociology of Knowledge. (3). Social and cultural influences on the development of ideas, ideologies and empirical knowledge. The formation of the scientific tradition. The status and role of the intellectual in societies. Prerequisite: 8 hours of sociology.

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 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 and department consent.

526. Intergroup Relations. (2). Relations between various types of groups, especially ethnic and religious. Review of relevant research. Prerequisite: Soc. 226 and department consent.

534. Seminar in Urban Sociology. (1 to 3). Studies of Wichita with application to general theories of urban sociology. Prerequisite: Soc. 334 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.

545. Advanced Reading in Sociological Theory. (3). A careful and critical evaluation of recent systematic writings in the field. Prerequisite: Soc. 445 or 446 and department consent.

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 and department consent.

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 at least 30 hours consisting of the following: S. W. 214-215, 311-312, 421-422, Soc. 222 and 315, Psych. 444 and 3 additional hours selected from the following: Econ. 221, Pol. Sci. 121 or 219, 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. 111.

* Prerequisite may be waived by department consent.

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. (3-3). 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.

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 343, 344, 359, 421, 444, 445, 453. 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.


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 method. 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.)

320. **Cinematography.** (3). Theory and technique of motion picture making. Use of motion picture camera with emphasis on documentary film concepts.

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.

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 license.

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.

560. Seminars in Speech. (2-3). Special seminars designed to treat problems in: (a) public address, (b) drama, (c) radio-television or (d) speech education. May be repeated for credit.

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

Undergraduate Objectives

The College of Business Administration has as its primary objective the training 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 undergraduate objectives of the College of Business Administration are, then:

(1) To provide the student with an 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 instill in the student the habit of original and orderly thinking.

(3) To equip the student with the fundamental business skills and to develop his understanding of the business process.

(4) To train the student to make valid business decisions and to work with people 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.

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, Economics and Secretarial Training.

Graduate Programs

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 is charged with the responsibility of adding to the total body of knowledge about business administration and economics. Further, the College serves the community and state by providing continuing educational programs and other specialized services. Many of these programs are coordinated by the Center for Management Development in the College of Business Administration. In addition, the Center publishes six issues of the Business Journal each year. The Journal is used to report a variety of information to five thousand readers in this region.

REGULATIONS

ADMISSION

Entering freshmen interested in business administration are admitted to the University College and must meet the general entrance requirements of the University, see page 87. The program of high school preparation recommended for students entering the University College is given on page 88.

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 suspended from the College of Business Administration if he fails to meet either of the requirements of his probationary status. When suspended, 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.

**REPETITION OF COURSES**

Students enrolled in the College of Business Administration may *not* repeat courses in which a “D” grade is received, except for audit. The rule shall not apply if a grade of “C or better” is required as a prerequisite for a sequence course. Secretarial students may repeat “D” hours in Sec. Tr. 231 or 234 upon consent of the adviser.

**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.

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.
BACHELOR OF BUSINESS ADMINISTRATION DEGREE

Required courses for the degree of Bachelor of Business Administration are:

Course                      Hrs.
Math. 121, 122, Discrete Mathematics *                       6
Acctg. 213, Introductory Accounting                               3
Acctg. 235-236, Cost I & II or Acctg. 274, Managerial Accounting      5
Eco. 221, 222, Principles of Economics I & II                       6
Eco. 238, Introductory Business Statistics                          3
Eco. 340, Money, Banking and Public Policy                          3
Eco. 421, Production, Price and Distribution Analysis                3
Adm. 261, Administrative Process                                    3
Adm. 265, Seminar A, Communication and Human Relations            2
Adm. 266, Seminar B, Communication and Human Relations            2
Adm. 300, Marketing                                                  3
Adm. 332, Law and Society                                            3
Adm. 343, Finance                                                   3
Adm. 351, Production                                                3

* Students taking an emphasis in the Department of Economics may substitute Math. 141, Algebra and Trigonometry, for Math. 121-122, upon department consent.

Each candidate for the B. B. A. degree shall satisfy the additional specific requirements of one of the following curricular emphases:

ACCOUNTING

Course                      Hrs.
Acctg. 235-236, Cost I and II                                      5
Acctg. 315-316, Intermediate I and II                              6
Acctg. 345, Tax                                                      5
Acctg. 403, Advanced I                                             3
Acctg. 413, Auditing                                               3
Adm. 434, Law and Business                                         5

ADMINISTRATION

Course                      Hrs.
Adm. 370, Quantitative Methods and Research                        4
Adm. 481-482, Administrative Policy I & II                         5
Upper division electives in Administration                         12

Students may elect their hours within Administration to organize a specialized program in marketing, industrial management, finance, or general management.

ECONOMICS

Within the 124 hours required for graduation a minimum of 30 hours in economics is required and a maximum of 41 hours in economics is allowed.

Course                      Hrs.
Eco. 414, Gov't Regulation of Economic Activity                     3
Electives in Economics (12 hours upper division courses, including not more than six hours from among Eco. 305, 307 and 406)             12-23

172  COLLEGE OF BUSINESS ADMINISTRATION
BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION DEGREE

Candidates for the degree of Bachelor of Science in Business Administration shall complete a total of sixty-two semester hours of Liberal Arts courses. The maximum lower division credit from the Department of Secretarial Training shall be 17-20 hours. Required courses for the degree of Bachelor of Science in Business Administration are:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math. 121, 122, Discrete Mathematics *</td>
<td>6</td>
</tr>
<tr>
<td>Acctg. 113 &amp; 114, Elementary Accounting Procedures I &amp; II</td>
<td>6</td>
</tr>
<tr>
<td>Eco. 221, 222, Principles of Economics I &amp; II</td>
<td>6</td>
</tr>
<tr>
<td>Eco. 238, Introductory Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>Eco. 414, Government Regulation of Economic Activity</td>
<td>3</td>
</tr>
<tr>
<td>Adm. 261, Administrative Process</td>
<td>3</td>
</tr>
<tr>
<td>Adm. 265, Seminar A, Communication and Human Relations</td>
<td>2</td>
</tr>
<tr>
<td>Adm. 266, Seminar B, Communication and Human Relations</td>
<td>2</td>
</tr>
<tr>
<td>Adm. 300, Marketing</td>
<td>3</td>
</tr>
<tr>
<td>Adm. 332, Law and Society</td>
<td>3</td>
</tr>
<tr>
<td>Adm. 343, Finance</td>
<td>3</td>
</tr>
<tr>
<td>Adm. 351, Production</td>
<td>3</td>
</tr>
<tr>
<td>Sec. Tr. 133, 138, 237, Typewriting **</td>
<td>6-8</td>
</tr>
<tr>
<td>Sec. Tr. 201, Secretarial Office Machines</td>
<td>1</td>
</tr>
<tr>
<td>Sec. Tr. 202, Calculating Machines</td>
<td>1</td>
</tr>
<tr>
<td>Sec. Tr. 231, 234, 240, Shorthand</td>
<td>4-9</td>
</tr>
<tr>
<td>Sec. Tr. 136, 203, Records Management and Office Procedures</td>
<td>4</td>
</tr>
<tr>
<td>Sec. Tr. 345, Transcription</td>
<td>3</td>
</tr>
<tr>
<td>Sec. Tr. 440, Office Management</td>
<td>2</td>
</tr>
</tbody>
</table>

* Mathematics 141, Algebra and Trigonometry may be substituted upon dept. consent for Math. 121-122.

** Only 6 hours will count toward a degree—Sec. Tr. 138 and Sec. Tr. 237.

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. 113, 114; Adm. 120, or 261, or 332; Sec. Tr. 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 54; 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. No credit is given on this certificate for Sec. Tr. 133. If taken in high school, no credit is given for Sec. Tr. 231; free electives shall be substituted for this course.

COLLEGE OF BUSINESS ADMINISTRATION 173
BUSINESS EDUCATION

Students interested in preparing to teach business subjects in high school enroll the first year in the 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 192.

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 172.

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, 235-236, and 315-316. A minor must include at least 3 upper division hours.

CERTIFICATE OF CERTIFIED PUBLIC ACCOUNTANT

Candidates for the Certified Public Accountant Certificate in Kansas will be admitted to the semiannual examination under any one of these three admission requirements: (1) 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; (2) proof of a college degree and completion of three years of public accounting experience; (3) proof of graduation from high school, or an equivalent education, and completion of three years of public accounting experience. The Certificate of Certified Public Accountant will be awarded to successful candidates in the examination only after completion of two years of public accounting experience for those qualifying under (1) and (3) above. Those qualifying under (2) will receive the Certificate at once. The examination is given in auditing, business law, accounting theory, and accounting practice. It is held each May and November. Questions of the American Institute of Certified Public Accountants’ Uniform Examination are used. A candidate who passes in at least two subjects, and who receives a grade of at least 50 percent in the remaining subject or subjects, is “conditioned” and will be considered to have passed the examination if he successfully completes the other two parts in no more than four of the next six examinations offered by the Board. The examination is administered by the Kansas State Board of Accountancy.

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

113. Elementary Accounting Procedures I. (3). Basic theory and practice of double entry bookkeeping. Study of work sheet preparation, special journals and subsidiary ledgers, accounting for and control of cash, the voucher control system, payroll accounting. Closed to students in University College. No credit allowed for students majoring in accounting, economics, or administration.

114. Elementary Accounting Procedures II. (3). Continuation of Acctg. 113. Study of receivables, inventories, fixed assets and depreciation, elementary income tax survey and a survey of data processing methods and procedures. Includes also a survey of accounting for various business organizations. A practice set will be included. Prerequisite: Acctg. 113.

213. Introductory Accounting. (3). Basic accounting procedures in the complete accounting cycle for service and merchandising companies under the three basic forms of business organization, and an introduction to financial statement analysis. Prerequisite: Sophomore standing or department consent.

235-236.* Cost Accounting I, II. (3-2). The study of accounting for manufacturing operations with emphasis on the accumulation and interpretation of cost data using job order, process, standard, and direct costing techniques. Includes the use of accumulated cost data in cost-volume-profit analysis and profit planning for managerial decision making. Prerequisite: Acctg. 213 with a grade of C or better.


Upper Division Courses

315-316. Intermediate I, II. (3-3). A review of basic procedures and a thorough, in depth, discussion of valuation and recording procedures for balance sheet items and of income determination. Prerequisite: Acctg. 235 or concurrent enrollment.

345. Tax Accounting. (5). Study of federal and state law and regulations relating to personal, business and fiduciary income tax returns. Primary emphasis will be placed on the federal income tax. Assignments will be made in the use of the various tax services and reporters. Prerequisite: Acctg. 213.


413. Auditing Principles. (3). Basic auditing principles, procedures, and reports. Prerequisite: Acctg. 315-316 or Acctg. 315 (5 hours).

423. Advanced II. (3). Accounting for fiduciaries—Statement of affairs, receiverships, statement of realization and liquidation, estates and trusts. Accounting for branches and subsidiaries. Consolidated financial statements, including those involving foreign branches and subsidiaries. Prerequisite: Acctg. 315.

432. Governmental. (2). Principles and practice for state, county, city and subdivisions thereof, as well as general institutional accounting principles for fund accounting systems. Prerequisite: Acctg. 213 or Acctg. 274.
433. Data Processing and Accounting Systems. (3). The study of the format and content of accounting systems reflecting the application of electronic computers to the processing of business data accumulated in an accounting system. Includes basic computer programming. Prerequisite: Acctg. 235-236 or Acctg. 274 or department consent.

453. Accounting Data for Decision Making. (3). Application of accounting data to financial policy decisions, profit planning and control, quantitative analysis of financial data, capital budgeting, price level changes. Emphasis is on the application of the accounting data accumulated. Prerequisite: Acctg. 274 or Acctg. 315, or department consent.

463. C.P.A. Preparation. (3). An integrating course to aid preparation of the candidate for the Uniform C. P. A. Examination in all areas except law and taxes. Prerequisite: 24 hours of accounting.

473. Tax Accounting. (3). See Acctg. 345 for description. Prerequisite: Acctg. 213. Not open to students with credit for Acctg. 345 or its equivalent.

Graduate Courses

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 statement. 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: Acctg. 501 or its equivalent.

503. Directed Studies in Accounting. (1-3). Prerequisite: Department consent.

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 socio-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.


* Accounting 235-236 are also offered as a combined course for 5 hours credit.
ADMINISTRATION

The requirements for an emphasis in Administration on a Bachelor of Business Administration degree are listed on page 172.

Students should attempt to arrange their courses according to the following schedule:

(1) Freshman level: Math. 121-122.
(2) Sophomore level: Acctg. 213, Acctg. 274, Eco. 221-222, Eco. 238, Adm. 261, Adm. 265-266.
(4) Senior level: Adm. 481-482, Eco. 421, and professional electives.

Students transferring from other schools or other programs must be especially careful in starting certain of the course sequences at the earliest possible dates, or graduation may be delayed. These sequences, such as Math. 121-122, Eco. 238, and Adm. 370 require four semesters to complete.

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 Computer Science. (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.

261. Administrative Process. (3). An analysis of the administrator and the environment in which he operates. Prerequisite: Sophomore standing.

265-266. Seminars A-B. Communication and Human Relations. (2-2). Systematic study of human relations theories and concepts, communication theory and research, with functional training in the communication skills. 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: Adm. 261 or concurrent enrollment in 261 or department consent.

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.

343. Finance. (3). Corporate organization, types of securities, obtaining short and long term capital. Includes financial planning and control, forecasting, and budgeting. Prerequisite: Acctg. 274 or Acctg. 235-236, or department consent.
351. Production. (3). The concepts and procedures involved in the production function. Prerequisite: Eco. 238 or department consent.

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 management's direction and use of these methods. Prerequisite: Eco. 238 or department consent.

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: Adm. 370.

403. Marketing Analysis. (3). The application of analytical techniques to product design and development, demand analysis, sales forecasting, pricing, and costs. Includes data sources and research procedures. Prerequisite: Adm. 300 or department consent.

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.

405. Consumer Behavior. (3). Study of a variety of concepts in the behavioral sciences related to specific topics in consumer behavior, e.g., mass communications, reference groups, and sociological, psychological and economic aspects of consumer behavior. Prerequisite: Adm. 300.

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.


434. 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. Prerequisite: Adm. 332.

441. Investments. (3). Industrial securities and government bonds, the work of investment banking houses, the elements of investment. Prerequisite: Adm. 343.

442. Financial Management. (3). The problems and operations for which the financial officer is responsible, emphasizing controversial aspects of financial analysis. Prerequisite: Adm. 343, and Acctg. 274 or 8 hours of accounting, or department consent.

443. Management of Financial Institutions. (3). Consideration of the management and operation of financial institutions, including commercial banks, savings and loan institutions, and consumer credit companies. Covers problems and policies regarding liquidity, reserves, earning assets, loans, income, and expense. Prerequisite: Eco. 340, Adm. 343, or department consent.

455. Materials Management. (3). A consideration of the factors of procurement, inventory control and materials handling in the factory environment. Prerequisite: Adm. 351.

456. Production Analysis. (3). Applications of probability theory and simulation to problems of inventory control, queuing, scheduling, and allocation. Prerequisite: Adm. 351 and Adm. 370.


464. Labor Relations. (3). Designed to present the philosophy underlying labor legislation, and the function of collective bargaining in labor-management relationships.

467. Organizational Behavior. (3). Seminar in organizational theory and methods of human organization research. Prerequisite: Adm. 261 or Adm. 266.


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: Adm. 300, 343, and 351. (Adm. 481-482 is offered as a combined course for 5 hours credit.)

490. Seminar in Selected Topics. (1-5).

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.

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.


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.

543. Monetary Management Techniques. (3). The history, development, theory, foreign monetary practices, and political aspects. Prerequisite: Adm. 541 or consent.

545. Security Analysis. (3). Analysis and valuation of investment securities issued by corporations and governmental agencies. Prerequisite: Adm. 541 or consent.


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. Prerequisite: 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. (3). 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.

571. Quantitative Decision Theory. (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. Design and Analysis of Research. (3). Topics are approached in parameters affecting the design and research. Included are: sampling theory and techniques; instrument design; measurement theory; data collection procedures; hypothesis construction; and use of multivariate statistical procedures. Prerequisite: 751 or consent.

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.


590. Seminar in Special Topics. (1-3). May be repeated by consent.

591. Directed Studies. (1-4). Prerequisite: Consent.

595-596. Thesis. (2-2).

ECONOMICS

Lower Division Courses

100. Business, Economics, and Society. (3). Study of basic factors of business and economic change, 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.

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.


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.

238. 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.

307. Economic History of the United States. (3). (History 335) 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.

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.

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.


415. Economics of Transportation. (3). Study of economic characteristics of transportation modes, problems and policies. Prerequisite: Eco. 222.

416. Economics of Air Transportation. (3). Study of economic characteristics of air transportation. Prerequisite: Eco. 222.

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.

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.

424. National Income Analysis. (3). Aggregate economic analysis and examination of policies affecting the level of income and employment. Prerequisite: Eco. 222.

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.

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.

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.


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.
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 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 360.


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.

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. 470.

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.

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.

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.

491. Directed Study. (1 to 3). Individual and group study of various aspects and problems of economics. Repeatable. Prerequisite: Department consent.


Graduate Courses


515. Seminar in Transportation. (3). An intensive analysis of selected characteristics of the transportation industries; contemporary issues and public policy. Prerequisite: Eco. 415. (Repeatable with department consent.)

520. Managerial Economics. (3). A survey of theoretical and analytical tools of economics which are useful in decision making by managers. Prerequisite: Eco. 222.

521. Advanced 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. (Repeatable with department consent.)

522. Advanced Macro-economic Analysis. (3). An intensive analysis of contemporary literature and problems of national income analysis. Prerequisite: Eco. 424. (Repeatable with department consent.)
530. **Analysis of Economic Theory.** (3). An intensive analysis of micro- and macro-economic principles. Prerequisite: Department consent.

531. **Business and Economic Forecasting.** (3). Economic forecasting and its relationship to macro-economic analysis. Prerequisite: Eco. 530 or equivalent.


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 Current Labor Problems.** (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). 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. (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 to 3). Individual and group study of various aspects and problems of economics. Prerequisite: Graduate standing and department consent. (Repeatable with permission of department chairman.)


595. **Thesis Research.** (2).

596. **Thesis.** (2).

**SECRETARIAL TRAINING**

**Major:** No major is offered in the department but courses in secretarial training count on a major for the secretarial emphasis in the College of Business Administration and on the business education major and minor in the College of Education. See page 173 and page 192.

**Minor:** There is no minor offered in the department.

Secretarial training courses are open to students who are enrolled for a minimum of 9 hours in the University. 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 head of the department for consideration with the dean of the college concerned. The facilities available determine the enrollment. The decision as to the avail-
ability of equipment is made by the head of the department and the Dean of the College of Business Administration.

Students are not permitted to audit courses in the Department of Secretarial Training. 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.

Transfer students in shorthand and typewriting who wish to enroll in the College of Business Administration, or in the College of Education for the major or minor in business education, will be classified in accordance with the results of placement tests.

For transfer of credit the courses must be commensurate with those given at Wichita State University. The credit allowed for any course will be no more than the credit permitted for the corresponding course at Wichita State University, and under no circumstances will a transfer student be allowed to receive total hours in secretarial training greater than Wichita State University permits.

Lower Division Courses

133. Beginning Typewriting. (2). 3R. Correct fingering and mechanical operation of a typewriter; 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 assigning equipment, preference is given to students specializing in business or pursuing a teacher-training program.

136. Records Management. (2). All basic filing systems. Prerequisite: Sec. Tr. 133, or one year high-school typing, or department consent. Can not have credit for both Sec. Tr. 233 and 136.

138. Advanced Typewriting. (3). Stress is placed on correct letter forms, tabulation, manuscript forms, typewriting problems, etc., typed at a high speed accurately. Prerequisite: Sec. Tr. 133 or one year of high-school typing, or department consent.

F138a-S138b. Advanced Typewriting. (2-1). 2L. Class meets one double period for a year. Prerequisite: Sec. Tr. 133, or one unit of high-school typewriting, or department consent.

201. Secretarial Office Machines. (1). 3L. Designed to familiarize students with office machines, including transcribing machines, electric typewriters, and other secretarial office appliances. Some part-time office experience. Prerequisite: Sec. Tr. 237, or department consent.

202. Calculating Machines. (1). 3L. Designed to familiarize students with adding machines, rotary-driven calculators, printing calculators, and key punch machines. Prerequisite: Department consent.

203. Office Procedures and Organization. (2). A study of the various secretarial procedures in a modern office. Prerequisite: Sec. Tr. 234 or 234b and sophomore standing, or department consent. Can not have credit for both Sec. Tr. 233 and 203.

231. Elementary Shorthand. (3). 5RCL. Theory of Gregg shorthand. No credit given to student with one unit of high-school shorthand. Prerequisite: Sec. Tr. 133 or concurrent enrollment, or one unit of high-school typewriting, or department consent.
F231a-S231b. Elementary Shorthand. (2-2). 2½L. Two meetings of one and one-half periods each, meeting each week for a year. No credit given to student with one unit of high-school shorthand. Prerequisite: Sec. Tr. 133, one unit of high-school typewriting, or department consent.

234. Advanced Shorthand. (1 or 3). 2L or 3R; 2L. Review of Gregg theory. Emphasis on advanced dictation and maileable transcripts. Credit allocated on basis of placement tests for admission. Prerequisite: Sec. Tr. 231 with a grade of C or better, or department consent.

F234a-S234b. Advanced Shorthand. (2-2). 2½L. Two meetings each week of one and one-half periods each, meeting each week for a year. Closed to those with credit in Sec. Tr. 232 or 232ab. Prerequisite: Sec. Tr. 231 or 231b with a grade of C or better, or department consent.

237. Technical Typewriting. (3). The most recent letter forms used in business difficult tabulating projects, legal typewriting, advanced typewriting problems timed, etc. Emphasis is placed on accuracy at a high rate of speed to meet office standards. Prerequisite: Sec. Tr. 138 or 138b, or two units secretarial training in high school, or department consent.

F237a-S237b. Technical Typewriting. (1-2). 2L. One meeting of two periods each week for a year. Prerequisite: Sec. Tr. 138 or 138b, or department consent.

240. Technical Shorthand. (3). 3R; 1L. Advanced dictation. Emphasis on technical vocabularies and office practices. Prerequisite: Sec. Tr. 234 or 234b with a grade of C or better, and Sec. Tr. 237, or 237b, and 36 hours and 72 grade points, or department consent.

248. Written Business Communications. (3). Principles and techniques of effective written business communication. Prerequisite: English 111 and department consent.

* Duplicate credit will not be given for -a and -b courses of the same number.

Upper Division Courses

300. Office Practice. (3). 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 Sec. Tr. 237.

345. Transcription. (3). 2R; 2L. Emphasis on transcribing advanced shorthand notes with speed, accuracy, and correct form. Prerequisite: Sec. Tr. 240 with a grade of C or better, or department consent.

440. Office Management. (2). Problems of office organization and management from the supervisory point of view; use of manuals; distribution of authority and responsibility; hiring, training, and promoting employees; quality and quantity of efficiency. Prerequisite: 15 hours of accounting and administration.

460. Directed Studies. (1-5).
The College of Education

LEONARD M. CHAFFEE, Ph. D., Dean

The principal purpose of the College of Education is to provide pre-service programs for elementary and secondary teachers. There are other curricular patterns available within the college, but these two are paramount in importance. In addition to minimum curricula for certification as teachers in many teaching fields there are offered programs in educational administration, special education, and in student personnel. These latter, however, are intended essentially to serve in continuing the professional preparation of classroom teachers.

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. They are arranged to permit the development of (a) understandings 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. These are competencies expected of effective teachers.

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 Department of Education 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 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 and School Counselors. (For specific graduate programs, see the Graduate Bulletin.)

COLLEGE OF EDUCATION
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. It is possible to comply with all of the subject and field requirements recognized in the certificate regulations except that only selected emphases in the field of Special Education are possible.

REQUIREMENTS

ADMISSION

Candidates for admission to the College of Education must have met the general entrance requirements of the University, see page 87, 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.

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 catalog.

All prospective 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), (III), and (IV) below; and must fulfill the teaching specialty emphases of two programs 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.
A student enrolled in the College of Education must maintain a 2.000 grade average. A student whose grade average falls below a 2.000 will be placed on probation and is subject to University probation and suspension regulations. 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.

(1) The following general program is required of all teacher candidates.

**REQUIREMENT 1**

**Mathematics and Natural Sciences** .......................... 12 semester hours

A minimum of four hours must be a laboratory science. Must include courses from two of the three areas of natural science, physical science, and mathematics. Elementary Education majors are required to take Math. 373 and Math. 374 in partial fulfillment of this requirement.

**REQUIREMENT 2**

**Communications** ........................................ 8 semester hours

(a) English 111, 211, 225, 331, 312, 313, 314, 315 (6 hrs.).
(b) Speech 111 (2 hrs.).

**REQUIREMENT 3**

**Humanities** ............................................... 12 semester hours

(a) Literature (Eng. or Foreign) (6 hrs.)
(b) Options (2 divisions 6 hrs.):
   (1) Hist. 101, 102, 103, 113, 114, etc.
   (2) Art 101, 102, 303, 305, 401, 461; Music 113, 114, 161, 331, 332.
   (3) Philosophy all courses; Religion 125, 130, 230, 240, 260, 333, 336, 337, 340, 360, 446.
   (4) Humanities 102.
   (5) American Civilization.

**REQUIREMENT 4**

**Social Science** .......................................... 12 semester hours

(Courses must be taken in at least 3 of the 5 divisions. Psy. 111 is required.)

(a) Psychology 111, 112, 246.
(b) Econ. 221, 222; all others after first course.
(c) Pol. Science 100, 121, 211.
(d) Sociology 111; all others after first course.
(e) Anthropology 124; all others after first course.
   History may be added for 3 hrs. credit.

**REQUIREMENT 5**

**Electives** .................................................. 6 semester hours

**REQUIREMENT 6**

**Physical Activities** ................................. 4 semester hours

(a) Air, Military Sci. 113, 114, 223, 224.
(c) 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.

**COLLEGE OF EDUCATION**

189
(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.
(C) Complete the following sequence in professional education:

GROUP 1

Educational Psychology ............................................. 6 semester hours
Ed. Psych. 333 and 433. *

GROUP 2

Foundations of Education ........................................... 6 semester hours
Fd. Ed. 232 and 428. *

GROUP 3

Secondary Education .................................................. 11 semester hours
Sec. Ed. 442* and 447. *

(D) Electives to complete the minimum program of 124 hours.
(See p. 54 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 Group (II), above.

GROUP 1

The American Culture .................................................. 40 semester hours
( Including 10 upper division hours.)

English 251, 252, 315; Speech 221 and 228; History 102; Soc. 111; Art 165, or 303; Pol. Sci. 121; Hist. 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 semester 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.)

(B) See (II) (C) above.

(IV) The following program is required of all who plan to qualify for the degree elementary teaching certificate:

(A) Complete the following sequence in professional education.

GROUP 1

Foundation Courses .................................................... 8 semester hours

GROUP 2

Curriculum and Instruction ......................................... 12 semester hours

* The Student Teaching Semester.
GROUP 3

Student Teaching ........................................... 13 semester hours

Elementary Education majors. Elem. Ed. 447, 448. See courses description for prerequisites.

Logopedics majors. Elem. Ed. 447 (4) semester hours, Elem. Ed. 448 (3) semester hours, may be selected from Log. 417, 440, or 441.

GROUP 4

Special Content (9 hrs., 3 div.)

(a) El. Ed. 216.
(b) Geography 125, 201, 210, 302, 342, 360, 382.
(c) Music 251, 252 or equivalent.
(d) PE 225.
(e) Art 241, 242 or equivalent.
(f) Logo. 421.
(g) Independent Study (1-2 hrs.), El. Ed. 322.

Students majoring in Logopedics are not subject to this requirement.

(B) Elect one academic minor (Except those majoring in Logopedics.) See page 194 for minors.

(C) Electives sufficient to complete the minimum program of 124 semester hours. (See page 54 for regulations concerning upper division courses.)

(V) 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 (I) and the professional field requirements of IIC above.* School Psychology requires five years.

(VI) One prerequisite to student teaching which is outlined in the required introductory course is that candidates present evidence of having worked with agencies serving children and youth.

TEACHING FIELDS

Selection of teaching fields for the senior high school must be made with an academic counselor from the College of Education. Most fields require a minimum of 24 hours preparation for teaching. University departments may have other requirements. The teaching field or major should be declared not later than the beginning of the junior year.

The major generally is made up of not fewer than 30 semester hours. (For specific exceptions see mathematics and language; also combined curricula are not limited to this maximum.)

The usual teaching assignment involves a combination of subjects more or less closely related. For this reason intensive study in the combined disciplines described below is offered in lieu of a major. Where a specific curriculum is chosen for major study, the requirements of the College of Liberal Arts in that subject will prevail.

* Candidates for the Bachelor of Music Education degree see p. 241 for general and special requirements.
COMBINED CURRICULA

The first objective of each of these curricula is to prepare the prospective teacher broadly for secondary teaching. At the same time it is desired that each student achieve as nearly as possible the minimum requirements for graduate work in a specified field. In some cases it will be necessary to take an additional one or two courses to reach the latter objective.

All combined majors in secondary education (junior and senior high) which require 50 or more semester hours for completion count as a combined major and minor. Note that they need not complete another minor.

BUSINESS EDUCATION

Major: Teachers of the business subjects in Class A 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.

Required—Accounting 113 and 114; Economics 221 and 222; Administration 261, 300, 332, and 343, or Econ. 340; Secretarial Training 138, 237. In addition, one of the options below must be elected. This major consists of a minimum of 36 hours with at least 9 hours of upper division work.

Option A

Certification to teach business subjects including shorthand: Secretarial Training 231 and 234 or Secretarial Training 234 and 240, Accounting 113 and 114.

Option B

Certification to teach business subjects except shorthand: Accounting 213 (or Accounting 113 and 114), Accounting 235, Accounting 315-316.

A student may major in Business Education and minor in either Accounting or Economics. The requirement for a minor within a field major totals 51 hours. If a student elects a minor in Accounting and option B, he will be required to elect 6 additional hours in the three remaining departments in the College of Business Administration. The business education counselor is to be consulted concerning the acceptability of any transfer course.

Minor: Accounting 113, 114; Economics 221; Secretarial Training 138, 237; and 9 hours from Accounting, Administration, Economics, or Shorthand, of which one course must be upper division.

NATURAL SCIENCES—BIOLOGICAL

Teachers in Class A 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:** Biology 111, 112, 201 and at least 4 hours of upper division Biology; and 5 hours of Chemistry or Physics.

**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.

**SOCIAL STUDIES**

To teach any of the social sciences, 24 hours in the field of social studies are required for certification with a minimum of 6 hours preparation in each specific subject 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; Soc. 111; Anthro. 124 or 202; Psych. 246 or Soc. 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 three options:

*Options*

(A) Hist. 432, 433, 438, 448.
(B) Hist. 331, 333, 431, 437.

**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.
DEPARTMENTAL MAJORS AND MINORS

Departmental Curricula: The various departments of the schools and colleges of the University offer major and minor fields of study. Any one of the curricula that follows is suitable as a supporting minor to the combined fields of study above. Only those marked with an asterisk (*) will be accepted as a major in the College of Education. The specific requirements of the department prevail:

- Accounting
- *American Civilization
- Anthropology
- Art
- *Biology
- *Chemistry
- *Classical Languages
- Economics
- *English Language and Literature
- *French
- Geology
- Geography
- *German
- *History
- Journalism
- *Logopedics
- Mathematics
- Music
- Philosophy
- *Physical Education
- *Physics
- *Political Science
- Psychology
- *Religious Education and Philosophy
- Sociology
- *Spanish
- *Speech

**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.

*** For the Special Education program in School Psychology consult either with the head of the Psychology Department or with the Dean of the College of Education.

**** Religious Education must be combined with Philosophy on minor—no more than 8 hours Religious Ed. will count towards degree.

TEACHERS EDUCATION CURRICULA

Educational Administration and Supervision

Upper Division Courses

434. The Junior High School. (3). Problems of the organization, function and curricular program of the junior high school, with emphasis on the transitional needs of students. (Offered fall only.)

438. The Junior College. (3). A survey of the history and philosophy of the junior college movement in America, with special consideration given to the types of curricula provided, methods of financing, legal control, and administrative organization. Goals of the Junior College and its relationship to other levels of education. (Offered spring only.)

450. Simulation Workshop in Administration. (1-2). Designed for the experienced administrator who desires to improve his present skill and develop some new ones. The workshop focuses on the areas of: Human Relations, Group Dynamics, Decision Making, Administrative Communication, Perception and Staff Morale. Prerequisite: Consent of instructor. (Offered summers.)

460. 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 fall and summer.)
E. A. S. Graduate Courses

501. Introduction to Administration and Supervision. (2). 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.

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. Prerequisite: Master's degree or consent of instructor. (Offered spring and alternate summers.)

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.

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. (Offered fall and summer.)

510. Secondary School Student Activities. (2). The role of Extra-Class activities in secondary school programs. Problems of organizing and administering the program.


523. School Law. (2). General concepts of law, interpretations of statutes and court decisions affecting education, legal responsibilities of school personnel. Kansas school law. (Offered fall and alternate summers.)

524. The School Plant. (2). 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. (Offered spring and alternate summers.)

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. (Offered spring only.)

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.

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. (Offered spring and summer.)

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. (Offered fall and summers.)
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. (Offered alternate summer and fall.)

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. Prerequisites: E. A. S. 460 and consent of the instructor.

546-547-548-549. The Internship. (2-3-4-5). Administrative assignment in the public schools. Prerequisite: Master's degree, 12 hours in school administration, and 3.25 graduate grade average. (Arranged on individual basis any course may be repeated.)

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.)

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. (Offered summers when sufficient demand exists.)


AEROSPACE STUDIES

AIR FORCE ROTC

The purpose of Air Force ROTC is to select and train qualified university male 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 freshmen and sophomores and the Professional Officer Course (POC) for qualified students with two years of academic work remaining.

(1) General Military Course: The GMC consists of one lecture hour and one corps training hour per week. Completion of a medical history form is required for each enrollee to assist in determining eligibility for AFROTC membership.
(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 Officer 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 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 $150.00 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 $130.00 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 exceed $1200.00.

**FINANCIAL ASSISTANCE PROGRAM**

Students enrolled in the four-year program are eligible to compete for scholarships awarded to well qualified cadets. This program provides full tuition, laboratory expenses, incidental fees,
book allowances, and $50.00 per month in non-taxable pay. Applicants are selected on the basis of scores on a qualifying test, quality of academic work, and a rating by an interview board. Scholarships are now awarded at all levels of ROTC work including freshmen, sophomores, juniors, and seniors. 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. 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 and 114. World Military Systems. (1-1). IR, IR/L. The first year General Military Course (GMC) is a brief study of war: its definition of courses, its nature, and the principles of war. Factors of national power and instruments that nations use to pursue their objectives are related to intensities of conflict. The missions and relationships of the three military services within the Department of Defense are reviewed. 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 and 224. World Military Systems. (1-1). IR, IR/L. The second year General Military Course (GMC) is a continued study of the missions and relationships of specific military forces. The sources of conflict in the world today and an assessment of the progress and the prospects for peace are studied. 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: AS 113 and 114.

Upper Division Courses

353 and 354. Growth and Development of Aerospace Power. (3-3). 3R, 1R/L. First year Professional Officer Course (POC) is a seminar study of the development of airpower, aerospace power today, and the future of manned aircraft. The second semester provides an introduction to the U. S. space program, the spatial environment, space orbits and trajectories, space vehicle systems, space operations, and future developments in space.

453 and 454. The Professional Officer. (3-3). 3R, 1R/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; professional responsibilities; the military justice system; leadership theory, functions and practices; management principles and functions; and problem solving procedures.

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.
ART EDUCATION

Art Minor for Students in the College of Education

Students will complete 18 art hours. These hours will be distributed as follows: 165, 241, 243, one elected studio course and 6 hours of art history elected from: 101, 102, 460, 461.

Lower Division Courses

241. Art Education in the Elementary School. (3). Study of the child's creative and mental growth and development through the use of two and three dimensional materials; the development of an arts program for the elementary school.

243. 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. (3). 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.

407f. Directed Reading in Art. (3). Supervised study and research in education. Weekly consultation and reports. Prerequisite: Consent of instructor.

442. Art Education in Secondary School. (4). Study of the junior-senior high school students' continuing and developing needs for creative expression and understanding of art as a maturing individual. Included is observation in public school art education classes.

EDUCATIONAL PSYCHOLOGY

Lower Division Courses

244. 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.º 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. (2). 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. Psy. 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.
421. Mental Hygiene. (3). Principles of mental hygiene in relationship to
the development of wholesome personality. There are examined the inter
relationships of teacher, school, home, and community as they affect mental
health. Prerequisite: Ed. Psych. 233 or 333.

Student Teaching.

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.

Graduate Courses

500. Introduction to Graduate Study in Education. (3). Teaching as a field
of graduate study with emphasis on the nature and methods of inquiry.

511. Evaluating Pupil Progress. (3). Educational evaluation in the cognitive,
affective, and psycho-motor domains; statistical analysis of test results. Pre-
requisite: Ed. Psych. 500 or consent of instructor.

519. Growth and Development II. (3). Bio-social foundation of human growth
and development related to the development of behavior from childhood
to maturity. Prerequisite: Ed. Psych. 233 or 333 or consent.

520. Learning Theory for Teachers. (3). A study of the major learning
theories and their effectiveness and application in the classroom. Individual
differences in learning. Prerequisite: Ed. Psych. 233 or 333 or equivalent,
Ed. Psych. 500, or consent of instructor.

521. Advanced Educational Psychology. (3). Review of recent research in
the areas of personality and social factors in education.

530. Educating the Adolescent. (3). Relation of the problem of adolescence
to development of the secondary curriculum. Prerequisite: 6 hours of Ed.
Psych.

550. Special Problems in Educational Psychology. (1-4). Directed reading
and research under supervision of a graduate instructor. Prerequisite: Ap-
proval of the department.

559. Inferential Statistics. (3). Major statistical techniques for analyzing data
and drawing inferences about a population from study of a sample. Required
of students enrolled in M. A. or 32 s. h. M. Ed. programs. Prerequisite: Ed.
Psych. 500 or consent of instructor.

560. Seminar on Research Problems. (1). Development and presentation of
research proposals. Required of students enrolled in M. A. or 32 s. h. M. Ed.
programs. Prerequisite or corequisite, Ed. Psych. 559.

562. Presentation of Research. (1-2). A project submitted in thesis manu-
script form. Prerequisite: Ed. Psych. 560. May be repeated for a maximum
total of 2 hours credit.

575-576. Master's Thesis. (2-2). Required for a master of arts degree. Pre-

* Prerequisites may be waived for equivalent experience by department consent.
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.


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.

322. Individual Studies in Education. (1-2).

344. 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 practices, materials and evaluation technique. 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.

406. Social Studies in the Elementary School. (3). Objectives, methods of teaching, equipment and resources, and evaluation and measurement in the social studies in the elementary school. The unit method of construction is stressed.


408. 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.

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 instructor.

447. * 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. Logopedics majors
will be assigned to a self-contained classroom for the first nine weeks and then assigned by the Department of Logopedics for the second nine weeks of the semester. Prerequisite: Senior Standing. Ed. Ed. 232, Ed. Psy. 233, El. Ed. 320, 321, 344, and 406.

The student teaching semester is required of all students who are working toward a degree certificate in elementary education. 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. Such deviations must meet the approval of the Elementary Education Department.

Applications 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).

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) Other Areas. Course designed for elementary school teachers. Only one pre-selected area will be emphasized during a semester. (Prerequisite: Teacher certification.) 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.

544. Multi-Media Teaching of Reading. (3). Emphasis upon multi-level, multi-media materials for teaching reading in the intermediate grades. Prerequisite: El. Ed. 405 or equivalent.

546. Developmental Reading in the Primary Grades. (3). Emphasis upon the use of materials for teaching developmental reading in the primary grades. Prerequisite: El. Ed. 320 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.

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.
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, isometric, and oblique drawing, with emphasis placed on auxiliary views, sectional views, 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 placed on rotations and visualization through logic. Prerequisite: Ind. Ed. 120.

124. Woodwork I. (3). 2R; 3L. Fundamental use and care of handtools; building of projects involving basic woodwork processes; development of accepted shop practices; application of brush and wipe-on finishes.

125. Woodwork II. (3). 2R; 3L. Continuation of Woodwork I with emphasis placed on the use and care of woodworking machines and the application of spray finishes. Prerequisite: Ind. Ed. 124.
135. Metalwork I. (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.


156. Auto Mech. II. (3). 2R; 3L. Practical application of theories studied in the first semester. Shop work includes tune-up, valve grinding, transmissions, front end, etc. Prerequisite: Ind. Ed. 155.

180. Electricity I. (3). 2R; 3L. A study of basic concepts of direct current electricity with an understanding of Kirchoff's and Ohm's laws.

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-resonant circuits. Prerequisite: Ind. Ed. 180.

225. Drafting III. (3). 2R; 3L. Development of working drawings in aircraft, structural, architectural, electrical and map drafting. Prerequisite: Ind. Ed. 121.

236. Metalwork II. (3). 2R; 3L. Study of materials used by the sheetmetal industry; methods of layout, forming, fastening, finishing; use of hand tools and machines. Prerequisite: Ind. Ed. 135.

237. Metalwork III. (3). 2R; 3L. Study of mechanical and physical properties of metals and how these characteristics are affected by heat; the working of metals while hot; forging, heat treating, founding and welding. Prerequisite: Ind. Ed. 135.

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 study of the fundamental characteristics of vacuum tubes and semiconductors and an analysis of their operation. Prerequisite: Ind. Ed. 181.

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. Further application of the fundamentals of woodwork and design in construction of advanced projects; a study of wood technology and how it affects construction. Prerequisite: Ind. Ed. 125.

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. 325.

327. Drafting IV. (3). 2R; 3L. Advanced study for drafting students with emphasis placed on problems growing from the needs of the student. Prerequisite: Ind. Ed. 225.

204 COLLEGE OF EDUCATION
350. Metalwork IV. (3). 2R; 3L. Fundamentals of benchwork and basic operations on lathes, mills, grinders, shapers, and drills. Prerequisite: Ind. Ed. 135.

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.

362. Plastics II. (3). 2R; 3L. Advanced problems in production techniques; compression and injection molding; recent developments and experimental work. Prerequisite: Ind. Ed. 261.

363. Plastics IV. (3). 2R; 3L. Advanced problems in production techniques; extrusion, rotational casting and foaming. Recent developments and experimental work. Prerequisite: Ind. Ed. 362.

364. Electronics III. (3). 2R; 3L. An introduction to nonsinusoidal wave-shapes; multivibrators, blocking and shock-excited oscillators, wave shaping circuits; limiters, clamps and counters; sweep generator circuits; special power supply considerations; circuit system applications; television transmitters and receivers; pulse circuit transistor applications. Prerequisite: Ind. Ed. 283.

365. 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.

Prerequisites may be waived for equivalent experience by department consent.

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 and Junior High School Librarian: A valid certificate for teaching in the elementary or junior high school and a minimum of 15 semester hours of library science and audio-visual courses.

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.

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 relationship 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

Major: A 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, 441 and 455 are required of those majoring in audiology while 440 is required of 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. Students wishing to prepare themselves to be public school speech or hearing clinicians normally take the program in the College of Education. Those wishing to prepare themselves 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, 417, 431 and 441.


The major with emphasis in audiology consists of 30 hours and includes the following courses:


Optional—Logopedics 132, 324, 326 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, 433, 434, 437, 438, 439 and 440. Logopedics 441 is required but may be taken in the first semester of graduate work.

**Teacher Education:** By arrangement with the Department of Education, any of these emphases in Logopedics may be combined in a dual major with Elementary Education. The education requirements are given on page 188.

The logopedics undergraduate 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 without charge.

---

**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). 1R; 6D. 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 development 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; 6L. 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 of 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.

---

**COLLEGE OF EDUCATION**

207
326. Application of Techniques. (2). 1R; 6L. Supervised application of techniques to cases with simpler problems. Observation of more difficult communicative disorders. Introduction to techniques used with stutters and aphasics. Prerequisite: Logopedics 324 with a grade of C or better, concurrent enrollment in Logopedics 324, or department consent.

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, or department consent.

417. Supervised Practicum in Speech Pathology. (3). 1R; 9L. 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.

442. Infancy: Pre- and Post-Natal Behavior. (2). Development of behavior from the ontogenetic viewpoint in both subhuman and human infants. Prerequisite: Department consent.

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). Groundwork 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; 3D. 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. (2). Individual study and research on specific problems.

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. Prerequisite: Department consent.

507. Early Speech Development. (2). Mastery during infancy of elementary speech sounds, patterning of sounds, appearance of words, sentences and meanings. Prerequisite: Department consent.

524. Aphasia. (3). 3R; 3D. 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; 3D. 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.

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). 1R; 9L. 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 hearings 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, function 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. (Offered in alternate years.)

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 for 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.

Army ROTC, originating from the National Defense Act of 1916, has been a part of WSU for 46 years. In 1918 a detachment was organized at the Fairmount College of Liberal Arts and Sciences.
Only for a brief period in World War II has the program been inactive. A new ROTC program was introduced with the adoption by Congress of the 1964 ROTC Vitalization Act. This act enables WSU to continue the Senior Division ROTC Program guided by active duty officers and non-commissioned officers. Under the provisions of this act, WSU offers undergraduate students two elective ROTC programs. They are designated as the four-year and the 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. Completion of two semesters is required for academic credit. Enrollment in the basic course does not obligate a student to enter the advanced course.

The advanced course requires juniors to attend one conference hour in the fall per week and four conference hours per week in the spring; seniors attend four hours per week in the fall and one conference hour 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 $260, plus 6¢ a mile for travel to and from summer camp. Total pay and 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. Extra-curricular 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 $90 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 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. Five students must enroll in this program before it can become operational.

Lower Division Courses

F113 & 114. First Year Basic. (1-1). 1C; 1 Leadership Laboratory. Organization of the Army and ROTC; Individual Weapons and Marksmanship; United States Army and National Security. Completion of two semesters is required in order to receive the academic credit.

F223 & S224. Second Year Basic. (1-1). 2C; 1 Leadership Laboratory. Cadet Noncommissioned Officer Training; Map and Aerial Photograph Reading; Operations and Basic Tactics; American Military History. Prerequisite for 223: MS 113 and 114.

Upper Division Courses

F333 & S334. First Year Advanced. (1-4). 1C-4C; 1 Leadership Laboratory. Branches of the Army; Military Teaching Principles; Leadership; Small Unit Tactics and Communications. Prerequisite for 333: MS 223 and 224.

F443 & S444. Second Year Advanced. (4-1). 4C-IC; 1 Leadership Laboratory. Operations; Logistics; Army Administration; Military Law; Role of the United States in World Affairs; Service Orientation. Prerequisite for 443: MS 333 and 334.

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.


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. (May be selected for minor.)

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. (May be selected for minor.)
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 materials 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 elementary schools. Prerequisite: 204.

305. Advanced Techniques in Elementary School Music (for minors). (2). Consideration of methods, materials for teaching music in the elementary classroom with special emphasis on correlation with elementary curriculum. For elementary education majors minoring in music. Prerequisite: Music 252 or 201.

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. Prerequisite: Music 202 and 302.


(Requirements for admission to the student teaching semester.)

Effective Fall Semester, 1968.

Senior standing.
Over-all grade average 2.25.
Major field grade average 2.50.
English 111 with C or better or equivalent.
Speech 111 with C or better.
Ed. Ed. 232.
Ed. Psy. 333.
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).
Secondary vocal 203, 303.
Secondary instrumental 204, 304 (plus Methods 135 through 140).
Recommendation of department.
Application for student teacher semester must be on file with the music education supervisor.
Piano proficiency passed.

430. Pedagogy of Theory. (2). (See Music 430.)
432. Teaching of Music Literature. (2). (See Music 432.)

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.

531. Developing the Child's Musical Understanding. (3).

532. Band Rehearsal Laboratory. (2).

535. Seminar 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.)

552. Introduction to Graduate Study. (3). See Music 552.)

554. Research Seminar in Music Education. (3). (See Music 554.)


576. Thesis. (2 or 3).

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 followed 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, 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 arrangement. Prerequisite: 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 director and physician from the following activities: Archery, badminton, bowling, recreation games, tennis, golf, swimming, life-saving, fencing, gymnastics, tumbling, self-testing activities, body mechanics and basic skills, track, basketball, field hockey, soccer, speedball, soft ball, volleyball, hiking and outing activities, folk dance, modern dance, theatre dance, social dance, folk dance and square dance, 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 Class A 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, 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.

**Options**

(A) (Women) P. E. 202, 203W, 204W, 324, 350W, 351W, 400, and 442P.

(B) (Men) P. E. 204M, 218M, 311M, 312M, 331M, 335, 336, and 337. 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:** Required—P. E. 115, 329, and 330. In addition one of the following options must be completed.

**Options**

(A) (Women) P. E. 117, 225, 400, and 9 or 10 hours of electives.

(B) (Men) P. E. 204M, 218M, 225, 311M, 312M, 331M, and 3 hours of electives. Men Physical Education minors must pass a
Sports Skills Proficiency Examination before being permitted to enroll in P. E. 311M or P. E. 312M.

(C) (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.

(D) (Women—Dance) P. E. 212, 223, 324, 412, 424 and 446, Skill courses: Folk Dance; Elementary, Intermediate, and Advanced Modern Dance; Social Dance; Theatre Dance; or equivalents to be approved by the department.

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**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>111</td>
<td>Introduction to Physical Education</td>
<td>(2)</td>
<td>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.</td>
</tr>
<tr>
<td>115</td>
<td>Personal and Community Health</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>First Aid</td>
<td>(2)</td>
<td>Standard and/or advanced first aid with certification by the American Red Cross.</td>
</tr>
<tr>
<td>202</td>
<td>Camp Leadership</td>
<td>(2)</td>
<td>3R. General camping standards and skills.</td>
</tr>
<tr>
<td>203W</td>
<td>Officiating Techniques for Women's Sports</td>
<td>(3)</td>
<td>Includes the study of the philosophies and standards of D. G. W. S., officiating techniques, basic skills, testing procedures, and laboratory work.</td>
</tr>
<tr>
<td>204M</td>
<td>Gymnastics</td>
<td>(2)</td>
<td>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.</td>
</tr>
<tr>
<td>204W</td>
<td>Body Mechanics and Gymnastics</td>
<td>(3)</td>
<td>2R; 3L. Principles of body mechanics and application to gymnastics including free exercise, tumbling, apparatus, and trampoline.</td>
</tr>
<tr>
<td>210</td>
<td>Safety Education</td>
<td>(2)</td>
<td>A general survey of the field of safety education. Emphasis on the selection and organization of instructional materials for classroom use.</td>
</tr>
<tr>
<td>212</td>
<td>Folk and Square Dance</td>
<td>(2)</td>
<td>1R; 2L. Materials from different countries and teaching methods for high school and recreational groups. Prerequisite: Sophomore standing or department consent.</td>
</tr>
<tr>
<td>220M</td>
<td>Rules and Mechanics of Officiating</td>
<td>(2)</td>
<td>2R; 1L. Theory, rules, and mechanics of officiating major sports common to the high school and college athletic program.</td>
</tr>
<tr>
<td>223</td>
<td>Introduction to Dance</td>
<td>(2)</td>
<td>2R; 2L. History, philosophy, and basic background work in the field of dance. Prerequisite: One activity course in modern dance.</td>
</tr>
</tbody>
</table>
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 and one semester of folk 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: 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.

331M. 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. 118 or concurrent enrollment.

337M. Theory and Organization of Track and Field Athletics. (2). Selection of personnel, conditioning, training, and techniques. Prerequisite: Phys. Ed. 118 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: completion of skill requirement in each of the sports as established by the department. Laboratory experience.

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: completion of skill requirement in each of the sports as established by the department. Laboratory experience.
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.


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: P. E. 212 and 324 or consent of department.

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.


SECONDARY EDUCATION

Upper Division Courses

311 & 312. Home Nursing for Instructors. (2-2). May not apply on secondary education requirements. Methods, procedures, and techniques for teaching home nursing, maternity, and infant care. Prerequisite: Registered Nurse (R. N.), home economics teacher.

   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.


   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.
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 Director of Student Teaching by the middle of the term prior to the year in which the student intends to enroll. In addition, students must obtain approval from the department 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:

Fd. Ed. 428. Social Aspects of the Teaching Process. (2 or 3).
Total—16 semester hours.

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 innovations, (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.) 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. Flight experiences will be an offering at the option of the student.

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.

539. 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.


SOCIAL AND PHILOSOPHICAL 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: Ed. Ed. 232.

426. Comparative Education. (3). Educational 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. (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. 

Educational Anthropology. (3). A course dealing with the basic concepts of anthropology and their application to social science units in elementary and secondary schools. 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. (This course will also be listed as Anthropology 449.)

456. 


459. 

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: Fd. 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 Fd. 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 Fd. Ed.

* Prerequisites may be waived for equivalent experience by department consent.

STUDENT PERSONNEL AND GUIDANCE

Upper Division Courses

423. 

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. Prerequisite: Ed. Psy. 233 or 333, or equivalent.

424. 

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 423. May not be taken concurrently with SPG 525.)

Graduate Courses

503. 

Counseling Theory. (2). A study of selected theories of counseling. Prerequisite: SPG 423 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. Not open to students with credit in Educational Psychology 502.
506. Children of Poverty. (3). A perceptual approach to children and youth whose adjustment problem appears to be related to poverty in the affluent society. Prerequisite: SPG 505 or Educational Psychology 502.

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 423. Recommended: SPG 505 or SPG 506.


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 423, Ed. Psy. 500 or concurrent enrollment, and SPG 520.

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 Guidance. (2). Laboratory approach to the study of group formation, process, and communication as a tool for guidance services. Prerequisite: SPG 423 or concurrent enrollment.

533. Administration of Guidance Services. (2). Administration theory with emphasis for the SPG major on relating theory to the problem of administration of guidance services. Prerequisite: 9 hours SPG including 423.

550. Special Problems in Guidance. (1-3). 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: Ed. Psy. 500 or 561, 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. (1-3). (May be repeated.) Prerequisite: Consent of instructor.

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.

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 523 and 533 and consent.

567. Practicum in Group Guidance and Counseling Methods. (3). Supervised practice in group guidance and group counseling. Prerequisites: SPG 525 and SPG 556. May be repeated for three hours additional credit. The second practicum must be in a different area or have a different focus than the first.


* Prerequisites may be waived for equivalent experience by department consent.
DEPARTMENT OF ART

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.

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 SUSPENSION

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 suspended 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 suspended.

A student on probation will be suspended 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 suspension 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 suspended. 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.

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 must complete the following: (1) A minimum of 81 hours of art distributed as follows: 6 hours in basic art courses, 75 hours in major and related professional areas. Specific requirements are on file
in the Art Office. (2) The student majoring in Art History must complete 36 hours in Art History which must include 101, 102, 463, Art 229, and elect 6 hours of studio work. To complete the requirements the candidate must take a minimum of 14 hours in one of the following three languages: German, French, or Italian; and 27 hours elected from courses in the following areas: Language, History, Philosophy, Psychology, Anthropology, and Literature. Specific course numbers are on file in the Art Office. (3) General requirements for graduation are listed on page 54.

BACHELOR OF ART EDUCATION DEGREE

Secondary Certificate by the State Board of Education

In addition to the scholastic and residence requirements for graduation from this University, candidates for this degree must complete the following: (1) A minimum of 42 hours or art, (2) 32 hours of teacher education to include 20 hours of art education, (3) General education: 53 hours of required courses in Liberal Arts plus 4 hours of physical activities, (4) Admission into the student teaching semester requires a cumulative grade point index of 2.25.

ART MAJOR OR MINOR FOR STUDENTS IN THE COLLEGE OF LIBERAL ARTS AND SCIENCES

STUDIO—MAJOR: Students will complete 39 art hours. These hours will be distributed as follows: 101, 102, and 9 hours elected from art history courses; and 24 hours elected from studio courses.

MINOR: Students will complete 21 art hours. These hours will be distributed as follows: 101, 102, and 15 hours of electives.

ART HISTORY—MAJOR: Students will complete 39 art history hours. These hours will be distributed as follows: 101, 102, 211, 212, 221, 222, 460, 463 and 9 hours elected from other art history offerings including Art 229. In addition the student must elect 6 hours of studio work.

MINOR: Students will complete 21 art history hours. These hours will be distributed as follows: 101, 102, and 15 hours elected from other art history offerings.

ART MINOR FOR STUDENTS IN THE COLLEGE OF EDUCATION

Students will complete 18 art hours. These hours will be distributed as follows: 165, 241, 243, and one elected studio course and 6 hours of art history elected from: 101, 102, 460, 461.

GENERAL REQUIREMENTS

The art courses which will fulfill the core curriculum requirements for graduation are: All Art History courses except 407g and 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.

ART COLLECTIONS OF THE UNIVERSITY

The Department of Art manages three collections of paintings, prints, sculpture, and ceramics. The Art Department Collection includes works by Chagal, Friedlander, Goya, Hayter, Levine, Piza, Summers, Vasarely, van Dyck as well as graduate and undergraduate student work. 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. The University Collection includes a wide range of 20th century American painting.

GRADUATE ART STUDIES

The Graduate School offers a program leading to a Master of Fine Arts or a Master of Arts in Art Education. For information concerning requirements for entrance and curriculum see Art listing in the Graduate School Bulletin.

ART CURRICULUM

OPEN PROGRAM

The following classes are in the Open Program and may be taken without prerequisites.


102. History of World War II. (3). A survey of world art from the 14th century through the mid 19th century.

16. Drawing I. (3). Introduction to the principles of drawing; theory and practice for beginning art students in various drawing media. Work dealing in still life, landscape, and human figure. Problems in composition, projects and sketch books. (Formerly Art 141.)

171. Design I. (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. (Formerly Art 142.)

172. Design II. (3). Introduction to the principles of three-dimensional design. A study of relationships of mass and space using diverse media.

ART EDUCATION

A professional program for students interested in art teaching. A structured program preparing majors to teach and supervise at various educational levels. All majors are encouraged to specialize in either studio or art history offerings.
Requirements—75 hours.
6 hours Open Program (studio).
20 hours Art Education Methods.
6 hours Drawing.
6 hours Painting.
3 hours Printmaking.
9 hours in 3-Dimensional areas.
12 hours Art Electives.
13 hours Education.

Lower Division Courses

241. Art Education in the Elementary School. (3). Study of philosophy, methods, and materials related to the psychological and sensory growth of the elementary age level in developing art knowledge and skills.

243. 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: Art 241 or consent of instructor.

Upper Division Courses

406. Art Curricular and Supervision Method. (4). The construction of an art program of study outline for elementary grades and junior and senior high school; technics in the supervision of an art education program.

407f. Directed Reading in Art. (3). Supervised study and research in art education. Weekly consultation and reports. Prerequisite: Consent of instructor.

442. Art Education in the Secondary School. (3). Examination of philosophy, purpose, curriculum and methods related to the secondary art program. Specific problems pertaining to the student teaching semester are considered.

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, 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—83 hours.
6 hours Open Program (studio).
36 hours Art History.
14 hours Foreign Language.
27 hours Liberal Arts Courses.

Lower Division Courses


102. History of World Art II. (3). A survey of world art from the 14th century through the mid 20th century.

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 Renaissance of Italy. It begins with a systematic study of the Early Renaissance of the 13th century in Siena and Florence. Consideration will also be given to the schools of Venice, Padua Umbria, and Ferrara.

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.

Upper Division Courses

303. American Art. (3). The history of American art from 1700 to the present.


307. Medieval Art I. (3). A study of the art of Europe and Byzantium from the time of Constantine to Charlamagne. 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.

403. Latin American Art. (3). A survey of the arts of Spanish and Portuguese America from 1490 to 1940.

407g. Directed Reading in Art. (3). Supervised study and research in art history. Weekly consultation and reports. Prerequisite: Consent of instructor.

421. Northern Renaissance. (3). Dutch and Flemish painting of the fifteenth and sixteenth centuries. Analysis of the styles of the chief masters from Van Eyck through Bruegel.

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.


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.

STUDIO AREAS

CERAMICS

The ceramics major is exposed to his materials: clays and glazes. Students investigate problems of glaze formulation, firing of the kiln, and characteristics of clays and production.

Requirements—81 hours.
3 hours Open Program (studio).
9 hours Art History.
18 hours Ceramics.
9 hours Sculpture.
6 hours Metalsmithing.
3 hours Painting.
6 hours Drawing.
27 hours Art Electives.
Lower Division Courses

281. Ceramics I. (3). Experience in hand building, wheel throwing, glazing, and firing of the kiln; ceramic textures. Prerequisite: Art 172.

282. Ceramics II. (3). Experience in wheel throwing, glazing, and firing of the kiln. Prerequisite: Art 281.

Upper Division Courses

381. Ceramics III. (3). Special emphasis on the chemistry of glazes and clay bodies. Prerequisite: Art 281 or 282.

382. Ceramics IV. (3). Continuation of Art 282. Prerequisite: Art 281 or 282.

407c. Directed Reading in Art. (3). Supervised study and research in ceramics. Weekly consultation and reports. Prerequisite: Consent of instructor.

481 & 482. Ceramics V and VI. (3-3). Continuation of Art 382. Prerequisite: Art 281 or 282.

DRAWING

Lower Division Courses


267 & 268. Life Drawing I and II. (3-3). Drawing from life with emphasis on figure construction. Anatomy sketchbooks and portfolios required. Prerequisite: Art 165.

Upper Division Courses

367 & 368. Life Drawing III and IV. (3-3). Continuation of Art 267 or 268. Prerequisite: Art 267 or 268.

407i. Directed Reading in Art. (3). Supervised study and research in drawing. Weekly consultation and reports. Prerequisite: Consent of instructor.

467 & 468. Advanced Drawing I and II. (3-3). Drawing in any medium, field and studio work. Group criticism. Prerequisite: 3 semesters of life drawing.

GRAPHIC DESIGN

Professional program for students interested in a career in the field of visual communication. Conceptual and practical problem solving in various media. Photography, topography, design, and drawing directed toward the development of design skills for communication purposes.

Requirements—81 hours.
6 hours Open Program (studio).
3 hours Art History.
36 hours Graphic Design.
3 hours Journalism.
3 hours Painting.
12 hours Drawing.
18 hours Art Electives.
Lower Division Courses


238. Photography I. (3). Basic orientation in the use of studio and hand cameras; darkroom procedures: development of negatives, proofmaking, printing control methods, use and care of developing and enlarging equipment. The application of design principles to the art of photography.

239. Photography II. (3). The theory and technology of film making; documentary and animated film projects.


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

387 & 388. Fashion Illustration I and II. (3-3). Development of the fashion figure for use in advertising. 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 267, 268, 272, and 297.


397. Advertising Illustration I. (3). A study in the techniques of illustration as used in contemporary communicative arts; practical problem-solving. Prerequisite: Art 267, 268, 272, and 297.

398. Delination. (3). Theory of one, two, and three-point perspective, followed by extensive application involving background, objects, and figures. Examination and exploration of the artist’s materials. Prerequisite: Art 267, 268, and 272.

399. Advanced Drawing for Commercial Art. (1). Continuation of Art 299. Maximum credit 4 hours by re-enrollment.

407j. Directed Reading in Art. (3). Supervised study and research in advertising. Weekly consultation and reports. Prerequisite: Consent of instructor.

487 & 488. Fashion Illustration III and IV. (3-3). Continuation of Art 388. Prerequisite: Art 387 or 388.


497. Advertising Illustration II. (3). Continuation of Art 397. Prerequisite: Art 397.

METALSMITHING

Exploration of methods of forming, casting, and joining of copper, bronze, silver, and gold. Emphasis is placed on design and craftsmanship.
Requirements—81 hours.
3 hours Open Program (studio).
6 hours Art History.
21 hours Metalsmithing.
6 hours Drawing.
6 hours Sculpture.
39 hours Art Electives.

Lower Division Courses

279. Metalsmithing I. (3). Designing and raising problems in metalsmithing. Stress placed on basic metalsmithing methods. Prerequisite: Art 172.

280. Metalsmithing II. (3). Forging and casting problems in metalsmithing. Stress placed on basic metalsmithing methods and design. Prerequisite: Art 172.

Upper Division Courses

379-380. Metalsmithing III and IV. (3-3). Exploration of processes of fabrication of hollow ware and jewelry. Stress placed on craftsmanship and design. Prerequisite: Art 279 or 280.

407e. Directed Reading in Art. (3). Supervised study and research in metalsmithing. Weekly consultation and reports. Prerequisite: Consent of instructor.

479 & 480. Metalsmithing V and VI. (3-3). Raising, forging, casting, and fabrication problems in silver and other nonferrous metals. Stress placed on craftsmanship and design. Prerequisite: Art 379 and 380.

PAINTING

Based on a thorough preparation in drawing and design, the painting 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. Visiting artists contribute through guest lectures and studio demonstrations.

Requirements—81 hours.
3 hours Open Program (studio).
9 hours Art History.
21 hours Painting.
18 hours Drawing.
6 hours Printmaking.
24 hours Arts Electives.

Lower Division Courses

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.


272. Painting II. (3). An introduction to watercolor painting in both transparent and opaque media. Prerequisite: Art 165.

Upper Division Courses

407a. Directed Reading in Art. (3). Supervised study and research in painting. Weekly consultation and reports. Prerequisite: Consent of instructor.

471 & 472. Painting V and VI. (3-3). Continuation of Art 372. Prerequisite: Art 271 and 272.

PRINTMAKING

Exploration of the etching process and exposure to tools and techniques of the graphic arts. Emphasis is placed on creativity, imagination, and experimentation.

Requirements—81 hours.
6 hours Open Program (studio).
6 hours Art History.
18 hours Printmaking.
12 hours Drawing.
6 hours Painting.
33 hours Art Electives.

Lower Division Courses

275. Printmaking I. (3). Basic intaglio methods (etching, engraving, soft ground, aquatint, and mixed techniques). Prerequisite: Art 165.

276. Printmaking II. (3). Basic intaglio methods and introduction to relief printing. Prerequisite: Art 165 and 171.

Upper Division Courses

375. Printmaking III. (3). Introduction to lithography, intaglio and combined printmaking techniques. Prerequisite: Art 275 or 276.

376. Printmaking IV. (3). Optional or combined printmaking techniques, black and white and color. Prerequisite: Art 275 or 276.

407b. Directed Reading in Art. (3). Supervised study and research in printmaking. Weekly consultation and reports. Prerequisite: Consent of instructor.

475 & 476. Printmaking V and VI. (3-3). Continuation of Art 375 and 376. Specialization in the use of combined methods in color printing and in black and white. Prerequisite: Art 275 or 276.

SCULPTURE

The sculpture major progress from clay modeling and plaster cast to wood and stone carving and other media such as plastics, wire, mesh, and welded metal. Transparency, motion and effects of sculptural color are investigated. Traditional and experimental methods are presented.

Requirements—81 hours.
6 hours Open Program (studio).
9 hours Art History.
21 hours Sculpture.
15 hours Drawing.
3 hours Painting.
27 hours Art Electives.

Lower Division Courses

285 & 286. Sculpture I and II. (3-3). An introduction to basic sculpture techniques and materials. Direct work in plaster, clay, wood and metal; casting in plaster and concrete. Prerequisite: Art 165 and 172.
Upper Division Courses

385. Sculpture III. (3). Special emphasis on the main approaches to sculpture. Stress 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 or 286.

386. Sculpture IV. (3). Casting techniques for sculpture selected from bronze, aluminum, plastics, and/or concrete. Prerequisite: Art 285 and 286 or 385.

485. Sculpture V. (3). Advanced carving, construction and assemblage techniques. May be repeated once for credit. Prerequisite: Art 385.

486. Sculpture VI. (3). Advanced casting techniques. May be repeated once for credit. Prerequisite: Art 386.

General Courses

405. Special Art Project. (2 or 3). For qualified upper division art students. Consists of an original research project in the Fine or Applied Arts. May be repeated once for credit. Prerequisite: Consent of instructor.


Graduate Courses

500. Methodology in Art Research. (3). Investigational procedures in art research; significant ideas and directions in art literature; principles of thesis writing; research design and creative thesis project.

501. Directed Reading 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) Advertising. Weekly consultation and reports. Individual areas may be repeated once for credit. Prerequisite: Consent of Instructor.

503 & 504. Research Problems in Art History and Philosophy of Art. (3-3). Research on individual problems in areas of student concern.

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. May be 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. Prerequisite: Consent of instructor.

519. Development of Art Understandings in the Educational Program. (3). Readings, observation and evaluative techniques in the development of concepts and materials of 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.

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.


566. Museum Techniques II. (3). Continuation of museum-related activities. Problems in education, staffing, planning, grants. Students are required to participate in curatorial duties. Art 565.

567. Special Problems in Life Drawing. (1 or 3). Drawing from books and portfolios required. May be repeated for credit.

570. Seminar in Advanced Criticism. (3). Aesthetics and philosophy of art criticism for advanced students.

571. Seminar in Art Education. (3). Problems, innovations, and critical analysis of trends in the practical and theoretical aspects of the arts, humanities, and sciences, and their relationship to art education. Outside assignments and field trips.

573. Environmental Aspects of Art Understanding. (3). A study of influences of environment upon the self and groups in our contemporary society.


577-578. Terminal Project. (3 or 5, 3 or 5).

SCHOOL OF MUSIC

Walter Duerksen, M. M., 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, 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 piano, organ, voice, orchestral and band instruments, 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 counselling 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 in courses designed for the non-piano major. Proficiency examinations in music theory will also be given new students. Those deficient will be required to enroll 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 SUSPENSION

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 7 hours shall be suspended for failure to raise the cumulative grade index to the required level. However, if such student has earned 12 or more hours in 2 or more semesters, the cumulative grade index including these hours shall be used to determine whether he shall be suspended.

Enrollment procedures for students on probation:

1. A maximum of 12 semester hours in an eighteen week term.
2. Two-thirds as many hours as the number of weeks for which he is enrolled in the summer term.
3. One hour of military or air science, marching band, or physical education may be added to the number of hours as stated in items 1 and 2.

A student on probation will be suspended 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 advisor with the approval of his Dean. A student on suspension must apply for readmission to the Commit-
tee 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 suspended. Any further applications for readmission will be considered on the merits of the individual case, after a lapse of at least one calendar year.

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); a candidate for student teaching must present a cumulative GPA of 2.25 and a major field GPA of 2.50 at the time they apply for student teaching.

MUSIC MAJOR IN THE COLLEGE OF LIBERAL ARTS

Students in the College of Liberal Arts 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, 229-230.

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 .................................................. 4 hours
Select in consultation with adviser.

GROUP VII

Electives from the areas of Music Literature, Music Theory, Counter-point, Conducting, Orchestration, and Choral Literature ............ 4 hours

A total of 128 credit hours is required in this program. 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

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 II.

MUSIC MINOR IN THE COLLEGE OF EDUCATION

A teaching minor in music for students in the College of Education consists of 15 hours including the following courses: Music 252 or 201, 127-129, 113, 1 hour of ensemble, 2 hours (2 semesters) of voice, 2 hours (2 semesters) of piano, 305.

GRADUATION REQUIREMENTS

BACHELOR OF MUSIC DEGREE REQUIREMENTS

(1) General graduation requirements of the University, see page 54.
(2) Music requirements for Bachelor of Music in Theory:

Applied Music:
Chief performing medium .............................................. 16 hours
Second performing medium (4 semesters) ............................. 4 hours
(one of these must be piano.)

Theory and Composition:

History and Literature of Music:
Music 113-114 and 331 & 332 .......................................... 10 hours

Conducting:
Music 217 or 218, and 451 ............................................. 4 hours

Ensembles ........................................................................ 10 hours

Electives (Music or non-music courses) ................................ 8 hours
Recital attendance for 8 semesters.

(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 ..................................................................... 10 hours

Electives (either music or non-music courses)* ......................... 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 general requirements for graduation and the Kansas State Certification requirements and is required of all Bachelor of Music Education degree candidates enrolled in the instrumental/vocal emphasis program:

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, 6 hrs.; Speech 111, 2 hrs.

*Music 381 and 382 required of piano majors. Music 397 and 398, 497 and 498 required of organ majors.
| Humanities                                      | 12-15 hours |
| Fine Arts: Music 113, 331 & 332                | 7 hours     |
| Literature (English or Foreign Language)       | 4 hours     |
| Electives from History, Philosophy, Religious Education, or American Civilization as listed in the University Requirements for Graduation | 1-3 hours |
| Social Sciences                                | 9-12 hours  |
| Economics 221 or Political Science, 100, 121, or 211 | 3 hours     |
| Psychology 111                                 | 3 hours     |
| Sociology and Anthropology 111 or 124          | 3 hours     |
| (For State Certification, History may be added to this area.) |           |
| Physical Activities                            | 4 hours     |
| Air Science, Military Science, Physical Education, or Marching Band (4 hours in Marching Band required of all wind and percussion majors). At least 2 hrs. must be in one subdivision. |           |
| Electives in non-music courses                 | 6 hours     |
| To be selected from Mathematics and Natural Sciences, Communications, Humanities or Social Sciences. |           |
| Education (For General Degree)                | 31 hours    |
| Ed. Psych. 333, 433 *                          | 6 hours     |
| Fd. Ed. 232 and 428 *                          | 6 hours     |
| Special Methods: Music Ed. (elementary instrumental emphasis) 202, 302, and 402 * (202 and 302 must be completed before student-teaching); or Music Ed. (secondary instrumental emphasis) 204, 304, and 404 * (204 and 304 must be completed before student-teaching). In addition, 6 hours of instrumental music methods (135, 136, 137, 138, 139, 140). Required for General Degree | 13 hours |
| Elementary Education 447 *                     | 3 hours     |
| Secondary Education 447 *                      | 3 hours     |
| * These courses to be taken concurrently during the student-teaching semester. |           |

**Bachelor of Music Education General Degree (Instrumental Emphasis)**

Music ........................................................................................................... 47 hours

Applied Music

Chief performing medium ................................................................. 8 hours
Second performing medium (2 semesters) ....................................... 2 hours
Third performing medium (2 semesters) ......................................... 2 hours
Above must include 2 hours of piano and passing of keyboard proficiency. The applied music elective must be taken in voice. Above minimums are subject to requirements of chief performing medium 22 and secondary medium 10.

Theory: Music 127-128, 129-130, 227-228, 229-230, 323, 441 or 445 .......... 20 hours
Conducting: Music 217 or 218 and 451 or 491 ............................... 4 hours
Ensembles .................................................................................................. 10 hours
(Football Band may be counted either as an ensemble or as physical education, but not both).
Recital attendance for 7 semesters plus senior recital.
History of Music **
Music 331 & 332 ..................................................................................... 6 hours
** Utilized to fulfill music and humanities requirements.

**Bachelor of Music Education (Vocal Emphasis)**

The following program is required of all Bachelor of Music Education degree candidates (Vocal Emphasis):

1) 52 semester hours of music from the following courses:
Applied Music ............................................ 12 hours
Chief performing medium, minimum Piano 22 or Voice 22 8 hours
Second performing medium, minimum Piano 10 or Voice 10 (2 semesters) 2 hours
Applied Music Electives (2 semesters) 2 hours
Theory .................................................... 20 hours
127-128, 129-130 8 hours
227-228, 229-230 8 hours
323 2 hours
445 2 hours
Conducting .............................................. 4 hours
217 or 218 and 451 or 491.
Ensembles .................................................. 10 hours
(Five hours must be in vocal ensembles. Recommended that 2 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.)
Recital Attendance for 7 semesters plus senior recital.

(2) 55 semester hours of general education (including 6 hours of music history and 2 hours of music literature.

(3) 25 semester hours of professional education including 7 semester hours of music education: Elementary vocal music emphasis students take Music 201, 301, 401; Secondary vocal emphasis students take Music 203, 303, 403. All students take Ed. 232, 428, 333, 433, El. Ed. 447, Sec. Ed. 447.

GENERAL MUSIC REQUIREMENTS

(1) 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 his junior year, 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 (3) whether this program shall be performed before a faculty jury.

The senior or jury recital will be presented during the fall or spring semester. Only in unusual cases will a student be permitted to present a senior or jury recital during the summer term and only when permission has been granted from the Dean of the College of Fine Arts, the chairman of the department concerned, and the applied music instructor.

Although 8 hours is the minimum requirement for an applied major in the Bachelor of Music Education program, it is understood that no graduating senior may prepare or perform the graduation recital without the guidance of a full-time staff member. In the event the 8 hours are earned prior to the recital presentation,
the student is expected to elect the applied major during the preparation for recital performance.

(2) When a student attains an Applied Music classification of 11 or above, he must perform each semester in a studio recital or its equivalent. “Classification of 11 and higher is subject to departmental review of the candidate’s ability to continue to achieve the performance levels of his declared major.”

(3) Attendance is required at 18 specified recitals and concerts sponsored each semester 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.

(4) Music education students should plan to attend one summer session to realize full benefits of the four-year curriculum. Students majoring in this field are encouraged to continue the study of their chief performing medium during the full four years.

(5) A specified number of ensembles is required of all students according to degree requirements described above. Specific ensembles must be scheduled in consultation with faculty adviser.

(6) 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 22 or Voice 22.

Candidates for the degree of Bachelor of Music must, before graduation, be classified as follows:

Vocal majors—Voice 42 and Piano 20.

Piano or Organ majors—Piano 42 or Organ 42, and Secondary Medium 20 or 22 as appropriate.

Instrumental majors—Major instrument 42, and Secondary Medium 22.

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.
APPLIED MUSIC REGULATIONS

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 44.

(1) Applied music instruction at the college level shall be on the University campus with approved music faculty staff.

(2) 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.

(3) Secondaries will take class or private lessons until proficiency requirements are met.

(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.

CURRICULUM FOR PIANO MAJORS

Piano 9-10. (1). The student should be able to read at sight hymn tunes and folk songs and be able to play accompaniments of average difficulty; all major and minor scales, arpeggios, and suggested material to be assigned by the instructor taken from technical studies and standard repertoire.

Piano 11-12. (2 to 4—2 to 4). First course for the student who enrolls with piano as a major study. Students admitted by examination only. Suggested quality of material: Bach, Two-Part Inventions or French Suites; Beethoven, Sonata Op. 2 No. 1, Op. 14 No. 1; Chopin, easier Waltzes, Mazurkas, Nocturnes. Studies and technical material adapted to the needs of the students.

Piano 19-20. (1). Course designed for secondaries. Special emphasis is placed on developing skill in reading vocal accompaniments and choral scores. May be re-elected.


Piano 31-32. (2 to 4—2 to 4). The student should have acquired a technique sufficient to play arpeggios and scales in parallel and contrary motion in rapid tempo. Technical materials and studies adapted to the needs of the student. Suggested quality of materials: Bach, Well-Tempered Clavier; Beethoven, Sonata Op. 31 No. 2; Chopin, Etudes, Ballades; Brahms, Rhapsodies. Selected works of modern and contemporary composers.

Piano 41-42. (2 to 4—2 to 4). Senior Recital. Must have had considerable experience in ensemble, and be a capable sight reader. Quality of material: Bach, Partitas, Transcriptions; Beethoven, later Sonatas such as Op. 53, Op. 57, or a concerto; larger works of Brahms, Chopin, Ravel or Debussy.
CURRICULUM FOR ORGAN MAJORS

Organ 11-12. (2 to 4—2 to 4). Organ major students must demonstrate piano proficiency. The student must continue piano study if advised by the instructor. Technical study will be based on Barnes' School of Organ Playing and Dupré's Seventy-Nine Chorales. Study will include the works of the pre-Bach period and the shorter preludes and fugues of J. S. Bach.

Organ 21-22. (2 to 4—2 to 4). Study will concentrate on the works of J. S. Bach. The pre-Bach composers will be continued, and other material will be used as advised by the instructor. The Liturgical Year of J. S. Bach will receive special emphasis.

Organ 31-32. (2 to 4—2 to 4). Study of the trio sonatas of J. S. Bach will begin, and further work will include the organ sonatas of Mendelssohn and shorter works by Cesar Franck.

Organ 41-42. (2 to 4—2 to 4). Senior recital. The study of Bach will continue with the trio sonatas and the larger preludes and fugues. The larger works of Franck, and compositions by Brahms and Reger will be introduced. Selected contemporary music by such composers as Sowerby, Dupre, and Messiaen will be used.

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.

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). Studies selected from 48 Famous Studies for Oboe, W. Farling: Oboe Method and Studies; Andraud; Vada Meccum of the Oboist; solos of comparable difficulty. Basic concept of oboe sound and familiarity of major and minor scales.


Oboe 41-42. (2 to 4—2 to 4). Continuation of above studies. Knowledge of reed making. Senior recital.

CURRICULUM FOR CLARINET MAJORS


Clarinet 21-22. (2 to 4—2 to 4). Studies by Thurston and Klose continued. Rose: 40 Studies; Langenus: Virtuoso Studies; Grade V solos such as Saint-Saens: Sonata; Delmas: Fantasie Italiane; Hindemith: Sonata. Continued study in transposition. 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 class II 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 Ferrin 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), 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.

COLLEGE OF FINE ARTS
Bassoon 11-12. (2 to 4—2 to 4). Studies from *Weissenborn: Books I and II*; solos by Gaillard, 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 Gaillard, 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 Gailliard, Telemann, or from Boyd and Garfield; further development of embouchure, articulation, technique, tone control; major and minor scales; reed-making and adjustment.

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: Karkas, Kopprasch (I), Alphonse (I), Pottag and Hauser; all scales and arpeggios, two octaves. Compositions by Mozart, Franz, Corelli, Gipps, Cohen, Tillotson and Saint-Saens. Orchestra studies.

Horn 21-22. (2 to 4—2 to 4). Etudes selected from: Farkas, Cugnot, Alphonse (I), Kopprasch (I & II), Mueller. All scales and arpeggios (120 mm, eight-note pattern). Orchestra studies, Pottag (I, II, III). Compositions by Mozart, Hermann, Corelli, Saint-Saens, Poulenc, Beethoven, Strauss and Franz.


**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, Voxman, 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 chosen from Schlossberg, Clark, Nagel, Concone, Brandt, Bousquet, Bozza, and Bartold. Solo literature selected from Frankenpohl, Perschetti, Mozart, Purcell, Bozza, Emmenuel, 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 11-12. (2 to 4—2 to 4). Studies by Kopprasch and Rochut. 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 tonic arpeggios to be played in eighth-notes at 80 M. M.

Trombone 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, alto and tenor clef, sight reading. All major and minor scales and selected arpeggiated chord progressions to be played in eighth-notes at 120 M. M.


Trombone 41-42. (2 to 4—2 to 4). Bach: Cello suites Nos. 1-3. Orchestral excerpts and solos by Creston, Hindemith, Martin, Milhaud, Saint-Saens, or equivalent. Advanced legato studies and sight reading. Senior recital.

It is recommended that all Trombone (euphonium) majors have some experience on the companion instrument.

Tuba 10. (1). Studies selected from Arban, Bell, Cimera, Cornette, Eby, Geib, Pares, and Rubank. 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 tonic 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 selected arpeggiated chord progressions, 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, Stevens, or 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, Persichetti, and Wilder. Sight reading.

It is recommended that all tuba students have some playing experience on F and CC tuba 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 Torreobruno: 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. Compositions of advanced difficulty taken from selected standard repertoire. Studies selected from Goodman, McMillan, and Knauer, Book I. Emphasis on physical, technical, and musical factors on two timpani. Compositions of beginning to intermediate difficulty taken from selected standard repertoire.

Percussion 31-32. (2 or 4—2 or 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 or 4—2 or 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 21-22. (2 to 4—2 to 4). Technical studies by Vito, Naderman, and Boch-David or Boch-Renie. 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: Sevcik, 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.

250 COLLEGE OF FINE ARTS
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 41-42. (2 to 4—2 to 4). Bach solo sonatas; sonatas by Schumann, Brahms, modern American composers; concertos by Saint-Saëns, Lalo, Bruch, Tschaikowsky, 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, Piatti; scales and arpeggios through two octaves; shifting and bowing techniques; sonatas and 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*; advanced scales and arpeggios, sonatas by Corelli, Vivaldi, Vandi; shorter pieces using neck positions.

Cello 21-22. (2 to 4—2 to 4). Continuation of studies from Schroeder, Feuillard *Daily Exercises*; scales and arpeggios through three octaves in all keys; thumb position techniques; sonatas by Handel, Eccles, Sammartini; concertos by Goltermann, Romberg, pieces by Saint-Saëns, and Faure.

Cello 31-32. (2 to 4—2 to 4). Studies by Duport; scales and arpeggios with a variety of bowing styles; concertos by Saint-Saëns, Boccherini, Haydn; pieces by Popper, Bloch, Bruch; sonatas of Beethoven, Breval, Barber, Hindemith.

Cello 41-42. (2 to 4—2 to 4). Studies of Popper, Piatti, Grutzmacher; scales in double-stops, arpeggios through four octaves; concertos by Dvorak, Schumann, Tschaikowsky, Britten; contemporary American pieces by Bloch, Dello Joio, Hindemith; 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 Birenstock; 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 240. 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

101-102. Comprehensive Musicianship. (5-5). Basic studies of the linear, vertical, durational, textural and dynamic parameters of music with reference to the conceptual, practical application to music literature.


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.

127-128. Harmony. (2-2). Fundamentals of harmonic structure and usage as related to melody. Creative writing and analysis are integral parts of the course.

129-130. Ear Training and Sight Singing. (2-2). Course designed to begin training in aural recognition and vocal realization of materials used in music composition. Includes rhythmic, melodic and harmonic dictation, sight singing and improvisation. To be taken concurrently with Music 127-128.

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.

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.)

COLLEGE OF FINE ARTS 253
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.

227-228. Harmony. (2-2). Advanced study of harmony incorporating nineteenth and twentieth century structures and usage. Creative writing and analysis are integral parts of the course. Prerequisite: Music 128.

229-230. Ear Training and Sight Singing. (2-2). Advanced studies in aural recognition and vocal realization of materials used in music composition. Prerequisite: Music 130 or equivalent. To be taken concurrently with Music 227-228.

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). For minors—see: Music Education 305.)

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 228.

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. 19th Century Harmony. (2). The harmonic techniques of the 19th century. Prerequisite: Music 323 or concurrent enrollment or department consent.

372. 20th Century Analysis. (2). The composition techniques of the 20th century composers. Prerequisite: Music 323 or concurrent enrollment or department consent.

381. Piano Materials. (2). Discussion and analysis of suitable materials and methods for teaching at elementary, intermediate, and advance levels.


397. Organ Literature of the 16th-18th Centuries. (2). An intensive survey of the literature of the instrument. Discussion and performance of the works by students and professor. Prerequisite: Music 228 or departmental consent.

398. Organ Literature of the 19th and 20th Centuries. (2). An intensive survey of the literature for the instrument. Discussion and performance of the work by students and professor. Prerequisite: Music 228 or department consent.

401. Advanced Techniques of Vocal Music for Elementary School. (2). (For elementary vocal majors—see: Music Education 401.)

402. Advanced Techniques of Elementary School Music. (2). (For elementary instrumental majors—see: Music Education 402.)
403. Advanced Techniques of Vocal Music for Secondary Schools. (2). (For secondary vocal majors—see: Music Education 403.)

404. Advanced Techniques of Secondary School Music. (2). (For secondary instrumental majors—see: Music Education 404.)

425. Voice Pedagogy. (2). Designed to acquaint the voice major with vocal techniques, concepts, and materials of private and class instruction. (Fall semester only.)

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. (Spring semester only.)

427. Music Theatre Directing. (2). Coaching, mounting, and staging music-drama productions, with emphasis on acting and directing techniques. Prerequisite: Consent of instructor.

430. (Music or Music Education). Pedagogy of Theory. (2). Teaching of music theory, including analysis and evaluation of the many texts available to the theory teacher. Planned course of study for various levels of instruction. Prerequisite: Music 323.

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.

451. Advanced Conducting & Score Reading. (2). Baton technique, score reading, musicianship. Prerequisite: Music 217 or 218.

452. Choral Materials. (2). A historical survey of choral literature from the Renaissance to the Twentieth Century with emphasis on availability of editions for performance. (Spring semester only.) Prerequisite: Music 331, 332, or consent of instructor.

459 & 460. Applied Composition. (2-2). Individual study in musical composition with emphasis on writing for both small ensembles and large groups in the larger forms. Prerequisite: Music 360 or instructor's consent.

461. 16th Century Counterpoint. (2). Analysis and application of the counterpoint composition-techniques of the 16th century. Prerequisite: Music 228.

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.

484. String Teaching Seminar. (2). (See Music Education 484.)

491. Advanced Choral Conducting. (2). A comprehensive study of conducting and rehearsal techniques, analysis and ear training, and styles of choral composition for the advanced student. Prerequisite: 217 or 218, 228, 230, 323.

497-498. Church Music Practicum. (2-2). A course concerned with practical matters and problems which face the church musician. Practice under conditions similar to actual situations. Prerequisite: Organ 12 performance standing.
Graduate Courses


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 the pre-Renaissance era to the present. Compositions of representative composers of each period will be analyzed harmonically, stylistically, and formally. The individual student will analyze music in his own medium culminating with a presentation before the class. From these presentations an over-all synthesis of the compositional procedures of each period will be made. Stress will be laid on the areas in which the individual student is weakest, and that will benefit the class as a whole. This course is designed primarily to develop an analytical perspective rather than to develop compositional skills.

531. Developing the Child's Musical Understanding. (3). (See Music Education 531.) Definition of understandings necessary for the attainment of musical awareness in the young child. Exploration of classroom experiences directed toward the successful development of these understandings through the application of basic learning principles.


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. Development of bibliography. Reports adapted to the needs of individual class members.

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.

572. Modern Music in the Modern School. (3). An Historical-Analytical survey of standard contemporary literature; consideration of creative approaches to the use of contemporary techniques; laboratory experiences exploring methods of teaching contemporary music at all levels of public school education. Prerequisite: Consent of instructor.

573-574. Graduate Recital. (2-2). Performance of a full recital featuring the chief performing medium. Prerequisite: Consent of instructor.
575. (Music or Music Education). Thesis Research. (2).
582. Marching Band Techniques. (2). Study and analysis of current formations and pageantry for the marching band.
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.
Engineering is a profession which devises new tools, methods, processes or systems, to make better use of resources, for the purpose of enriching man's environment. This enrichment takes the form of better protection against harmful environment, better transportation, better food and shelter, and better communication, commensurate with man's desire to exist. The School of Engineering is an institution of learning which imparts knowledge to the student so that he will be able to understand and cope with his environment, and thus ultimately contribute to the enrichment of society.

To achieve these goals an institution must have objectives. The objective prevailing is emphasis on fundamentals, so that the student will ultimately develop into an engineer. Over the years, the objective has shifted in a broad sense from one of current practice, or past practice, to one based on application of broad principle. There is today a very substantial de-emphasis on routine techniques, with a shift in emphasis towards fundamental understanding.

At Wichita State University, the engineering courses are designed to give a student a thorough grounding in fundamentals of engineering with emphasis on their application in the particular chosen field of study.

The rapid advancements in engineering science and technology have resulted in considerable modification of engineering curricula. This has necessitated a continual inclusion of a greater breadth of subject material, much of which is interdisciplinary in nature. A realization of this trend has resulted in the concept of "engineering core programs" which cover a broad spectrum of fundamental engineering knowledge in an efficient manner, involving interdisciplinary organization where it is deemed advantageous.

In addition to the technical material, the engineering program contains a sufficient number of courses in humanities, social science, communication, mathematics and physical science to provide a well rounded educational program.

The curricula of the School of Engineering lead to the degrees of Bachelor of Science in Aeronautical Engineering, Bachelor of Science in Electrical Engineering, Bachelor of Science in Industrial Engineering, Bachelor of Science in Mechanical Engineering, and Master of Science.

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.

ENTRANCE REQUIREMENTS

Students may enter the School 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.

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. 1.700 if the student has earned 24 to 63 credit hours.
2. 2.000 if the student has earned 64 or more credit 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 may not enroll for more than 12 semester hours in an eighteen week term or 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.

CURRICULA

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.

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 stu-
students. Experience has shown, however, that 9 semesters are usually required. Any deviation from this sequence should be discussed with the faculty advisor.

SEQUENCE OF COURSES

AERONAUTICAL ENGINEERING

FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
<th>FIRST SEMESTER</th>
<th>Hrs.</th>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engl. 111, College English</td>
<td></td>
<td>3</td>
<td>Phys. 243E, General Col.</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Speech 111, Ext. Speaking</td>
<td></td>
<td>2</td>
<td>Communications Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Humanities or Social Science</td>
<td></td>
<td>3</td>
<td>Humanities or Social Science</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>ROTC or Physical Activities</td>
<td></td>
<td>1</td>
<td>ROTC or Physical Activities</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18</td>
<td></td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

SOPHOMORE

<table>
<thead>
<tr>
<th>Course</th>
<th>FIRST SEMESTER</th>
<th>Hrs.</th>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phys. 244 E, General Col.</td>
<td></td>
<td>4</td>
<td>I. E. 254, Engr. Prob. and Statistics</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Humanities or Social Science</td>
<td></td>
<td>5</td>
<td>Chem. 111, General Chemistry</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>ROTC or Physical Activities</td>
<td></td>
<td>1</td>
<td>ROTC or Physical Activities</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18</td>
<td></td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

JUNIOR

<table>
<thead>
<tr>
<th>Course</th>
<th>FIRST SEMESTER</th>
<th>Hrs.</th>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. E. 382, Electrical Dynamics</td>
<td></td>
<td>4</td>
<td>Engr. 364, Field Analysis</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>A. E. 333, Mechanics of Materials</td>
<td></td>
<td>3</td>
<td>A. E. 324, Aerodynamic Theory</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Chem. 112, Gen. and Inorganic</td>
<td></td>
<td>5</td>
<td>A. E. 398, Systems Dynamics</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18</td>
<td>Phys. 311, Modern Physics</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Humanities or Social Science</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18</td>
<td></td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

SENIOR

<table>
<thead>
<tr>
<th>Course</th>
<th>FIRST SEMESTER</th>
<th>Hrs.</th>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. E. 414, Flight Mechanics</td>
<td></td>
<td>3</td>
<td>Engr. 413, * Seminar</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>A. E. 425, Flight Struc. I</td>
<td></td>
<td>4</td>
<td>Technical Elective</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>E. E. 392, Electronics</td>
<td></td>
<td>4</td>
<td>M. E. 369, Energy Conversion</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Humanities or Social Science</td>
<td></td>
<td>3</td>
<td>Humanities or Social Science</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18</td>
<td></td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

* These courses will bear the designation of the major department of the student.

ELECTRICAL ENGINEERING

FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
<th>FIRST SEMESTER</th>
<th>Hrs.</th>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engl. 111, College English</td>
<td></td>
<td>3</td>
<td>Communications Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Chem. 111, General Chemistry</td>
<td></td>
<td>5</td>
<td>E. G. 110, Engr. Graphics I</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Humanities or Social Science</td>
<td></td>
<td>3</td>
<td>Physics 240E, Gen. Coll. Phys.</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>ROTC or Physical Activities</td>
<td></td>
<td>1</td>
<td>Chem. 112, Gen. Chemistry</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17</td>
<td></td>
<td>19</td>
<td></td>
</tr>
</tbody>
</table>

SCHOOL OF ENGINEERING 261
### SOPHOMORE

<table>
<thead>
<tr>
<th>Course</th>
<th>FIRST SEMESTER</th>
<th>Hrs.</th>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. E. 227, Engr. Digital Comp.</td>
<td></td>
<td>2</td>
<td>E. E. 382, Electrical Dynamics</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Math. 244, Intro. Anal. III</td>
<td></td>
<td>3</td>
<td>Humanities or Social Science</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Physics 244E, Gen. Coll. Phys.</td>
<td></td>
<td>4</td>
<td>Speech 111, Ext. Speaking</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>ROTC or Physical Activities</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>18</td>
<td></td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

### JUNIOR

<table>
<thead>
<tr>
<th>Course</th>
<th>FIRST SEMESTER</th>
<th>Hrs.</th>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. E. 398, System Dynamics</td>
<td></td>
<td>3</td>
<td>A. E. 333, Mech. of Materials</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Physics 311, Topics in Mod. Phys.</td>
<td></td>
<td>3</td>
<td>M. E. 369, Energy Conversion</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Humanities or Social Science</td>
<td></td>
<td>3</td>
<td>A. E. 347, Sci. of Engr. Math's</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>ROTC or Physical Activities</td>
<td></td>
<td>1</td>
<td>Humanities or Social Science</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>18</td>
<td></td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

### SENIOR

<table>
<thead>
<tr>
<th>Course</th>
<th>FIRST SEMESTER</th>
<th>Hrs.</th>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conversion I</td>
<td></td>
<td>4</td>
<td>Engr. 418, Seminar</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Engr. 394, Field Analysis</td>
<td></td>
<td>3</td>
<td>Technical Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Humanities or Social Science</td>
<td></td>
<td>3</td>
<td>Humanities or Social Science</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>ROTC or Physical Activities</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>18</td>
<td></td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

Electrical Engineering electives may be selected from the following: E. E. 481, 493, 484, 490, 491, 492, 494, A. E. 324, I. E. 450, M. E. 402, Math. 335, 447, Phys. 345.

* These courses will bear the designation of the major department of the student.

### INDUSTRIAL ENGINEERING

#### FRESHMAN

<table>
<thead>
<tr>
<th>Course</th>
<th>FIRST SEMESTER</th>
<th>Hrs.</th>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engl. 111, College English</td>
<td></td>
<td>3</td>
<td>Speech 111, Ext. Speaking</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Chem. 111, General Chemistry</td>
<td></td>
<td>5</td>
<td>E. G. 213, Engr. Graphics I</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>ROTC or Physical Activities</td>
<td></td>
<td>1</td>
<td>Physics 245E, Gen. College Phys.</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>16</td>
<td></td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

#### SOPHOMORE

<table>
<thead>
<tr>
<th>Course</th>
<th>FIRST SEMESTER</th>
<th>Hrs.</th>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. E. 227, Engr. Dig. Comp.</td>
<td></td>
<td>2</td>
<td>Math 346, Differential Equations</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Math 244, Intro. Analysis III</td>
<td></td>
<td>3</td>
<td>Humanities or Social Science</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Communications Elective</td>
<td></td>
<td>3</td>
<td>ROTC or Physical Activities</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>ROTC or Physical Activities</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>19</td>
<td></td>
<td></td>
<td>19</td>
</tr>
</tbody>
</table>

#### JUNIOR

<table>
<thead>
<tr>
<th>Course</th>
<th>FIRST SEMESTER</th>
<th>Hrs.</th>
<th>Course</th>
<th>SECOND SEMESTER</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. E. 392, Electrical Dynamics</td>
<td></td>
<td>4</td>
<td>E. E. 392, Electronic Circuits</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>A. E. 398, Exp. Mechanics Lab.</td>
<td></td>
<td>1</td>
<td>Physics 311, Top. in Mod. Phys.</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Humanities or Social Science</td>
<td></td>
<td>3</td>
<td>Engr. 418, Seminar</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>ROTC or Physical Activities</td>
<td></td>
<td>1</td>
<td>Humanities or Social Science</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>19</td>
<td></td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>Course</td>
<td>First Semester Hrs.</td>
<td>Course</td>
<td>Second Semester Hrs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>---------------------</td>
<td>--------</td>
<td>----------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.E. 369, Energy Conversion</td>
<td>3</td>
<td>I.E. 452, Factory Planning</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I.E. 458, Production Design</td>
<td>3</td>
<td>I.E. Electives</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanities or Social Science</td>
<td>6</td>
<td>Humanities or Social Science</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I.E. Electives</td>
<td>2</td>
<td>Engr. 364, Field Analysis</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17 18

Industrial Engineering electives may be selected from the following:

- I.E. 357, Safety Engineering

*These courses will bear the designation of the major department of the student.*

### MECHANICAL ENGINEERING

<table>
<thead>
<tr>
<th>Course</th>
<th>First Semester Hrs.</th>
<th>Course</th>
<th>Second Semester Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engl. 111, College English</td>
<td>3</td>
<td>Communications Elective</td>
<td>3</td>
</tr>
<tr>
<td>Math. 142, Intro. Analysis I</td>
<td>5</td>
<td>Math. 244, Intro. Analysis II</td>
<td>3</td>
</tr>
<tr>
<td>Speech 111, Ext. Speaking</td>
<td>2</td>
<td>Physics 243E, Gen. College Phys.</td>
<td>4</td>
</tr>
<tr>
<td>Humanities or Social Science</td>
<td>5</td>
<td>Humanities or Social Science</td>
<td>3</td>
</tr>
<tr>
<td>ROTC or Physical Activities</td>
<td>1</td>
<td>ROTC or Physical Activities</td>
<td>1</td>
</tr>
</tbody>
</table>

18 18

<table>
<thead>
<tr>
<th>Course</th>
<th>First Semester Hrs.</th>
<th>Course</th>
<th>Second Semester Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math. 244, Intro. Analysis III</td>
<td>3</td>
<td>Math. 346, Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>A.E. 227, Dig. Comp.</td>
<td>2</td>
<td>A.E. 373, Engr. Mechanics II</td>
<td>3</td>
</tr>
<tr>
<td>A.E. 223, Engr. Mechanics I</td>
<td>3</td>
<td>M.E. 298, Thermodynamics I</td>
<td>3</td>
</tr>
<tr>
<td>Humanities or Social Science</td>
<td>5</td>
<td>Chem. 111, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>ROTC or Physical Activities</td>
<td>1</td>
<td>ROTC or Physical Activities</td>
<td>1</td>
</tr>
<tr>
<td>M.E. 300, Professional Development</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

18 18

<table>
<thead>
<tr>
<th>Course</th>
<th>First Semester Hrs.</th>
<th>Course</th>
<th>Second Semester Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engr. 361, Fluid and Heat Flow</td>
<td>4</td>
<td>A.E. 398, Systems Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>Engr. 363, E. M. Fields</td>
<td>2</td>
<td>Physics 311, Topics in Mod. Phys.</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 112, General and Inorganic</td>
<td>5</td>
<td>A.E. 399, Exp. Mechanics Lab.</td>
<td>1</td>
</tr>
<tr>
<td>M.E. 300, Prof. Development</td>
<td>0</td>
<td>Engr. 364, Field Analysis</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Humanities or Social Science</td>
<td>3</td>
</tr>
</tbody>
</table>

18 18

### JUNIOR

<table>
<thead>
<tr>
<th>Course</th>
<th>First Semester Hrs.</th>
<th>Course</th>
<th>Second Semester Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>E.E. 392, Electronic Circuits</td>
<td>4</td>
<td>Engr. 418, Seminar</td>
<td>1</td>
</tr>
<tr>
<td>M.E. Electives</td>
<td>3</td>
<td>M.E. 441, Mech. Engr. Des. II</td>
<td>3</td>
</tr>
<tr>
<td>Humanities or Social Sciences</td>
<td>5</td>
<td>M.E Electives</td>
<td>6</td>
</tr>
<tr>
<td>M.E. 300, Prof. Development</td>
<td>0</td>
<td>Humanities or Social Sciences</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.E. 300, Professional Development</td>
<td>0</td>
</tr>
</tbody>
</table>

18 18

Mechanical Engineering electives may be selected from any departmental offerings numbered 400 and Math 447. These courses should be selected to emphasize: (1) design, (2) instrumentation and automation, or (3) thermodynamics-heat transfer-fluids. 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.
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.

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 page 260.

The following courses will be listed as offerings of each degree granting department. Students will receive major department credit by enrolling in any section of these courses.

125. Engineering Concepts, Analysis, Design and Synthesis. (3). 2R; 2L.
The use of the slide rule and computers in the study of engineering concepts, analysis, design and synthesis. Available to Electrical Engineering freshmen students on an elective basis.

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.


364. Field Analysis. (3). 3R. Potential theory; applications of the equations of Poisson and Helmholtz and of the diffusions and wave equations to various field and flow phenomena; analysis of representative problems. Prerequisites: Engr. 361 and 363.
393. Engineering Analysis (3). 2R; 3L. The professional method of engineering analysis and design with the objective of developing in the student the ability to deal with new situations in a creative manner by means of fundamental principles; an integration of the engineering sciences and mathematics through use in problem-solving activities. Prerequisite: A.E. 398 or concurrent enrollment, Engr. 361, Engr. 363.

413. Seminar. (1). 2L. Problem solving by discussion groups, preparation and presentation of technical papers, and professional considerations. Prerequisite: Senior standing or consent of Instructor.

AERONAUTICAL ENGINEERING

Lower Division Courses


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: A.E. 127 or equivalent.

Upper Division Courses


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 materials and materials science. Experiment design, measurement and data interpretation. Prerequisite: 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. 416, or concurrent.


416. Supersonic and Hypersonic Aerodynamics. (2). 2R. One-dimensional flow of a perfect gas; shock and expansion waves; applications to nozzles, wind tunnels, and airfoils in two-dimensional supersonic flow. General features and assumptions of hypersonic flow; hypersonic similarity; Newtonian and small-disturbance theory; introduction to free molecule and rarified gas flows. Prerequisite: A. E. 324.


426. Flight Structures Laboratory. (1). 3L. Special projects in the design and analysis of flight vehicle structures. Prerequisite: A. E. 425.


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 concentration. Energy methods. Prerequisite: A. E. 333.


476. Selected Topics in Structural Engineering. (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.


504. Research in Aeronautical Engineering. (2). Individual experimental work by qualified graduate students. Problems to be selected in consultation with instructor.

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. (3). Inviscid compressible flow theory in transonic, supersonic, and hypersonic speed regimes.


522. Advanced Flight Structures II. (3). The analysis of statically indeterminate structures by the matrix displacement method.


550. Aeronautical Seminar. (1). A fortnightly two-hour meeting of staff members and graduate students to discuss current aeronautical problems.

Graduate Courses in Engineering Mechanics

Prerequisite for all graduate course is department consent.


530. Theory of Elasticity. (3). Elements of the common theory of elasticity with emphasis on two-dimensional problems in strain and stress.

532. Theory of Plates and Shells. (3). Bending of flat plates of various shapes and boundary conditions. Membrane stresses in arbitrary shells and bending stresses for shells of revolution.

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.

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 of space motion; particle dynamics, central force motion, variational principles and Lagranges equations, rigid body dynamics, Euler's moment equations, gyroscopic motion.


539. Variational Principles of Mechanics. (3). An approach to the dynamics of discrete particles or bodies using basic variational principles and variational calculus.


543. Corrosion and Chemical Process in Materials. (3). Classical thermodynamics applied to liquid and solid state reactions in single and multi-component systems, cells, solid state devices, etc. Prerequisite: A. E. 347 or equivalent.


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.


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 new linear 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. 364, 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.


491. UHF Generation and Amplification. (3). High frequency limitations of vacuum tubes; theory and characteristics of microwave oscillators and amplifiers; Klystrons, Magnetrons, Traveling Wave Tubes, and Masers. Prerequisite: E. E. 482 or concurrent enrollment.

492. Physical Electronics. (3). Theory of electron emission, optics, and beam deflection devices; storage tubes; surface and junction effects in metals and semiconductors, high frequency limitations to vacuum and semiconductor devices; microwave tubes. Prerequisite: Engr. 364, A. E. 347 and E. E. 392.

494. Automatic Computers. (4). 3R; 3L. Basic construction and principles of operation of analog and digital computing machines and use of these machines in the solution of engineering and scientific problems. Prerequisite: E. E. 480 or Department consent.

495. Electrical Design Project II. (1). 3L. Prerequisite: E. E. 485 or Department consent.

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 wave forms. 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.


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.

SCHOOL OF ENGINEERING 269
582. Theory of System Response. (3). Response of linear physical systems with emphasis on electrical networks. Laplace and Fourier Transforms, complex frequency concepts, frequency spectra, pole and zero viewpoint of network analysis and synthesis, complex plane loci, attenuation-phase diagrams. Introduction to advanced theory of feedback systems; servo-mechanisms, negative feedback amplifiers and oscillators; stability criteria. Prerequisite: E. E. 480 or Department consent.

583. Electromagnetic Field Theory I. (3). Introduction to advanced mathematical treatment of electric and magnetic fields using vector notation; boundary value problems; time varying fields; development of Maxwell's Equations. Prerequisite: Engr. 363 or department consent.

584. Electromagnetic Field Theory II. (3). Application of Maxwell's Equations; eddy currents, skin effect; electromagnetic waves; introduction to wave guides, cavity resonators, radiation, and antenna. Prerequisite: E. E. 583.

585. Electron Dynamics. (3). Electron ballistics in static and dynamic fields including space charge effects; electron optics, space charge spreading, aberration and thermal velocity limitations; space charge waves, theory of Klystrons, Magnetrons and Traveling Wave Tubes. Prerequisite: E. E. 583 or concurrent enrollment.

586. Solid-State Electronics. (3). Principles of operation of solid-state electronic devices with emphasis on the underlying physical phenomena. Special treatment will be given to electron emission, semiconductor, dielectric and magnetic devices. Some consideration of circuit application of these devices. 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). (6L). 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.


591. Instrumentation and Control of Nuclear Reactors. (3R). Reactor kinetics; time constants, fission projects and poisoning and temperature effects. Control rod effectiveness; neutron flux depression. Reactor instrumentation and control elements. Reactor control systems; internal and external loops. Analysis of transient and steady-state response. Control during startup; steady-state operation and shut-down. Prerequisite: Department consent.


ENGINEERING GRAPHICS

Lower Division Courses

110. Engineering Graphics I. (2). 4L. Basic spatial 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 the preparation of working drawings and specifications. Prerequisite: E. G. 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: Engineering Graphics 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.

256. Advanced Tool Drafting. (2). 6L. The study of the materials and conventional practices used in the graphical presentation of information pertaining to the design and fabrication of jigs, fixtures, and dies, including the solution of simple design problems. Prerequisite: E. G. 213.

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: E. G. 110 or department consent.

INDUSTRIAL ENGINEERING

Lower Division Courses

254. Engineering Probability & Statistics. (3). Basic theory of probability and statistics with emphasis on applications to engineering. Prerequisite: Math. 244 or concurrent.

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.


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.


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.

490. Senior Projects in Industrial Engineering. (1) or (2). Selection and research of a specific Industrial Engineering topic.

Graduate Courses

540. Advanced Engineering Economy. (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. Electronic Data Processing. (3). A study of the systems aspect of digital computing with an introduction to the COBOL language. Prerequisite: A. E. 227 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

Upper Division Courses

298. Thermodynamics I. (3). The First and Second Laws. Thermodynamic analysis as applied to thermal, mechanical and electrical systems. Prerequisites: Math. 244, Physics 243E and I. E. 254 or concurrent.

300. Professional Development. (0). A colloquium to acquaint the student with the practice of Mechanical Engineering. One meeting per month.


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. (2). 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 and systems. Prerequisites: M. E. 301.

405. Experimental Engineering. (3). Prerequisite: M. E. 373. Study of theoretical, analytic and statistical aspects of basic mechanical engineering experimentation. Theories of test planning data, checking, analysis and synthesis, and evaluation are considered. Prerequisites: Department consent.


422. Intermediate Heat Transfer. (3). A rigorous treatment of heat transfer including transient and multi-dimensional 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. (3). Continuation of M. E. 439, application of mechanics of materials and thermal effects to engineering systems and components. Introduction to theory of lubrication and rheology. Prerequisite: M. E. 439.

448. Mechanical Engineering Projects. (2). 6L. A design, analysis or research project under faculty supervision. Problems are selected according to the student's interest. Prerequisites: Senior standing and department consent.

450. Topics in Mechanical Engineering. (1-3). Investigation of selected phases of Mechanical Engineering. Prerequisite: 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 Fracture Mechanics. (3). Methods of fatigue and fracture mechanics together with reliability study as applied to Mechanical Engineering Design problems. Prerequisites: A. E. 530, or department consent.

549. Advanced Mechanical Engineering Design. (3). Studies of current Mechanical Engineering design problems which involve high speed, high and low temperatures, vibrations and dynamic loading. Prerequisites: Math. 447, or department consent.


555-556. Advanced Thermodynamics. (3-3). Prerequisites: M. E. 402, Math. 447 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, Math. 447 or department consent.

559. Mechanical Control. (3). Application of feedback methods to mechanical and combined control systems. Prerequisite: Math. 447, or department consent.

561. Similitude in Engineering. (2). Critical analysis of models and analogies as aids to engineering design. Prerequisite: Math. 447, or 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.

564-565. Nuclear Power Plants. (3-3). Analysis types of nuclear reactors for power plants' operation with emphasis on reactor fuels, moderators, coolant, control, shielding, and auxiliary equipment. Prerequisite: Math. 447, or department consent.

567. Theory of Rational Design. (3). Design synthesis techniques including: Frequency, Axiomatic and Baysian Formulation; Statistical Inference Techniques, Jayne's Maximum Entrophy principle, Error Analysis, systems with random inputs. Prerequisite: Department consent.

568. Rational Design Methods. (3). A continuation of M. E. 567 with emphasis on application to creativity, optimization, reliability, maintainability, and concept analysis. Prerequisite: M. E. 567 or department consent.

The Summer School

JACKSON O. POWELL, Ph.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 undergraduate degrees offered by the University may be earned during the summer. Graduate work leading to the Masters degree is available through certain departments.

SUMMER SESSION BULLETIN

The bulletin of the summer session lists dates, all courses offered, names of instructors, and hours of credit. 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, 67205.

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 43.

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 works 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 exclamatory 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

<table>
<thead>
<tr>
<th>A</th>
<th>P A G E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting Department:</td>
<td></td>
</tr>
<tr>
<td>Certificate of Public Accountant</td>
<td>174</td>
</tr>
<tr>
<td>Courses</td>
<td>175</td>
</tr>
<tr>
<td>Curricular Emphasis</td>
<td>172</td>
</tr>
<tr>
<td>Minor</td>
<td>174</td>
</tr>
<tr>
<td>Administration Department:</td>
<td></td>
</tr>
<tr>
<td>Courses</td>
<td>177</td>
</tr>
<tr>
<td>Curricular Emphasis</td>
<td>172</td>
</tr>
<tr>
<td>Educational Administration and Supervision</td>
<td>194</td>
</tr>
<tr>
<td>Administrative Officers</td>
<td>7</td>
</tr>
<tr>
<td>Admission Requirements</td>
<td>38</td>
</tr>
<tr>
<td>Advanced Standing</td>
<td>40</td>
</tr>
<tr>
<td>College of Business Administration</td>
<td>170</td>
</tr>
<tr>
<td>College of Education</td>
<td>188</td>
</tr>
<tr>
<td>College of Fine Arts</td>
<td>225</td>
</tr>
<tr>
<td>College of Liberal Arts and Sciences</td>
<td>102</td>
</tr>
<tr>
<td>Graduate School</td>
<td>41</td>
</tr>
<tr>
<td>School of Engineering</td>
<td>260</td>
</tr>
<tr>
<td>Summer School</td>
<td>275</td>
</tr>
<tr>
<td>University College</td>
<td>87</td>
</tr>
<tr>
<td>Advanced Placement Credit</td>
<td>41</td>
</tr>
<tr>
<td>Advanced Standing, Admission to</td>
<td>40</td>
</tr>
<tr>
<td>Advanced Standing Examination</td>
<td>40</td>
</tr>
<tr>
<td>Advisors, Faculty</td>
<td>89</td>
</tr>
<tr>
<td>Aeronautical Engineering Department:</td>
<td></td>
</tr>
<tr>
<td>Courses</td>
<td>265</td>
</tr>
<tr>
<td>Requirements</td>
<td>261</td>
</tr>
<tr>
<td>Aerospace Studies Department:</td>
<td></td>
</tr>
<tr>
<td>Air Force ROTC</td>
<td>196</td>
</tr>
<tr>
<td>Courses</td>
<td>198</td>
</tr>
<tr>
<td>Extracurricular Activities</td>
<td>198</td>
</tr>
<tr>
<td>Financial Assistance Program</td>
<td>197</td>
</tr>
<tr>
<td>Flight Instruction Program</td>
<td>197</td>
</tr>
<tr>
<td>Four-Year Program</td>
<td>196</td>
</tr>
<tr>
<td>General Military Course</td>
<td>196</td>
</tr>
<tr>
<td>Pay and Allowances</td>
<td>197</td>
</tr>
<tr>
<td>Professional Officer Course</td>
<td>197</td>
</tr>
<tr>
<td>Two-Year Program</td>
<td>197</td>
</tr>
<tr>
<td>Aid, Student</td>
<td>64</td>
</tr>
<tr>
<td>American Civilization Department:</td>
<td></td>
</tr>
<tr>
<td>Courses</td>
<td>109</td>
</tr>
<tr>
<td>Major</td>
<td>109</td>
</tr>
</tbody>
</table>
Anthropology Department ........................................ 110
Applied Music Instructors ........................................ 33
Applied Music Regulations ........................................ 245
Art Department:
  Bachelor of Art Education Requirements ..................... 227
  Bachelor of Fine Arts Requirements .......................... 226
  Courses .................................................. 228
  Degrees .................................................. 227
  General Requirements ...................................... 227
  Major, Liberal Arts ......................................... 227
  Minor, Liberal Arts .......................................... 227
Art Education:
  Bachelor of Education Requirements ......................... 227
  Courses .................................................. 228
Assistantships:
  Clerical .................................................. 65
  Departmental ............................................... 65
  Graduate .................................................. 64
  Library .................................................... 65
  Technical .................................................. 65
Attendance ....................................................... 52
Audit Course Fees ............................................... 44
Auditor, Regulations Concerning ................................. 47
Awards .................................................................. 67
  Sorority and Fraternity ....................................... 62

B

Bachelor of Art Education Requirements ......................... 227
Bachelor of Arts in Education Requirements ..................... 188
Bachelor of Business Administration Requirements ............ 172
Bachelor of Fine Arts Requirements ............................. 226
Bachelor of Music Education, Vocal Emphasis .................... 242
Bachelor of Music Education Requirements ...................... 241
Bachelor of Music Requirements .................................. 240
Bachelor of Science:
  Aeronautical Engineering ...................................... 261
  Biology ..................................................... 113
  Business Administration ...................................... 173
  Chemistry ................................................... 116
  Electrical Engineering ...................................... 261
  Geology ..................................................... 124
  Industrial Engineering ...................................... 262
  Mathematics ................................................ 135
  Mechanical Engineering ..................................... 263
  Physics ...................................................... 143
Band and Orchestral Majors Curriculum ......................... 246
Biology Department:
  Courses ..................................................... 113
  Major ....................................................... 113
  Minor ....................................................... 113

278 INDEX
Educational Psychology Courses .............................................. 199
Electrical Engineering:
  Courses ............................................................................ 268
  Requirements .................................................................. 261
Elementary Education:
  Certificate ........................................................................ 190
  Courses ............................................................................. 201
Eligibility for Courses ............................................................. 49
Employment Opportunities .................................................... 58
Engineering (See School of)
Engineering Graphics Courses ................................................ 271
English, Language and Literature Department:
  Courses ............................................................................. 120
  Major .............................................................................. 119
  Minor .............................................................................. 120
Enrollment Summary (Inside Back Cover) ............................... 39, 87
Entrance Physical Examination ............................................ 39
Examination, Advanced Standing ........................................... 40
Examinations, Rules Regarding ............................................ 53
Excess Hours, Regulation ..................................................... 50
Exemptions for Superior Achievement .................................... 50
Extension Courses .................................................................. 54

Faculty .................................................................................. 8
Fairmount College of Liberal Arts and Sciences:
  Admission Requirements ................................................... 102
  Curriculum ....................................................................... 109
  Degrees ............................................................................ 102
  Field Major ...................................................................... 104
  Major Requirements .......................................................... 103
  Minor Requirements .......................................................... 104
  Requirements .................................................................... 102
  Special Programs of Study ............................................... 105
  Transfer of Credit ............................................................... 105
Fees:
  Campus Privilege .................................................................. 43
  Departmental ..................................................................... 44
  Incidental .......................................................................... 43
  Miscellaneous .................................................................... 45
Fellowships, Graduate .......................................................... 79
Field Major ............................................................................. 104
Fields of Study Prescribed .................................................. 54
Fine Arts, Bachelor of, Requirements .................................. 226
Fine Arts, College of (See Art Department and School of Music)
Foreign Students, Admission .................................................. 57
Foundations for Religious Education ..................................... 85
Fraternities, Social and Honorary ........................................... 62
French:
  Courses ............................................................................ 155

INDEX 281
| Major | .............................. | 154 |
| Minor | .............................. | 154 |

**Freshman Courses:**
- Definition | ......................... | 49 |
- Eligibility for | ......................... | 49 |

**G**
- General Music Requirements | ......................... | 243 |
- General Regulations | ......................... | 46 |
- General Requirements, Admission | ......................... | 38 |
- General Requirements for Graduation | ......................... | 54 |
- Geography:
  - Courses | ......................... | 128 |
  - Minor | ......................... | 125 |
- Geology and Geography Department:
  - Courses | ......................... | 125 |
  - Major | ......................... | 124 |
  - Minor | ......................... | 125 |
- German Department:
  - Courses | ......................... | 129 |
  - Major | ......................... | 128 |
  - Minor | ......................... | 128 |
- Grading Notation | ......................... | 46 |
- Graduate Assistantships | ......................... | 64 |
- Graduate Courses:
  - Definition | ......................... | 49 |
  - Eligibility for | ......................... | 49 |
- Graduate Scholarships | ......................... | 79 |
- Graduate School:
  - Admission | ......................... | 41 |
  - Assistantships | ......................... | 64 |
  - Bulletin | ......................... | 42 |
  - Degrees | ......................... | 41 |
  - Fees | ......................... | 43 |
  - Scholarships | ......................... | 79 |
- Graduation Requirements, General | ......................... | 54 |
- Graduation with Honors | ......................... | 56 |
- Graduation, Catalog Requirements | ......................... | 54 |
- Greek Courses | ......................... | 157 |

**H**
- Health and Hospitalization | ......................... | 60 |
- High School Preparation, Recommended | ......................... | 88 |
- History Department:
  - Courses | ......................... | 130 |
  - Major | ......................... | 130 |
  - Minor | ......................... | 130 |
- Honorary Organizations | ......................... | 62 |
- Honors and Awards | ......................... | 67 |
Honors, Graduation with ........................................ 56
Honors Sections .................................................. 51
Hospitalization .................................................... 60
Hours:
  Credit Point Index ............................................ 47
  Excess ............................................................. 50
  For Graduation, D-work .................................... 54
  For Graduation, Required .................................. 54
  Maximum per Semester ....................................... 50
  Residence, Required in ...................................... 54
  Upper Division, Required .................................... 54
Housing ............................................................. 59
Humanities Requirements ......................................... 55
Human Relations ................................................... 57

I

Incomplete, Regulations Regarding .............................. 47
Industrial Education Department:
  Courses .......................................................... 203
  Major .............................................................. 203
  Minor .............................................................. 203
Industrial Engineering:
  Courses ............................................................ 271
  Requirements .................................................... 262
International Students ............................................. 57
Italian Courses ...................................................... 156

J

Job Opportunities .................................................. 53
Journalism Department:
  Courses .......................................................... 134
  Major .............................................................. 133
Junior Courses:
  Definition ....................................................... 49
  Eligibility ....................................................... 49

L

Laboratory Science Requirement .................................. 54
Language Requirements, Liberal Arts .............................. 102
Latin and Greek:
  Courses .......................................................... 156
  Major .............................................................. 156
  Minor .............................................................. 156
Law, Pre-
Liberal Arts and Sciences (See Fairmount College of) ..... 106
Library Assistants ................................................... 65
Library Science Courses ............................................ 205
Library Staff ........................................................ 205
Living Accommodations .............................................. 59

INDEX 283
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Officers, Administrative</td>
<td>7</td>
</tr>
<tr>
<td>Officers, Board of Regents</td>
<td>7</td>
</tr>
<tr>
<td>Orchestral Instrument Curricula</td>
<td>245</td>
</tr>
<tr>
<td>Organ Majors Curriculum</td>
<td>246</td>
</tr>
<tr>
<td>Organizations:</td>
<td></td>
</tr>
<tr>
<td>Honorary</td>
<td>62</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>63</td>
</tr>
<tr>
<td>Regulations Concerning</td>
<td>61</td>
</tr>
<tr>
<td>Social</td>
<td>62</td>
</tr>
<tr>
<td>Orientation</td>
<td>57, 89</td>
</tr>
<tr>
<td>Personal Counseling</td>
<td>57</td>
</tr>
<tr>
<td>Philosophy Department:</td>
<td></td>
</tr>
<tr>
<td>Courses</td>
<td>140</td>
</tr>
<tr>
<td>Major</td>
<td>140</td>
</tr>
<tr>
<td>Minor</td>
<td>140</td>
</tr>
<tr>
<td>Physical Activities Requirements</td>
<td>55</td>
</tr>
<tr>
<td>Physical Education Department:</td>
<td></td>
</tr>
<tr>
<td>Major</td>
<td>216</td>
</tr>
<tr>
<td>Minor</td>
<td>216</td>
</tr>
<tr>
<td>Professional Courses</td>
<td>217</td>
</tr>
<tr>
<td>Service Courses</td>
<td>216</td>
</tr>
<tr>
<td>Physical Examination Requirements</td>
<td>39, 87</td>
</tr>
<tr>
<td>Physics Department:</td>
<td></td>
</tr>
<tr>
<td>Courses</td>
<td>143</td>
</tr>
<tr>
<td>Major</td>
<td>143</td>
</tr>
<tr>
<td>Minor</td>
<td>143</td>
</tr>
<tr>
<td>Piano Major, Curriculum</td>
<td></td>
</tr>
<tr>
<td>Police Science:</td>
<td></td>
</tr>
<tr>
<td>Courses</td>
<td>98</td>
</tr>
<tr>
<td>Description</td>
<td>92</td>
</tr>
<tr>
<td>Minor</td>
<td>98, 145</td>
</tr>
<tr>
<td>Political Science Department:</td>
<td></td>
</tr>
<tr>
<td>Courses</td>
<td>146</td>
</tr>
<tr>
<td>Major</td>
<td>145</td>
</tr>
<tr>
<td>Minor</td>
<td>146</td>
</tr>
<tr>
<td>Pre-Dental</td>
<td>107</td>
</tr>
<tr>
<td>Pre-Freshman Period</td>
<td>57</td>
</tr>
<tr>
<td>Pre-Law</td>
<td>107</td>
</tr>
<tr>
<td>Pre-Medical</td>
<td>107</td>
</tr>
<tr>
<td>Pre-Optometry</td>
<td>107</td>
</tr>
<tr>
<td>Pre-Pharmacy</td>
<td>107</td>
</tr>
<tr>
<td>Prescribed Fields of Study</td>
<td>54</td>
</tr>
<tr>
<td>Pre-Theological</td>
<td>108</td>
</tr>
<tr>
<td>Pre-Veterinary</td>
<td>107</td>
</tr>
<tr>
<td>Prizes</td>
<td>67</td>
</tr>
<tr>
<td>Probation, Rules Regarding</td>
<td>48</td>
</tr>
</tbody>
</table>
Requirements: |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Admission</td>
<td>58</td>
</tr>
<tr>
<td>Graduation, General</td>
<td>54</td>
</tr>
<tr>
<td>Prescribed Fields of Study</td>
<td>54</td>
</tr>
</tbody>
</table>

(See, also, various Colleges, Schools and Departments)

Resident Fees .................................. 43

R. O. T. C (See Aerospace Studies and Military Science) ........................................... 154

Romance Languages Department .............. 154

Rules Regarding Examinations .............. 53

Rules Regarding Scholarship ............... 46

Schedules ...................................... 89

Scholarship, Rules Regarding .............. 46

Scholarships:
- Graduate .................................. 79
- Undergraduate .............................. 68

School of Engineering:
- Admission ................................ 260
- Aeronautical Engineering Courses ...... 265
- Common Sequence of Courses ............. 260
- Curricula ................................ 260
- Departmental Requirements ............. 261
- Electrical Engineering Courses ....... 268
- Engineering Graphics Courses .......... 271
- Engineering Mechanics, Graduate Courses 268
- Entrance Requirements .................. 260
- Industrial Engineering Courses ....... 271
- Mechanical Engineering Courses ....... 272

School of Music:
- Admission ................................ 237
- Applied Music Regulations .............. 245
- Bachelor of Music Requirements ......... 240
- Bachelor of Music Education Requirements 241
- Courses ................................ 253
- General Music Requirements ............. 243
- Music Minor, Education .................. 240
- Music Major, Liberal Arts ............... 239
- Music Minor, Liberal Arts ............... 240
- Proficiency Examinations ............... 238
- Secondary Education Courses .......... 220
- Secondary Teaching Certificate ....... 189

Secretarial Training Department:
- Certificate of Applied Science ....... 173
- Courses ................................ 185
- Eligibility for Courses ................ 184
- Restrictions ............................. 185

Senior Courses:
- Definition ................................ 49
- Eligibility ............................... 49

INDEX 287
Social Organizations .................................................. 62
Social and Philosophical Foundations of Education Courses ...... 222
Social Science Requirements ........................................... 55
Social Studies:
   Major .................................................................. 193
   Minor .................................................................. 193
Social Work Courses ....................................................... 162
Sociology Department:
   Courses .................................................................. 159
   Major .................................................................... 159
Sophomore Courses:
   Definition .................................................................. 49
   Eligibility for .......................................................... 49
Sororities, Social ............................................................... 62
Spanish:
   Courses .................................................................. 158
   Major .................................................................... 157
   Minor .................................................................... 157
Special Examinations ....................................................... 53
Special Loan Funds .......................................................... 81
Special Programs, Liberal Arts ......................................... 105
Special Students ............................................................. 39
Speech Defects, Corrective Training for ................................. 207
Speech Department:
   Courses .................................................................. 163
   Major .................................................................... 162
   Minor .................................................................... 163
Student Aid .................................................................. 66
Student Government ...................................................... 60
Student Health and Hospitalization .................................... 60
Student Housing ............................................................. 59
Student Loans ................................................................ 80
Student Personnel and Guidance Courses ............................. 223
Student Personnel Services ............................................. 56
Student Responsibility .................................................... 52
Student Services:
   Campus Activities Center ............................................ 61
   Counseling ................................................................ 57
   Employment ................................................................ 58
   Health and Hospitalization ........................................ 60
   Housing .................................................................... 59
   Orientation ................................................................ 57
   Reading Improvement Laboratory .................................. 59
   Student Government .................................................. 60
   Teacher Placement .................................................... 58
   Veteran’s Affairs ....................................................... 58
   Student Teaching ....................................................... 189, 221
   Students, Classification ............................................. 49
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residence Credit</td>
<td>96</td>
</tr>
<tr>
<td>Standards</td>
<td>88</td>
</tr>
<tr>
<td>Transfer of Credit to a Degree Granting College</td>
<td>91</td>
</tr>
<tr>
<td>University Faculty</td>
<td>8</td>
</tr>
<tr>
<td>Upper Division Courses:</td>
<td></td>
</tr>
<tr>
<td>Eligibility for</td>
<td>49</td>
</tr>
<tr>
<td>Hours Required for Graduation</td>
<td>54</td>
</tr>
<tr>
<td>Veteran's Affairs</td>
<td>58</td>
</tr>
<tr>
<td>Violin Major Curriculum</td>
<td>250</td>
</tr>
<tr>
<td>Vocal Emphasis</td>
<td>242</td>
</tr>
<tr>
<td>Voice Major Curriculum</td>
<td>241</td>
</tr>
<tr>
<td>Withdrawal from Courses</td>
<td>52</td>
</tr>
<tr>
<td>Withdrawal from the University</td>
<td>52</td>
</tr>
</tbody>
</table>
### ENROLLMENT SUMMARY 1966-1967

#### University College

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Juniors</td>
<td>82</td>
<td>29</td>
<td>111</td>
<td></td>
</tr>
<tr>
<td>Sophomores</td>
<td>797</td>
<td>316</td>
<td>1113</td>
<td></td>
</tr>
<tr>
<td>Freshmen</td>
<td>2221</td>
<td>1258</td>
<td>3479</td>
<td></td>
</tr>
<tr>
<td>Specials</td>
<td>13</td>
<td>2</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Div. Cont. Educ.</td>
<td>511</td>
<td>321</td>
<td>832</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3624</td>
<td>1926</td>
<td>5550</td>
<td></td>
</tr>
</tbody>
</table>

#### Fairmount College of Liberal Arts and Sciences

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seniors</td>
<td>413</td>
<td>169</td>
<td>582</td>
<td></td>
</tr>
<tr>
<td>Juniors</td>
<td>486</td>
<td>200</td>
<td>686</td>
<td></td>
</tr>
<tr>
<td>Sophomores</td>
<td>237</td>
<td>166</td>
<td>403</td>
<td></td>
</tr>
<tr>
<td>Freshmen</td>
<td>11</td>
<td>5</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Specials</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1151</td>
<td>541</td>
<td>1692</td>
<td></td>
</tr>
</tbody>
</table>

#### College of Business Administration

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seniors</td>
<td>308</td>
<td>18</td>
<td>326</td>
<td></td>
</tr>
<tr>
<td>Juniors</td>
<td>424</td>
<td>48</td>
<td>472</td>
<td></td>
</tr>
<tr>
<td>Sophomores</td>
<td>263</td>
<td>70</td>
<td>333</td>
<td></td>
</tr>
<tr>
<td>Freshmen</td>
<td>12</td>
<td>1</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Specials</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1012</td>
<td>137</td>
<td>1149</td>
<td></td>
</tr>
</tbody>
</table>

#### School of Engineering

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seniors</td>
<td>236</td>
<td>0</td>
<td>236</td>
<td></td>
</tr>
<tr>
<td>Juniors</td>
<td>217</td>
<td>3</td>
<td>220</td>
<td></td>
</tr>
<tr>
<td>Sophomores</td>
<td>146</td>
<td>2</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>Freshmen</td>
<td>11</td>
<td>0</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Specials</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>612</td>
<td>5</td>
<td>617</td>
<td></td>
</tr>
</tbody>
</table>

#### College of Education

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seniors</td>
<td>204</td>
<td>273</td>
<td>477</td>
<td></td>
</tr>
<tr>
<td>Juniors</td>
<td>190</td>
<td>403</td>
<td>593</td>
<td></td>
</tr>
<tr>
<td>Sophomores</td>
<td>103</td>
<td>262</td>
<td>365</td>
<td></td>
</tr>
<tr>
<td>Freshmen</td>
<td>5</td>
<td>16</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Specials</td>
<td>3</td>
<td>8</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>505</td>
<td>962</td>
<td>1467</td>
<td></td>
</tr>
</tbody>
</table>

#### College of Fine Arts

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seniors</td>
<td>90</td>
<td>104</td>
<td>194</td>
<td></td>
</tr>
<tr>
<td>Juniors</td>
<td>84</td>
<td>93</td>
<td>177</td>
<td></td>
</tr>
<tr>
<td>Sophomores</td>
<td>49</td>
<td>75</td>
<td>124</td>
<td></td>
</tr>
<tr>
<td>Freshmen</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Specials</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>225</td>
<td>278</td>
<td>503</td>
<td></td>
</tr>
</tbody>
</table>

#### Graduate School

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>1370</td>
<td>768</td>
<td>2138</td>
<td>2138</td>
</tr>
</tbody>
</table>

#### Summer School, 1967

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grand Total</td>
<td>2747</td>
<td>2443</td>
<td>5190</td>
<td>5190</td>
</tr>
<tr>
<td>Duplicates Deducted</td>
<td></td>
<td></td>
<td>3,191</td>
<td></td>
</tr>
<tr>
<td>Net Total</td>
<td>18,306</td>
<td>15,115</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>