This catalog becomes effective September 1, 1969.

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CALENDAR FOR 1969-1970

1969

August 16 ................. Last date on which to file application for the fall semester.
September 10, 11, 12, 13, 14, Wednesday night through Saturday .................. Registration for first semester
September 15, Monday .......... Classes begin
October 23, Saturday ........... Final date for removing in completes
November 7, Friday ........... Mid-term reports
November 21, Friday .......... Final date for non-penalty grades
November 27, 28, 29, Thursday, Friday, Saturday .... Thanksgiving recess
December 1, Monday ........... Advising for preregistration for second semester
December 19, Friday .......... Preregistration ends
December 20, Saturday ......... Christmas recess begins at close of classes

1970

January 5, Monday .......... Classes resume
January 10, Saturday ....... Classes close
January 12, 13, 14, 15, 16, 17, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday .......... First semester final examinations
January 24, 26, 27, 28, Saturday, Monday, Tuesday, Wednesday .......... Registration for second semester
January 29, Thursday ....... Classes begin
March 14, Saturday .......... Final date for removing in completes
March 21, Saturday .......... Spring recess begins at close of classes
March 30, Monday .......... Classes resume
April 3, Friday ............. Mid-term reports
April 18, Saturday .......... Final date for non-penalty grades
April 27, Monday .......... Advising for preregistration for fall semester
May 1, Friday ............. May festival
May 15, Friday .......... Preregistration ends
May 19, Tuesday .......... Classes close
May 20, 21, 22, 23, 24, 25, 26, Wednesday, Thursday, Friday, Saturday, Monday, Tuesday .......... Second semester final examinations
May 31, Sunday .......... Commencement exercises
June 5, 6, Friday, Saturday .......... Summer school registration
June 8, Monday .......... Summer school classes begin
July 31, Friday .......... Summer session closes
August 2, Sunday .......... Summer session commencement
ADMINISTRATIVE OFFICERS OF THE UNIVERSITY—1968-1969

CLARK D. AHLBERG ........................... President
ROGER D. LOWE .................. Assistant to the President for Finance and Operations and Business Manager

JOHN BREAZEALE .................. Dean of the Graduate School
FRANCIS JABARA ... Dean of the College of Business Administration
LEONARD M. CHAFFEE ............. Dean of the College of Education
CHARLES V. JAKOWATZ .......... Dean of the School of Engineering
WALTER DUERKSEN ............ Dean of the College of Fine Arts
J. K. SOWARDS ................. Dean of the Fairmount College of Liberal Arts and Sciences

J. ROBERT BERG .................. Dean of University College
GORDON TERRY WILLIGER ... Director of Summer Session and Workshop Program and Assistant Dean of the Graduate School

JAMES J. RHATIGAN .......... Dean of Students
JOSEPHINE FUGATE ............. Dean of Women
CARL FARRING ... Director of Admissions and Records
LAURA M. CROSS .............. Associate Director of Admissions
C. EDWARD CARROLL ........... Director of Libraries
ARMIN BRANDHORST ........... Director of Physical Plant
FREDERICK SUDERMANN ... Director of Research and Governmental Programs (Leave of Absence—1968-1969)

HELEN CROCKETT ............... Director of Continuing Education
GEORGE J. WORDEN .......... Director of Information Services
ALBERT C. KATZENMEYER .......... Director of Athletics

BOARD OF REGENTS OF THE STATE OF KANSAS—1968-1969

C. N. CUSHING, Chairman .................... Downs
JAMES J. BASHAM, M. D. .................... Fort Scott
HENRY A. BUBB .................... Topeka
ARTHUR H. CROMB .................. Mission Hills
JOHN F. EBERHARDT .............. Wichita
T. J. GRIFFITH ................... Manhattan
DWIGHT D. KLINGER ............... Ashland
LAWRENCE D. MORGAN .......... Goodland
ELDON SLOAN .................... Topeka
MAX BICKFORD, Executive Officer .......... Topeka
UNIVERSITY FACULTY—1968-1969

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

Abbott, Marian F., Assistant Professor of Music Education and Assistant to the Director of Graduate Music Studies (1968). B. M. E., Central Methodist College, 1956; M. M., Wichita State University, 1968.

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


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


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


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

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


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


Ator, James, Assistant Professor of Music Literature and Woodwinds (1965). B. M. E., Drake University, 1960; M. M., Wichita State University, 1964.


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

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

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


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

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


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

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


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

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


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

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

Blake, Leslie M., Professor and Chairman of Department of Speech (1940). B. S., Kansas State College, 1937; M. S., ibid., 1939.
Blake, Rufus W., Jr., Assistant Instructor in Sociology and Administrative Assistant to the Dean of Students (1968). A.B., Wichita State University, 1966.

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


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

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


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


Breazeale, John, Professor of Physics and Dean of the Graduate School (1959). B.S., Millsaps College, 1947; M.S., University of Alabama, 1951; Ph.D., University of Virginia, 1955.


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.

Brumagin, Joan T., Assistant Professor of Psychology (1968). B.A., Allegheny College, 1962; M.S., Purdue University, 1965; Ph.D., ibid., 1968.

Bues, 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.

Butkus, Thomas, Assistant Instructor and Assistant to the Director of Placement (1967). B.A., Coe College, 1966; M.E., Wichita State University, 1968.


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


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

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

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

Cesar, James, Professor of Violin and Chairman of Stringed Instruments Department (1949). B.M., Cleveland Institute of Music, 1940; B.S., Western Reserve University, 1947; M.A., ibid., 1949. (Leave of absence—second semester, 1968-1969.)


Chick, Grace E., Associate Professor and Acting Director of Department of Nursing (1968). B. N., B. S., University of Kansas, 1938; M. S., Northwestern University, 1950.


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

Chrisman, Paul C., 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 (1958). B. S., University of Wichita, 1955; M. S., University of Illinois, 1958; Ph. D., ibid., 1962.

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


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


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


Cook, Everett L., Associate Professor of Aeronautical Engineering (1953, 1959). B. S. A. E., University of Wichita, 1954; M. S. A. E., 1958; Ph. D., Oklahoma State University, 1967.


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

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

Costley, Dan L., Associate Professor and Chairman of Department of Administration (1963). B. A., University of Oklahoma, 1957; M. A., ibid., 1958; Ph. D., Michigan State University, 1964.

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

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


Cutler, Bruce, Professor of English (1960). B.A., State University of Iowa, 1951; M.S., Kansas State University, 1957. (Leave of absence, 1968-1969.)


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


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


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


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

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

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

Duerksen, Walter, Professor of Music and Dean of College of Fine Arts (1932), B. F. S. M., University of Wichita, 1931; M. M., Northwestern University, 1938.

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


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


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


Fahrbach, Carl G., Associate Professor and Director of Admissions and Records (1964). B. S., Kansas State Teachers College, Emporia, 1946; M. S., ibid., 1951; Ed D., University of Kansas, 1958.


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

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

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


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.

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


Fordemwalt, Fred, Assistant Professor of Chemistry (1968). B.S., Iowa Wesleyan College, 1925; M.S., State University of Iowa, 1927; Ph.D., ibid., 1940.


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

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


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.


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

Gibson, George H., Assistant Professor of Opera Theatre and Voice (1967). B.M., University of Miami, 1956; M.M., University of Texas, 1959.


Cohn, 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 Chairman 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.


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

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

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

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


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

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

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


Harder, K. Peter, Assistant Professor of Economics (1967). B. A., University of Puget Sound, 1963; M. A., University of Nebraska, 1966; Ph. D., ibid., 1968.

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

Hardy, James Lynn, Associate Professor and Chairman of Department of Music Education (1965). B. S. M. E., Southwestern 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.

Harrison, Jon E., Adjunct Assistant Professor of Dental Hygiene (1968). B.A., University of Kansas, 1958; D.D.S., University of Missouri at Kansas City, 1962.


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


Henry, Robert M., Assistant Professor of Journalism (1968). B.A., Peru State College, 1959; M.S., University of Kansas, 1968.

Herman, David T., Professor and Chairman 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 Chairman 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 Chairman of Department of Anthropology (1959). B.S., Northwestern University, 1950; Ph.D., ibid., 1957.

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


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


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


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

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

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

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

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

Johnson, Ralph C., Assistant Professor of Accounting (1968). B.S., Oakwood College, 1964; M.S., Wichita State University, 1967; CPA Certificate, Kansas.


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.

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


Kalluri, Dikshitulu, Assistant Professor of Electrical Engineering (1967). B.E., Andhra University, India, 1956; D.I.I.Sc., Indian Institute of Science, 1957; M.S., University of Wisconsin, 1960; Ph.D., University of Kansas, 1968.

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

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.


Kneil, Thomas R., Assistant Professor of Logopedics (1967). A. B., Bowdoin College, 1953; 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 Chairman 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 Chairman 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.


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


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.


McFarland, David E., Assistant Professor of Aeronautical Engineering (1967). B. S., University of Wichita, 1961; M. S., ibid., 1964; Ph. D., University of Kansas, 1967.
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. (Leave of absence—first semester, 1968-1969.)


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


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

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.


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


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.

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


Myers, James E., Assistant Professor of Geology (1968). B. S., Iowa State University, 1942; M. S., University of Wichita, 1956; M. S., Wichita State University, 1968.


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


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


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


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

Niemeyer, Melvin D., Assistant Instructor and Applications Programmer, Digital Computing Center (1968).


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

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


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

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.

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

Park, Jon, Adjunct Assistant Professor and Director of Dental Hygiene (1968). D.D.S., University of Missouri at Kansas City, 1964.


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


Pfaunstei, 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 Psychology (1950). B.S., Southeastern State College, Oklahoma, 1941; M.S., Syracuse University, 1947; Ph.D., ibid., 1950.


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; Ph.D., University of Texas, 1968.


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

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


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


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


Riley, Ronald R., Adjunct Assistant Professor of Dental Hygiene (1968). A.B., University of Wichita, 1960; D.D.S., University of Missouri at Kansas City, 1964.


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


Rodewald, Sara, Instructor in German (1968). B.S., Kansas State University, 1963; M.A., University of Kansas, 1969.


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.

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

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

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

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


Scriven, Nancy L., Assistant Professor of Music Education (1967). B.M.E., University of Wichita, 1952; M.M.E., Wichita State University, 1968.


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


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


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


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


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

Snyder, Melvin H., Jr., Professor and Chairman 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.

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

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 Chairman of Department of Art (1965). B. F. A., University of Nebraska, 1958; M. S., University of Kansas, 1964.


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

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


Sturhahn, Lawrence, Assistant Professor of English (1968). B. A., State University of Iowa, 1951.

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. (Leave of absence—1968-1969.)

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


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

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

Taggart, 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. (Leave of absence—first semester, 1968-1969.)


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

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


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

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

Teufel, Hugo, Jr., Associate Professor of Mathematics (1963). B. S., University of Kansas, 1955; M. S., University of New Mexico, 1960; Ph. D., ibid., 1968.

Thomas, Phillip D., Associate Professor of History (1965). B. A., Baylor University, 1960; M. A., University of New Mexico, 1964; Ph. D., ibid., 1965.


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


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

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


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

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

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; Ph. D., University of Wisconsin, 1969.

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


Watertor, Jean L., Assistant Professor of Biology (1968). B. A., University of Iowa, 1944; M. S., University of Wisconsin, 1948; Ph. D., Iowa State University, 1965.
Watson, Louis W., Assistant Professor of Physics (1965). B.S., University of Oklahoma, 1956; M.S., ibid., 1963.

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


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


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


West, Elles C., Associate Professor of Men’s Physical Education (1965). Physical Therapy, Karolmska 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, Assistant Dean, and Counselor in University College (1965). A.B., Tabor College, 1953; M.S., Kansas State University, 1965.


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


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

Worden, George J., 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.

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


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


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

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


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

RETIRED FACULTY

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

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


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

Downing, Jacquetta, Professor Emeritus of French (1917). A. B., Fairmount College, 1921; B. M., ibid., 1921; A. M., University of Kansas, 1922; L’Institut de Phonetique (Sorbonne), 1929.
Gossett, Lucille, Assistant Professor Emeritus of English (1937). B.A., Baker University, 1922; M.A., University of Wichita, 1940.


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., Hope College, 1913; M.A., University of Chicago, 1925; Ph.D., ibid., 1925.

Hekhuys, 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.


Poulisot, 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—1968-1969**

Ballinger, Leon  
Baerg, Verleen  
Bickford, Mary  
Brown, Dee Ann  
Callan, Edward  
Canady, Don  
Cox, Allen  
Duerksen, Tim  
Fear, Judith  
Garrison, Michael E.

Ballinger, Howard  
Baerg, Ines  
Bickford, Sue  
Brown, Robert  
Callan, David  
Canady, Myra  
Cox, Beatrice  
Duerksen, Sharon Sprowls  
Fear, Mildred  
Garrison, Max R.

**LECTURERS—1968-1969**

Abshire, Patsy—Dental Hygiene  
Almquist, David D.—Dental Hygiene  
Anderson, Dr. Robert—Education and Administration  
Andreas, Dr. H. Paul W.—Medical Technology  
Bath, James—University College  
Bauman, Alice—Physical Education  
Bechtold, Dr. Lawrence—Educational Administration and Supervision

Benedict, Esther E.—Mathematics  
Bevis, Clyde E.—Police Science  
Blackwood, Wallace—Mathematics  
Blakemore, Glenn—Speech  
Bonmici, Charles—Medical Technology  
Brake, Dorothy—Medical Technology  
Brewer, Dr. Joseph—Educational Psychology  
Brinton, Thomas F.—Sociology  
Britton, Regina—Art
Brooks, Nancy—Sociology
Burger, Sister Ann Catherine—Medical Technology
Burns, Paul D.—Romance Languages
Cadle, Marilyn—Dental Hygiene
Campbell, Paul W.—Elementary Education
Cardenas, Michael P.—Mathematics
Carr, Dennis—Medical Technology
Carr, Robert—Speech
Carroll, Robert—Speech
Chambers, Barbara—Medical Technology
Christian, Betty—Elementary Education
Clark, Elizabeth—Speech
Cleous, Wilma—Medical Technology
Clifton, Randall M.—Art
Collins, Nancy T.—Physical Education
Collins, Ron—Medical Technology
Cook, Virginia—Medical Technology
Compton, Barbara—Medical Technology
Copeland, Kathryn—Medical Technology
Craig, M. Demnice—Anthropology
Crews, Robert T.—Medical Technology
Curtis, Diane—Mental Hygiene
Danielson, Richard E.—Medical Technology
Davidson, Byrlee C.—Fundamentals of Education
Decker, Marilyn H.—Elementary Education
Doyle, George—Journalism
Dominguez, Mary Alice—Spanish
Eckert, Dr. William G.—Medical Technology
Findley, W. Cecil—Speech
Floerchin, Lawrence—Psychology
Focht, A. Jack—Police Science
Fortune, Kathy—Medical Technology
Frahm, Robert—Medical Technology
Freund, Ruth—Medical Technology
Garafalo, Frank—Journalism
Gass, Marcelle—Business Education
Gerlach, Dr. E. Hugh, Jr.—Medical Technology
Gill, Hugh W., Jr.—Geology
Giovanis, Ethel—Medical Technology
Glaves, Robert—Journalism
Glenn, William—Speech
Goering, Dr. Robert C.—Medical Technology
Goldberg, Donald R.—Aeronautical Engineering
Gonzalez, Manuel—Spanish
Gowell, Elaine—Dental Hygiene
Graham, Linda L.—Economics
Granger, Carey Don—Education
Greene, Lucille J.—Art
Hamilton, Beryl A.—Political Science
Hamilton, Stella M.—Mathematics
Hannon, Floyd B.—Police Science
Harris, Kay—Medical Technology
Hayes, Lance—Speech
Hayes, Patricia—Speech
Hoagland, Ralph—Mathematics
Hoffman, Alan L.—Secondary Education
Hogan, Linda—Medical Technology
Hogan, Mary Alice—Medical Technology
Holmes, Jeanette E.—Elementary Education
Humann, Paul—Speech
Hunter, Ruby—Medical Technology
Jacka, Lenore—Dental Hygiene
Jackson, Bill—Art
Jenkinson, Barbara—Elementary Education
Johnson, Kathryn—Medical Technology
Johnson, Mary—Medical Technology
Jones, Betty—Medical Technology
Jones, Elizabeth P.—Spanish
Jones, John C.—Medical Technology
Jones, Jordan—Police Science
Kelly, Dr. Robert H.—Medical Technology
Kice, Nancy Jane—Medical Technology
Kingsland, Schuyler—University College
Kirkpatrick, Merrell—Police Science
Klein, Larry—Speech
Knauss, Dixie—Medical Technology
Knorr, Margaret—Physical Education
Konek, Carol W.—English
Koontz, Mary Jane—Elementary Education
Korte, Edward L.—Mathematics
Lank, Claudette—Medical Technology
Linsner, James D.—Mathematics
Madison, Dr. Ward N., Jr.—Medical Technology
Martin, Thomas W.—Mathematics
Martinez, Frank—Spanish
McBride, Omalou—Medical Technology
McConachie, Betty—Physical Education
McQueen, Jimmie C.—Mathematics
Mier, Mildred—Physical Education
Miller, Patsy A.—Political Science
Minard, Barbara—Medical Technology
Moen, Roger O.—Administration
Molloy, Vera—Elementary Education
<table>
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<td>Moore, Betty</td>
<td>Sociology</td>
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<td>Moore, Donald J.</td>
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<td>Speech</td>
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<td>Moorman, Dale</td>
<td>Medical Technology</td>
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<td>Morgan, Betty L.</td>
<td>University College</td>
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<td>Muma, Michael C.</td>
<td>Aeronautical Engineering</td>
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<td>Muser, Bill</td>
<td>Medical Technology</td>
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<td>Nathan, C. Henry</td>
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<td>University College</td>
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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 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 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), the American Chemical Society Committee for the Professional Training of Chemists, and the American Association of Colleges and Schools of Business.

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

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, which doubles the 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 Bat-
tery, 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 freshmen complete information about orientation and enrollment. High school seniors should arrange to complete the American College Testing Program Battery through the offices of their high school principal or counselor.

Transfers

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

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

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

ADMISSION TO ADVANCED STANDING

The regulations governing 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 designation 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.

Advanced Placement credit may be established on the strength of successful scores earned on the College Board's College—Level Examination Program (CLEP). Students who pass the CLEP Ex-
aminations with 50th percentile scores or better will be given three
hours of credit in the respective core curriculum area for which the
test is presented.

ADMISSION TO GRADUATE SCHOOL

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

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.

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

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

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

Specific requirements vary from department to department and
are listed in the Graduate Bulletin. This bulletin should be con-
sulted for information about the requirements in a particular pro-
gram.

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 Enrollment Office.
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 $2.65 per credit or clock hour during the regular semesters and $2.40 during the summer session, in accordance with University policy. The fee will be distributed to pay for revenue bonds, Parking, Student Union, Stadium addition and Library, and for Student Health Services, Athletic Admissions, forensic, student government association, University Forum, student publications, concerts, drama, opera productions, etc.

Library Revenue Bond Fee

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

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>Residency</th>
<th>Regular Semester</th>
<th>Summer Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organ (University)</td>
<td>$10.00</td>
<td>$5.00</td>
</tr>
<tr>
<td>All Other</td>
<td>5.00</td>
<td>3.00</td>
</tr>
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</table>
**Instrument Rental:** Instrument Rental fee of $4.50 per semester or summer session is charged each student requesting the use of a musical instrument owned by Wichita State University.

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

<table>
<thead>
<tr>
<th></th>
<th>Regular Semester</th>
<th>Summer Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost for 1 credit hour</td>
<td>$23.00</td>
<td>$11.50</td>
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</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 collect-
tion. A committee consisting of the Assistant to the President—Business Manager, the Director of Summer School and Workshops, and a faculty member from the College of Business Administration constitutes a Board of Appeals for students who believe their fees have been incorrectly assessed. The decision of this committee is final.

Period of Payment

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

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:

<table>
<thead>
<tr>
<th>Type of Enrollment</th>
<th>Fee</th>
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</thead>
<tbody>
<tr>
<td>Resident (Graduate and Undergraduate)</td>
<td>$8.00</td>
</tr>
<tr>
<td>Nonresident (Graduate and Undergraduate)</td>
<td>$23.35</td>
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</table>

The Campus Privilege Fee is required of every student enrolled for work on or off the Wichita State University campus at the rate of $2.65 per credit hour or clock hour during the regular semester and $2.40 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.

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

UNIVERSITY HONORS PROGRAM

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

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

A student may enter the Program at any stage in his career that he and the Honors Coordinator believe he may profit from such work. Prospective students or students already enrolled in the University should contact the Coordinator for information on taking part in the Program.

Honors Students are exempt from English 111, receiving three hours of credit for this course after completing thirty hours of course work. The grade for the course is the student's grade level at the end of thirty hours of course work. The student must meet the core curriculum requirements, but the Honors Committee may establish specially designed courses for achieving this goal.

Students are expected to perform at a "B" level, equivalent to a 3.0 grade point average; but no student will be dropped from the Program until his performance falls below expectation for at least two consecutive semesters, and then only with an opportunity for consultation and appeals from any such decision.
INDEPENDENT STUDY LEADING TO A DEGREE WITH DEPARTMENTAL HONORS

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

An Independent Study project should consist of original research or of creative work of an outstanding order. In order to graduate with departmental honors the student should complete his project and write up the results according to specifications established by the Honors Coordinator. He must then stand examination on his project and such aspects of his major field of study as appear relevant. The Honors Coordinator, in consultation with the student’s instructor, will appoint a three member faculty committee to conduct the examination and determine the student’s eligibility for graduation with Departmental Honors. Should the student fail to secure such a degree either because of incompletion of his project or failure in the examination, he will receive academic credit toward the regular degree for the credit hours completed with the grade determined by the instructor under whom the work was performed. In no case may any student receive more than six hours of credit for such Independent Study.

STUDENT RESPONSIBILITY

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

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

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

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

(5) The student shall be personally responsible for the fulfillment of all University requirements and the observation of all University regulations.

(6) Summons by Advisers and other officers: Students are 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 F, 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 day of admission to any institution of collegiate rank was on or after September, 1958.
For the purpose of graduation, a grade point average of 2.000 or better must be earned on all work taken at this University which could be applied to the degree sought.
A credit point index of 2.000 or better must be achieved in the student’s major.
No student shall be allowed credit toward graduation for D grade work in excess of one-quarter of total hours.
A minimum of 40 hours must be taken in courses numbered 300 and 400 after a total of at least 50 hours and 120 credit points has been attained.

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

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

PRESCRIBED FIELDS OF STUDY (CORE CURRICULUM)

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

(a) Mathematics: 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).

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

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

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

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

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

Speech: 143 (3).

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

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

** For English Majors and Minors.

*** Selection from III and IV must total 24 hours with a minimum of 12 in group III and a minimum of 9 in group IV.
(d) Philosophy and Religion: Philosophy, all courses; Religion, all courses.

(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: All courses.

(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 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 al-

*** 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. If a student does not complete a minimum of four semesters of Aerospace Studies or Military Science, the hours he has earned will be bracketed, and the grade in those hours will not be computed in the grade point average; however, those hours, although bracketed, will still contribute to the satisfaction of the physical activities requirement of the Core Curriculum.
owed 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.

RECOGNITION FOR OUTSTANDING ACADEMIC PERFORMANCE

Graduation With Excellence

Degrees are conferred with distinction upon students who have shown exceptional scholarship. Students attaining a scholarship index of 3.90 receive the summa cum laude, those with an index of 3.55 receive the magna cum laude, and those with an index of 3.25 receive the cum laude award. Those performing Independent Study and meeting the appropriate requirements (see p. 52) will graduate with Departmental Honors.

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 coun-
scling 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.

TESTING CENTER

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

ADVISEMENT

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

INTERNATIONAL STUDENTS

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

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

1. Graduation from an accredited high school or college.
3. Notarized statement of financial responsibility in an amount of $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 1969-70 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 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, Senate, and Student-Faculty Court carry out the executive, legislative, and judicial functions respectively.

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

THE COURT OF STUDENT ACADEMIC APPEALS

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

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

The Court is an important safeguard for students.

STUDENT HEALTH AND HOSPITALIZATION

Wichita State University maintains a Student Health Service staffed by 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. Delta Sigma Theta has been recognized by the Student Government Association and is in the process of seeking recognition by the Panhellenic Council. 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, two local 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, Omega Psi Phi, and Delta Sigma Phi.

Fraternity and Sorority Awards

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

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

HONORARY ORGANIZATIONS

**Alpha Kappa Delta**—Sociology  
**Delta Sigma Rho-Tau Kappa Alpha**—Forensics  
**Eta Kappa Nu**—Electrical Engineering  
**Gold Key**—Interdepartmental  
**Honor Society**—Honor Students  
**Kappa Delta Pi**—Education  
**Kappa Kappa Psi**—Bandsmen  
**Kappa Mu Psi**—Radio-TV  
**Kappa Pi**—Art  
**Lambda Alpha**—Anthropology  
**Lambda Iota Tau**—Literature  
**Men's Honor Five**—Service, scholarship, leadership (men)  
**Mortar Board**—Service, scholarship, leadership (women)  
**Mu Phi Epsilon**—Music (women)  
**National Collegiate Players (Pi Epsilon Delta)**  
**Omicron Delta Kappa**—Senior (men)  
**Phi Delta Kappa**—Education  
**Phi Alpha Theta**—History  
**Phi Eta Sigma**—Freshmen (men)  
**Phi Mu Alpha Sinfonia**—Music  
**Phi Sigma Tau**—Philosophy  
**Pi Delta Phi**—French  
**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 ORGANIZATIONS 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
Biology Club
Black 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
Industrial Arts Club
Institute of Electronics and Electrical Engineers
Inter-Fraternity Council
International Club
Inter-Resident Council
Inter-Varsity Christian Fellowship
le Cercle Francais
Lutheran Chapel and Student Center
Men's Physical Education Major's Club
Newman Club
Orchesis (Modern Dance)
Pannonus
Pershing Rifles
Pep Council
Political Science Club
Psychology Club
Scabbard and Blade
Shoutin' Shockers
Sky Diving Club
Society of Automotive Engineers
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 Education Association
Student Religious Liberals (Unitarian Universalist)
Students for a Democratic Society
Sunflower
S-Wheat Shockers
Timothy Club
United Christian Fellowship
University Fencing Club
Varsity Rifle Team
Veterans on Campus
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 $2400. Application should be made to the Dean of the Graduate School.

Undergraduate Employment

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

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

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

**Departmental Assistants**

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

**Clerical and Technical Assistants**

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

**Library Assistants**

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

**Custodial and Food Service Workers**

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

**Work-Study Program**

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

Conditions of eligibility include that a student must:

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

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

Employment will be limited to an average of 15 hours per week in which classes are in session, or for not more than 40 hours in any other week.
Selection of students to be employed will be made by the Office of Student Financial Aid, Room 101, Morrison Hall.

FINANCIAL AIDS AND AWARDS

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

Educational Opportunity Grants

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

Students who submit scholarship applications as of February 1, 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 Opportunity Grant portion does not have to be repaid; however, all loans received as a part of the “package” must be repaid. Other matching funds Wichita State University is required to use in approving such a “package” 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 AIDS

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 basis for selection of the recipient will be scholastic achievement and financial need. The final date for application is February 1.
Advertising Club of Wichita Scholarship

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

Aeronautical Local 733 International Association of Machinists Scholarship

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

Air Force ROTC Scholarships

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

Alpha Tau Sigma Delta Gamma Elizabeth Spicer and Eva C. Hagen 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 1.

Armed Forces Communications and Electronics Association Scholarship Award

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

Established in 1964 by Department of the Army, these scholarships provide for payment of all tuition, books and fees plus $50 per month during the school year. The 4-year scholarship is awarded to 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 1.

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 1.

Biological Science Scholarship

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

The Boeing Company Scholarships

The Boeing Company contributes annually for scholarship purposes. The scholarship awards 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: Engineering, mathematics, physics or business administration. In selecting the winners of the scholarships the Committee will consider the applicant’s scholastic record, his interest in and personal qualifications for his chosen field of study, character and leadership qualities, and need for financial assistance in carrying on his educational program. Application must be made through the office of Financial Aids no later than February 1.

Luella Bosworth Scholarship Fund

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

Merrill Bosworth Music Scholarship

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

Marjorie Calkins Piano Scholarship

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

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 1.

City of Wichita Scholarships

The City Commissioners annually award a sum of money from the one and one-half mill levy for scholarship purposes. The University makes a number of grants covering part or all of the fees to students with outstanding academic records. The grants are for one year and are renewable to students maintaining a B or better average. The stipulations of the 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 1.

Flora Colby Clough Scholarship

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

Jenkin H. Davies Music Scholarship

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

Delta Delta Delta Scholarships

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

Ernst & Ernst Accountancy Award

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

**Grand Army of the Republic Living Memorial Scholarship:** For a lineal 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 1.

**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 1.

**Sam R. Gardner Memorial Golf Scholarship**

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

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

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 1.

The Haskins & Sells Foundation Award for Excellence in Accounting

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

Arthur J. Hoare Scholarship in Mathematics

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

Earl R. Hutton Scholarship

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

**The Independent Insurance Agents of Wichita, Inc.**

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

**The John C. and Maude A. James Scholarship**

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

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

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

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

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

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

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

**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 1.
KFH Scholarship in Radio

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

Logopedics Scholarships

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

The Men of Webster Scholarship

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

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 1.
Mortar Board Alumni Scholarship

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

Wichita State University Music Scholarships

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

Dr. Henry Onsgard Scholarship

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

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 1.

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 basis for selection of the winner will be academic achievement and financial need. The stipend is $120. The final date for application is February 1.

The Personnel Management Association of Wichita Scholarship

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

**Pi Mu Epsilon Mathematics Scholarship**

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

**The Theodore Presser Foundation Music Scholarship**

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

**The Wichita Purchasing Agents Association Scholarship**

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

**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. Basis for selection will be scholarship, need and character. Final date for application is February 1.

**The Minisa Chapter (N. S. A. I.) Secretarial Scholarship**

Established in 1958 by the Minisa Chapter of the N. S. A. I. An annual award of $300 is granted to a girl who has graduated from a high school in Sedgwick County and who has indicated an intention to enroll in the College of Business Administration with an emphasis in 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 1.
The Savings and Loan League of Wichita Scholarship

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

The Sorosís Alumnae Award

The interest earned by the Sorosís 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 1.

Dr. Walter A. Ver Wiebe Scholarship in Geology

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

David Bard Wainwright Memorial Scholarship Fund

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

Wall Memorial Scholarship

This scholarship, given in memory of Lillie Striegel Wall and Henry V. Wall, is awarded to a 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 1.

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

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

The Grace Wilkie Scholarship

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

Women’s Aeronautical Association of Kansas Aeronautical Engineering Scholarship

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

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

GRADUATE FELLOWSHIPS AND SCHOLARSHIPS

James H. Hibbard Memorial Scholarship

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

Kiwanis Scholarship in Public Administration

Established in 1964 a $1500 scholarship is being provided by the Downtown Kiwanis Club for graduate study leading to a Masters degree in Public Administration. Final date for application is 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 consist of $50 to be used only for loans to women and is available to new students on the campus.

Delta Epsilon Loan Fund

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

Kansas Engineering Society Loan Fund

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

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

Lucy Munro Barker Loan Fund

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

Wichita Community Theatre, Inc., Loan Fund

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

Alpha Phi Omega Loan Fund

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

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.

Law Enforcement Education Program

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

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

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

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

National Defense Student Loan Fund

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

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

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

Any borrower who serves as a full-time teacher in a public elementary or secondary school, in a private non-profit elementary or secondary school, or in an institution of higher education may have his loan cancelled at the rate of 10% for each year of approved teaching service up to a maximum of 50% of his total loan. Certain teaching positions qualify for a 15% cancellation rate and a maximum of 100% designated by the Commissioner of Education.
Applications are available at the Office of Student Financial Aid, Room 101, Morrison Hall. Interested applicants should observe deadlines of filing:
For Fall Semester—June 1.
For Spring Semester—December 1.
For Summer Session—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.

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

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

**Kansas Sales Executive Club Loan Fund**
Established in 1957, $1000 available for loans to juniors and seniors with a major in marketing and who have an interest in selling.

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

**George W. Shepherd Memorial Loan Fund**
Established in 1962, the funds are to be loaned with no interest charge to students seeking careers as police officers.
United Student Aid Funds Loans

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

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

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

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

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

Federal Guaranteed Loans

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

Through this program the maximum undergraduate loan is $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 (7% maximum) during this period. The student begins repayment to the lender when he graduates or withdraws from school.

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

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

George D. Wilner Loan Fund

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

Wichita State University Men's Faculty Club

Established in 1965 by the Men's Faculty Club of this University. The fund is used for National Defense Student Loan matching funds.
Alice Campbell Wrigley Memorial Loan Fund
Available to students with high academic achievement, interest, and promise in the field of theatre who have financial need.

FOUNDATIONS FOR RELIGIOUS EDUCATION

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

The Butler Foundation
Established by Emily Butler. It is a trust fund of $10,000 to be used for the purpose of assisting in the financing of the "Department of Religious Education of the University of Wichita."
At the specific request of the trustees of Fairmount College a small portion of the income of the Joint Ransom-Butler Foundation is now set aside annually for use in defraying the cost of outstanding lectures in religion, science and literature.

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

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

FRESHMEN

(1) Make application to the Admissions Office, Wichita State University, listing all 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 of laboratory science, exclusive of general science.

PROBATION AND DISMISSAL STANDARDS

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

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

(3) See the heading Probation and Dismissal Standards in the general section of this catalog for regulations concerning:
- (a) removal of probation
- (b) continuing on probation
- (c) maximum allowable load while on probation
- (d) readmission after dismissal

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.

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

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

At the end of the first eight weeks in each semester, reports of unsatisfactory grades are 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 University College 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. In the event of complete withdrawal, 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 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 sched-
ule 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, etc., below are followed in the second semester by courses numbered respectively 102, 112, 142, etc.

SAMPLE FIRST SEMESTER SCHEDULE

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

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

<table>
<thead>
<tr>
<th>Hrs.</th>
<th></th>
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<tbody>
<tr>
<td>6-9+</td>
<td></td>
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</tbody>
</table>

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

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

(For additional general courses, see page 55.)

Recommended Major and Professional Courses:

**LIBERAL ARTS AND SCIENCES**

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

**BUSINESS ADMINISTRATION**

<table>
<thead>
<tr>
<th>Hrs.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Math. 121, Discrete Mathematics</td>
</tr>
</tbody>
</table>

( Secretarial Science, see department head.)

**TEACHER EDUCATION**

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

**PHYSICAL EDUCATION**

<table>
<thead>
<tr>
<th>Hrs.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Phys. Ed. 111, Introduction to Physical Education</td>
</tr>
<tr>
<td>3</td>
<td>Phys. Ed. 115, Pers. &amp; Community Health</td>
</tr>
</tbody>
</table>

**INDUSTRIAL EDUCATION**

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

**ENGINEERING**

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

**FINE ARTS—ART**

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

* Science, Engineering and Business majors substitute laboratory science and/or Mathematics.
<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mus. 111, Ensemble</td>
<td>1</td>
</tr>
<tr>
<td>Mus. 113, Music Literature</td>
<td>2</td>
</tr>
<tr>
<td>Mus. 127-129, Music Theory (prerequisite, Piano)</td>
<td>4</td>
</tr>
<tr>
<td>Applied Music</td>
<td>2</td>
</tr>
</tbody>
</table>

**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 Association
- 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-GRANTING 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 period of academic dismissal 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:

**Core Curriculum**

<table>
<thead>
<tr>
<th>Course</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**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Police Science</td>
<td>24</td>
</tr>
<tr>
<td>Political Science 100 or 121; 441</td>
<td>6</td>
</tr>
</tbody>
</table>

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 certificate.

**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 (page 101) results in the student being eligible for the two-year certificate in Dental Hygiene and for the state licensure examination.

**Department of Nursing**

The Department of Nursing at Wichita State University was established in 1968, and the first class of nursing students is scheduled to begin their clinical and professional nursing studies in the fall of 1969. The degree program is divided into two parts, including two years of general education courses followed by two years of clinical and professional nursing classes.

The four-year course of study leading to a Bachelor of Science degree in Nursing is the first such program to be initiated since Wichita State University became a state school in 1964. The Wichita area hospitals' 2700 bed capacity provides adequate facilities for
the training of nurses. Nurses will find that the baccalaureate degree program is the foundation for advancement to beginning administrative positions and continuing professional development. These degree graduates will also have the basic preparation necessary for graduate study in nursing. Applicants for the BS in Nursing degree program should send their inquiries to Director of Nursing, Wichita State University.

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, 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.

Students with the RN 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.

Curriculum for B. S. Degree in Nursing

All students entering the nursing program must present 64 hours of largely Liberal Arts and Sciences subjects. These may be taken at Wichita State University or presented by transfer from any of the accredited colleges and universities, including the several junior colleges. The student should have taken the ACT or CEEB test prior to entry into the Liberal Arts sequence of courses. Wichita State University core curriculum requirements must be satisfactorily completed within the limits of these requirements. The following are required and recommended courses:

Curriculum for the First Two Years of the B. S. Program in Nursing

**NATURAL SCIENCES AND MATHEMATICS**

<table>
<thead>
<tr>
<th>Required courses:</th>
<th>Recommended courses:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry</td>
<td>Nutrition</td>
</tr>
<tr>
<td>Microbiology or Bacteriology</td>
<td>Physics</td>
</tr>
<tr>
<td>Biology or Zoology</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Anatomy and Physiology</td>
<td>Organic Chemistry</td>
</tr>
<tr>
<td></td>
<td>Biochemistry</td>
</tr>
</tbody>
</table>

**SOCIAL SCIENCES**

<table>
<thead>
<tr>
<th>Required courses:</th>
<th>Recommended courses:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sociology</td>
<td>Child Psychology</td>
</tr>
<tr>
<td>Psychology</td>
<td>Political Science</td>
</tr>
<tr>
<td></td>
<td>Economics</td>
</tr>
<tr>
<td></td>
<td>Social Psychology</td>
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<tr>
<td></td>
<td>Abnormal Psychology</td>
</tr>
<tr>
<td></td>
<td>Anthropology</td>
</tr>
</tbody>
</table>
Humanities and Language

Required courses:
- English Composition (2 courses)
- Speech

Recommended courses:
- Foreign Language
- Logic
- Philosophy
- Literature
- History

Curriculum for the Diploma Program in Nursing

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 required courses and electives as prescribed by the particular school of nursing to which the student plans to transfer.

The above one year of college credit, followed by two additional academic years of clinical study at the school of nursing, will qualify a student for the RN diploma from the school of nursing and will provide a foundation for completion of requirements for the Bachelor of Science or Arts degree at the University.

It is recommended that pre-nursing students enroll in Zoology or Biology during the summer term following high school graduation. This allows more adequate preparation for the required science courses.

Nursing—R. N. or B. S.

SUMMER

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 223</td>
<td>5</td>
<td>Biology 120</td>
<td>4</td>
</tr>
<tr>
<td>Psychology 111</td>
<td>3</td>
<td>Sociology 111</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 103 or 111</td>
<td>3</td>
<td>English 111</td>
<td>3</td>
</tr>
<tr>
<td>Speech 111</td>
<td>2</td>
<td>Child Psych. 260</td>
<td>3</td>
</tr>
<tr>
<td>Physical Activity</td>
<td>1</td>
<td>Physical Activity</td>
<td>1</td>
</tr>
</tbody>
</table>

Total: 16

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 which the law deals. The prelegal adviser will provide information relative to requirements for entrance to law school.
Premedical, Predental, Preveterinary

In general, a board 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 by Wichita State University within the City of Wichita carry residence credit; credit courses offered at locations outside the city may carry extension credit. Correspondence work is offered by Wichita State University through the University of Kansas.
Standards and Requirements

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

Bulletin

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

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.

111. Extemporaneous Speaking. (2). Analysis of audience, selection of subject, choice of ideas, finding and testing supporting materials, organization, and delivery.

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 antiseptic techniques. The study of dental materials is included. Instruction is given in practical laboratory phases of modern technique and the manipulation of materials used in dental practice.

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 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.
NURSING


302. Fundamentals of Nursing II. (5). Practical application of nursing care for all age groups and in various settings. Integration of pharmacy, diet therapy, pathology and human dynamics. Includes selected clinical experience in the hospital. Three hours of class. Six hours of practice.

303. History and Trends in Nursing. (2). Historical development of professional nursing. Emphasis on current trends, professional organizations, legal problems, and community responsibilities. Includes professional ethics and citizenship. Two hours of class.


322. Medical-Surgical Nursing II. (6). Nursing care of adult patients with emphasis on surgical conditions and the specialized areas of orthopedic, gynecological, genito-urinary problems and disaster nursing. Three hours of class. Nine hours of practice.

323. Medical-Surgical Nursing III. (6). Care of adult patients with medical-surgical conditions with emphasis on long-term care and rehabilitation. Includes the specialized areas of neurology, eye, ear, nose and throat and outpatient care. Three hours of class. Nine hours of practice.

331. Maternal and Child Care. (6). Scope and goals of nursing care during the maternity cycle from conception through labor and delivery and immediate care of the newborn. Introduces the students to current concepts and the nurses role in assisting with family development. Three hours of class. Nine hours of practice.

332. Growth and Development. (6). Deals with the needs of children, their usual health problems, common symptoms and illnesses, etc., from birth to adolescence. Three hours of class. Nine hours of practice.


451. Personnel Management and Administration. (3). Goals and concepts of teaching, learning and personnel management. Basic principles of management and leadership as applied to the functioning of the supervisors and team leaders. Provides guided opportunity for self development in nursing proficiency and leadership, extends previous learning in problem solving, administration and teaching. One hour of class. Six hours of practice.
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 of 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.

* Prerequisites 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. (3). 2R; 1C. Designed to determine the students’ facility with the English language. All foreign students are required to enroll and participate until approval of the instructor is obtained.

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

Math. 52. Algebra. (5). The topics from high school algebra essential to the study of university level mathematics. May be used, in meeting department prerequisites, in place of one and one-half units of high school algebra. Prerequisite: None.
Math. 60. Plane Geometry. (2). For students without high school credit in plane geometry. May be used in meeting department prerequisites, in place of one unit of high school geometry. Prerequisite: One unit of high school algebra or Mathematics 52, or concurrent enrollment in Mathematics 52.

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.

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 his ultimate specialization, man is, before all else, a member of civilization. Ours is a complex civilization, one which requires an ever-increasing degree of sophisticated understanding. To study the liberal arts and sciences means, in essence, to study the range and scope of man's knowledge about himself and about his universe.

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 program 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 54. 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 laborator science (exclusive of general science) must complete satisfactorily fourteen semester hours, four of which must be in a laboratory science. A student presenting two units of high school laboratory science (exclusive of general science) must complete satisfactorily a minimum of nine semester hours, four of which must be in a laboratory science. Except for students majoring in the natural sciences, four semester hours must be taken in each of the physical and biological science divisions as listed in the University core curriculum. Courses elected by the student may satisfy core curriculum requirements.

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

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

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


Candidates for the Bachelor of Arts degree shall elect: (1) A major in one field of study of not less than 24 hours or more than 41 hours, or a combined major consisting of 24 hours from one field of study and 12 hours from an allied field of study, 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.

ART HISTORY

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

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

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

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

LATIN AMERICAN STUDIES

MAJOR: A major in Latin American Studies consists of at least 32 hours and must include Anthropology 308, Economics 470 or 471, History 225, 226, 328, Geography 364, Political Science 423, Spanish 421 or any 300-400 level course in Latin American Literature and 426. Other courses must be elected from the following: Anthropology 346, History 325, 326, 327, 329, and Political Science 420. Approved special projects courses related to Latin America taken in the departments listed above may also count toward the major in Latin American Studies. Proficiency in reading Portuguese is required.

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 MAJOR IN AFRO-AMERICAN STUDIES

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

- Anthropology: 130, 305, 307, 322, 360
- Economics: 498
- English: 280
- Fine Arts: Art 150, Music 162
- History: 335
- Political Science: 317, 318, 400
- Sociology: 226, 326, 334
FIELD TRIPS

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

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

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

Applied music shall transfer not to exceed 8 hours.
Applied art shall transfer not to exceed 8 hours.

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>
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<tbody>
<tr>
<td>Math. 141, Algebra and Trigonometry</td>
<td>............</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 111, General Chemistry</td>
<td>............</td>
<td>5</td>
</tr>
<tr>
<td>Biol., 111, Introductory Botany</td>
<td>............</td>
<td>4</td>
</tr>
<tr>
<td>Speech 111, Extemporaneous Speaking</td>
<td>............</td>
<td>2</td>
</tr>
<tr>
<td>Phys. Ed. 101</td>
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**Course SECOND SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Chem. 112, General and Inorganic Chemistry</td>
<td>....</td>
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<tr>
<td>Biol. 112, Introductory Zoology</td>
<td>....</td>
</tr>
<tr>
<td>Eng. 111, College English</td>
<td>....</td>
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<tr>
<td>Social Science **</td>
<td>....</td>
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<tr>
<td>Phys. Ed. 102</td>
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**SOPHOMORE YEAR**

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<tr>
<th>Course</th>
<th>FIRST SEMESTER</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Chem. 231, Organic Chemistry</td>
<td>............</td>
<td>5</td>
</tr>
<tr>
<td>Biol. 201, Introductory Cellular Biology</td>
<td>....</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 211, Advance Writing</td>
<td>............</td>
<td>3</td>
</tr>
<tr>
<td>Humanities **</td>
<td>............</td>
<td>6</td>
</tr>
<tr>
<td>Phys. Ed. 103</td>
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**Course SECOND SEMESTER**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Chem. 232, Organic Chemistry</td>
<td>....</td>
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<tr>
<td>Biol. 223, Human Biology</td>
<td>....</td>
</tr>
<tr>
<td>Social Science **</td>
<td>....</td>
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<tr>
<td>Phys. Ed. 104</td>
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</table>

**JUNIOR YEAR**

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

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<tr>
<th>Course</th>
<th>Hrs.</th>
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<tr>
<td>Biology, electives</td>
<td>...</td>
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<tr>
<td>Humanities **</td>
<td>....</td>
</tr>
<tr>
<td>Humanities or Social Science **</td>
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</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

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* Or Math. 121 (3) and Math. 122 (3).
** Electives chosen in the Humanities and Social Sciences must fulfill the University Core Curriculum.
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 "comprehensive and expression in words; critical understanding of the human institutions and values with which the law deals; and creative power in thinking," to be achieved through disciplined study in the fields of the student's choice.

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

PREMEDICAL, PREDENTAL, PREVETERINARY, PREPHARMACY, PREOPTOMETRY

Schools of Medicine emphasize for admission a broad education as well as prescribed studies in the sciences. Preparation for the study of medicine should include, therefore, courses of study which develop disciplined thinking, intelligent appreciation of values, and sympathetic understanding of man and society. Since vital aspects of the study of medicine are associated with scientific knowledge and techniques, courses in biology, chemistry, physics, and allied fields are required. Students may choose to major in these fields but other majors may be selected in preparation for the study of medicine. The prospective physician should also possess those qualities of character which make for effective citizenship and professional competence. The adviser for premedical studies will provide information relative to the Medical College Admission Test recommended by the Association of American Medical Colleges and, upon request, a detailed outline of the various curricula for admission to medical school. Students are urged to consult with him at the earliest possible time in regard to the opportunities and requirements in this professional field.

While the four-year degree program is definitely preferable, it is possible in some medical schools to gain admission on the basis of a three-year program of studies. Students of Wichita State University who have taken 94 hours of preparation, the last 30 of which must have been taken at Wichita State University, have complied with the prescribed fields of study requirements, have 188 credit points with no more than 20 hours of D grade work, have passed the first year of medical or dental school (for 30 hours), and are eligible for admission 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 Religion. Specific requirements set forth by the individual seminaries can thus be satisfied.

PUBLIC SERVICE

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

SOCIAL WORK

A major and minor are provided in the Sociology Department of the Fairmount College of Liberal Arts and Sciences for training in various areas of social work. Courses are designed for four types of students: (1) All students as preparation for intelligent and responsible community participation; (2) the student who, upon
graduation, may accept a position not now requiring professional graduate training; (3) the student who plans to go on to a graduate school of social work; (4) the student who is preparing to enter another of the helping professions. The offerings in social work are listed on page 172. 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 202.

LIBERAL ARTS AND SCIENCES CURRICULUM

COURSES IN THE HONORS PROGRAM

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

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

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

AMERICAN STUDIES

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

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

- English: 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 Studies 301 (2-5) plus at least six other upper division hours.

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

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

FAIRMOUNT COLLEGE
499. Seminar in American Studies. (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. (3). An examination of various concepts concerning the realm of the supernatural as held by primitive people. Relates such religious and magical beliefs—and the resultant practices—to the larger patterns of cultural context. Prerequisite: 6 hours of Anthropology.

328. Introduction to Linguistics. (3). Principles of descriptive and historical linguistics: Phonetics and phonology, morphology and syntax. (Also German 327.)


337. North American Archeology II. (3). Analysis of Woodland, Mississippi, Hopewell, and other archeological cultures of the eastern United States. Prerequisites: Anthro. 124 or 201.

345. Economics of Pre-Industrial Societies. (3). The study of methods of production, division of labor, organization of markets, concepts of money and property allocation in tribal societies. An emphasis will be placed on kinship units as units of consumption and production. Prerequisite: 6 hours of Anthropology.

346. Peasant Society. (3). A cross-cultural survey of anthropological studies of peasant societies in Asia, Europe, Latin America, etc. Emphasis will be placed on the nature of peasant societies as compared with tribal or industrial societies. Prerequisite: 6 hours of Anthropology.

354. Physical Anthropology. (4). A course dealing with the biological evolution of man through time, and the variations among populations past and present. Prerequisite: Anthro. 201 and 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 subcultures 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 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. Consent required. (Also P. E. 455.)

462. **Theory of Language.** (3). (Also English 462.)

490. **Field Methods in Anthropology.** (3-8). A course which instructs the student in archeological and ethnological field methods through actual participation in a field research program. The project depends upon the specific summer session and varies from year to year. Prerequisite: 8 hours of Anthropology.

498. **Anthropological Problems.** (2-3). Special problems in cultural anthropology. Prerequisites: 12 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. May be repeated up to 6 hours.

548. **Recent Developments in Anthropology.** (2). A review of the latest discoveries and interpretations in the science of man. Prerequisite: 5 hours of Anthropology. May be repeated up to a total of 6 hours.

570. **Independent Reading.** (1-3). Prerequisite: Department consent. May be repeated up to a total of 6 hours.

BIOLOGY

Major: A major in biology leading to a Bachelor of Arts degree requires 30 hours of biology, and must include Biology 111, 112, and 201, or the equivalent. Chemistry 111, 112, 231 and 232, or the equivalent, are required.

A major in biology leading to a Bachelor of Science degree requires 40 hours of biology, and must include 111, 112, and 201, or the equivalent, Chemistry 111, 112, 231, 232, or the equivalent, Physics 123, 124, and the courses listed in one of the three options, said option to be selected by the beginning of the Junior year.

Botany Option: Biology 322, 329 and 330.

Microbiology Option: Biology 301, 324 and either 325, 424, or 460. Students planning to do graduate work in Microbiology are expected to complete satisfactorily Mathematics 142.

Zoology Option: Biology 225 or 310, 309 and 320.

Minor: A minor in biology requires 15 hours, including Biology 111, 112 and 201.

Several of the courses offered in the Biology department are service courses, and are so designated. Service courses cannot be taken for credit toward a biology major or minor.

Lower Division Courses

100. Principles of Biology. (4). 3R; 2L. A general course in biology designed for students not majoring in sciences. Credit will not count toward a major or minor in Biology. Credit will not be given for both Biology 100 and Science 102: Biological Science.

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. 201.

320. Comparative Animal Physiology. (4). 3R; 3L. A survey of physiological phenomena in the major groups of animals with attention to physiology as a unifying discipline in zoology. Prerequisite: Biol. 201 and Chem. 231.

322. Plant Physiology. (5). 3R; 6L. The functional dynamics of plant metabolism and growth, including water relations, nutrition, translocation, photosynthesis, respiration, and various aspects of development. Prerequisite: Biol. 201 and Chem. 231.

324. Microbial Physiology. (3). 3R. The physiology and metabolism of microorganisms. Prerequisite: Biol. 301 and Chem. 231.

325. Microbial Physiology Laboratory. (2). 6L. An introduction to the basic techniques involved in the study of microbial physiology. Prerequisite: Biology 301 and Chem. 231.


330. Vascular Plants. (4). 2R; 6L. An introduction to the structure, reproduction and evolution of the major groups of living and extinct vascular plants. An introduction to flowering plant systematics will be included. Prerequisite: Biol. 201.

343. Mycology. (4). 2R; 4L. The structure, development and reproduction of fungi with emphasis on the cytology and physiology of forms of scientific and economic importance. Prerequisite: Biol. 201.


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

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.

421. Genetics Laboratory. (3). 9L. Use of viruses, bacteria, fungi and Drosophila to illustrate principles of mutagenesis, gene action, recombination and population dynamics. Prerequisite: Biol. 301 and 401.

422. Protozoology. (4). 2R; 6L. Survey of the free-living and parasitic protozoa; identification, life cycles and host-parasite relationships emphasized. Prerequisite: Biol. 301 or 309 or 312.

423. Cytology. (3). 2R; 3L. The structure, chemistry, development, and function of the cell with particular reference to chromosomes and their bearing on genetics. Prerequisite: Biol. 201.

424. Immunobiology. (3). 3R. The nature of antigens, antibodies, and their interactions; cellular and humoral aspects of immunologic phenomena. Prerequisite: Biol. 201.

425. Immunobiology Laboratory. (2). 6L. Methods of immunization and techniques for qualitative and quantitative determinations of antibody production and antigen-antibody reactions. Prerequisite or corequisite: Biol. 424, Chem. 232 or consent of instructor.

430. Histology. (4). 2R; 6L. Microscopic anatomy of vertebrates with emphasis on the mammal. Prerequisite: Biol. 225.

460. Microbial Genetics. (4). 4R. The relationship between development, metabolism, and genetics in microorganisms. Prerequisite: Biol. 301 and 401 or department consent.

482. Topics in Botany. (2). Prerequisite: Consent of instructor. May be repeated once for credit.

483. Topics in Zoology. (2). Prerequisite: Consent of instructor. May be repeated once for credit.

484. Topics in Microbiology. (2). Prerequisite: Consent of instructor. May be repeated once for credit.


Graduate Courses

500. Biology Seminar. (1). Reviews of current research in biology. Prerequisite: Biol. 490 or consent of instructor. May be repeated once for credit.

501. Comparative Invertebrate Morphology. (3). 3R. A detailed analysis of the anatomy of invertebrate organ systems and their evolution. Prerequisite: Biol. 309 or consent of instructor.
502. Special Problems in Animal Behavior. (3). 3R. Emphases are on prey-predator interactions and the effect of a changing environment on behavioral patterns. Prerequisite: Biol. 410 or consent of instructor.

503. Special Problems in Ecology. (5). 2R; 6L. Emphasis on conservation of natural resources, land and water use, wildlife and fisheries management, and effects of pollution. Assigned readings, individual projects, and field trips required. Prerequisite: Biol. 411, 415 or consent of instructor.

504. Advanced Immunology. (3). 3R. Contemporary problems in immunologic research. Lectures, assigned readings and reports. Prerequisite: Biol. 424 and consent of instructor.


507. Microbial Metabolism. (3). 3R. Studies of the degradative and biosynthetic metabolic pathways of representative bacteria, yeasts and higher fungi. Prerequisite: Biol. 301 or consent of instructor.

510. Physiological Basis of Behavior. (3). 3R. A modern approach to coordinatory 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. Such students, as well as those with substantial interest in the biological sciences, may satisfy the B.A. requirements by substituting Chemistry 461 for either Chemistry 346 or Chemistry 324. In the latter case, Chemistry 323 is required.

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. This course is recommended for students in Engineering, Dental Hygiene, and Nursing, as well as those majoring in Social Science and the Humanities. Students who expect to major in the Natural Sciences should take Chem. 111-112. Credit will not be granted for both Chem. 103 and Chem. 111.

111. General Chemistry. (5). 3R; 4L. An introduction to the general laws of chemistry and the non-metals and their compounds. The Chem. 111-112 course sequence is designed to meet the needs of natural science majors and is not recommended for students who plan to take only one course in chemistry. Students who have had good high school preparation in chemistry and mathematics should consider the alternate afforded by Chem. 123-124. Prerequisite: 1.5 units of high school algebra or 1 unit and Math. 52. Credit will not be granted for both Chem. 103 and Chem. 111.

112. General and Inorganic Chemistry. (5). 3R; 4L. The chemistry of metals, electrochemistry, ionic equilibria, and introduction to qualitative analysis and organic chemistry. Prerequisite: Chem. 111 with a grade of C or better.

123-124. General and Analytical Chemistry. (5-5). 3R; 6L-3R; 6L. General chemistry and introductory quantitative analysis, including much of the material ordinarily presented in Chem. 323. Students who successfully complete this sequence are not required to take Chem. 323 as a prerequisite for Chem. 324. Prerequisite: 1.5 units of high school algebra, 1 unit of high school chemistry, and consent of department.

201. Glass Blowing. (1). 2L. Limited enrollment open to students upon recommendation of the chemistry department.

231-232. Organic Chemistry. (5-5). 3R; 6L-3R; 6L. For majors and pre-medical students. 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 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 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.

232. 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).

280. Sophomore Studies. (3). Prerequisites: English 111 and 211 or 225 or departmental consent. Course content will vary from one semester to another. (Sample topics: Modes of Tragedy, Black Literature, etc.)

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 Works: 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

501. 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 maintained.

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. Prerequisite: 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)

GEOL0GY 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

101. Earth and Space Science. (4). 3R; 2L. A general survey of man's physical environment; includes elements of geology, geography, meteorology, climatology, oceanography, and astronomy. Lectures, films, and demonstrations. Laboratory and field experiences. Not open to students who have taken Physical Science 101, Geology 105, Geology 111, or Geography 201. Not for major or minor credit in Geology.

111. General Geology. (5). 3R; 4L. The earth and its materials, structure and history; the various processes operating to change its aspects and composition. Field trip(s) required.

112. Historical Geology. (4). 2R; 6L. History of the earth from the time of its origin as a planet to the appearance of man. Prerequisite: Geol. 111. Field trip(s) required.

211. Descriptive Astronomy. (3). 2R; 2L. An introductory study of extraterrestrial realms and materials, including the solar and galactic systems, their apparent origins, 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.

* May be offered only in alternate years.
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 or 103. Field trip(s) required.

335 Field Mapping. (2). 6L. Field mapping methods, with special reference to use of level, compass, barometer, alidade, and air photos. Prerequisite: Geog. 201 or Geol. 112. Field trip(s) required.

336. Field Geology and Stratigraphic Mapping. (3). 9L. Field geology and stratigraphy of Eastern Kansas. Prerequisite: Geol. 112. Field trips required.

337. Invertebrate Paleontology. (3). 2R; 3L. Invertebrate fossils, criteria of identification, classification. Prerequisite: Geol. 112, or Biology majors upon instructor's consent. Field trip(s) required.

347. Sedimentology. (3). 2R; 3L. Origin, classification, textures, and structures of sedimentary rocks. Prerequisite: Geol. 225 or department consent. Field trip(s) required.

350. Principles of Stratigraphy. (3). 2R; 3L. Principles and techniques of description, classification, correlation, interpretation, and dating of the sedimentary rock record. Prerequisite: Geology 337. Geology 347 recommended. Field trip(s) required.

351. 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. (3). 2R; 6L. Use of the polarizing microscope; mineral identification and rock classification. Prerequisite: Department consent.

436. Vertebrate Paleontology. (3). 2R; 3L. Systematic study of the fossil record of the vertebrates; laboratory training in identification of fossil bones and teeth; emphasis on regional faunas; collecting and museum trips required. Prerequisite: Geol. 112; Biology majors upon instructor's consent.

438. Micropaleontology. (3). 2R; 3L. This course is designed to prepare students for research work in laboratories of oil companies, geological surveys and oceanographic stations. Emphasis on latest techniques, identifications, and use in correlation of foraminifera (including fusulinids), dinoflagellates, coccoliths, palynomorphs, etc. Prerequisite: Geology 112 and consent of instructor. Field trip(s) required at the option of the instructor.

439. Palynology. (3). 2R; 2L. An introduction to the study of both modern and fossil spore and pollen morphology as applied to problems of plant taxonomy and evolution, paleoclimates, phytogeography, paleoecology, interpretation of sedimentary environments, biostratigraphy, Pleistocene climates and archeology. Emphasis is on vascular plants, but includes study of dinoflagellates and related algae and nonvascular plants. Prerequisites: Geology 112, or Biology 330 and consent of instructor.

440. Map Interpretation and Photogeology. (3). 2R; 3L. Construction, use, and interpretation of maps; use and interpretation of aerial photographs. Prerequisite: 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 or 103. Field trip(s) required at the option of the instructor.
444. Petroleum Geology. (3). 2R; 3L. Origin, migration, and accumulation of oil and gas in the earth’s crust. Distribution and significant features of modern fields. Prerequisite: Geol. 112. Field trip(s) required at the option of the instructor.

445. Subsurface Formation Evaluation. (2). Detailed study of fluid content, fluid pressures, and other characteristics of subsurface formations as revealed by electric logs, other types of mechanical logs, and various testing devices. Introduction to the principles and uses of shut-in pressure build-up data. 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 six hours.

499. Research in Geology. (1-3). Research on special problems in the field of geology: (a) General; (b) Mineralogy; (c) Petrology; (d) Structural; (e) Paleontology; (f) Economic; (g) Sedimentation; (h) Petroleum; (i) Stratigraphy; (j) Geophysics. Prerequisite: Consent of instructor.

* 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) Economic; (g) Sedimentation; (h) Petroleum; (i) Stratigraphy; (j) Geophysics. Prerequisite: Department consent.

505. Advanced General Geology. (4). 2R; 6L. Principles, physical processes, structure, earth history, and economic implications of geology, based upon a study of original sources; student reports. Prerequisite: Instructor’s consent. Field trip(s) required at the option of the instructor.

506. Advanced Historical Geology. (3). Historical geology of the world. Emphasis on original sources and current research investigations. Prerequisite: Instructor’s consent. Field trip(s) required at the option of the instructor.

515. Volcanology. (3). A study of the distribution, form, composition and activities of major volcanoes and volcanic areas in the world. The topics will include petrology and geomorphology of selected volcanoes, the geochemistry of magmas, and volcano tectonics. Prerequisite: Instructor’s consent.

521. Advanced Stratigraphy. (3). 2R; 3L. Advanced concepts and principles of stratigraphic analysis and interpretation. Emphasis on original sources and current research investigations. Field problem required. Prerequisite: Geol. 350 or consent of instructor. Field trip(s) required at the option of the instructor.

525. X-Ray Analysis and Clay Mineralogy. (4). 3R; 3L. Introduction to the principles of x-ray diffraction and spectrography; use of x-ray diffraction apparatus in mineral identification and crystal structure study. Special emphasis on the origin and identification of clay minerals. Prerequisite: Geol. 225 or consent of instructor.

530. Igneous and Metamorphic Petrology. (4). 2R; 4L. Mineral paragenesis, bulk chemical compositions, physical-chemical relationships, textures, structures, origins, and classifications of igneous and metamorphic rocks. Thin-section studies facilitate rock identifications and the determination of petrogenetic relationships. Prerequisite: Geol. 425 and consent of instructor.
532. Sedimentary Petrology. (3). 2R; 3L. Detailed study of sedimentary rocks and their origins. Determinations of mineral compositions, textures, structures, fabrics, and petrogenetic relationships are facilitated by the use of thin sections, peels, and geochemical analyses. Prerequisite: Geol. 425 and consent of instructor.

534. Geotectonics. (3). Physical and geological principles of crustal deformation and tectonic interpretation; orogenies and epeirogenies in their time-space relationships; especial reference to structural geology of North America. Prerequisite: Instructor's consent. Field trip(s) required at the option of the instructor.

537. 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 metallic 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.

223. Economic Geography. (3). A geographical analysis of the distribution and utilization of basic world resources.

235. Descriptive Meteorology. (3). 2R; 2L. An introductory study of the atmosphere and its properties and the various phenomena of weather; a brief survey of important principles of physical, dynamic, synoptic, and applied meteorology. Prerequisite: 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 consists 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 course.

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

60. German for Graduate Reading Examination. (3). Open to upper division and graduate students only. A reading course designed to prepare students to fulfill department requirements of a reading knowledge of German for the M.A or M.S. degrees. No previous knowledge of German required. Will not count toward a degree.

111-112. Elementary German. (5-5).

191. Elementary German Review. (3). Intensive practice and review of basic German structure. Primarily for students whose study of German has been interrupted or whose preparation in elementary German is inadequate to permit satisfactory performance in 223 or 225. Does NOT apply on Liberal Arts and Sciences language requirement for graduation nor on German major or minor. Prerequisite: German 112 or equivalent and departmental consent.

223-224. Intermediate German. (3-3). Grammar review; intensive reading of short stories; extensive reading of one short novel. Prerequisite: German 112 or equivalent. (224 satisfies core curriculum literature requirement.)

225-226. German Conversation and Composition. (2-2). Use of language laboratory develops fluency; dictation and free composition exercises develop style. Prerequisite: German 112 or equivalent.
Upper Division Courses

Except as noted, all upper division courses have as prerequisite German 224 or departmental consent.

321. German in Technical Fields. (3). Supervised individual readings in the student's field of specialization—humanities, social sciences, or natural sciences. Prerequisite: German 223. Does not satisfy core curriculum literature requirement.

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

431. Drama. (3).

435. 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.
(3) England.
(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. 102: 1648 to the present.

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. 132: Survey from Reconstruction to the present.


271 & 272. The Far East. (3-3). A survey of the social, economic, and political development of the Far East with emphasis on China, India, and Japan. Prerequisite: Sophomore standing.

**Upper Division Courses**

300. Introduction to Historical Research and Writing. (2). Basic instruction in research methodology, composition, and criticism. Required of history majors.

301 & 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 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 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 end of the Mexican war, with emphasis on the growth of American Nationalism.

335. The Negro in the United States. (3). Negro life, culture, and history from the seventeenth century to the present.

337. Economic History of Europe. (3). Same as Economics 305. (See for description.)

338. Economic History of the United States. (3). Same as Economics 307. (See for description.)

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.

462. Seventeenth Century Europe. (3).


464. Europe, 1815-1870. (3).

470 & 471. Modern German. (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.

487. Diplomatic History of Europe in the Nineteenth and Twentieth Century. (3). The course deals with such topics as the Congress of Vienna, Imperialism, and Anti-Imperialism and the diplomatic relations of the European nations before and after World War I.

491. Workshop in American History. (1-3). May be repeated for graduate credit but will not satisfy requirements for the Master of Arts or Ph.D. degree programs.

492. Workshop in European History. (1-3). May be repeated for graduate credit but will not satisfy requirements for the Master of Arts or Ph.D. degree programs.

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

498. Historiography. (2). Review of the major schools of historical thought, philosophies of history, and eminent historians, from the ancient world to the present.

Graduate Courses

505. Seminar in Ancient History. (3). Prerequisite: Consent of department.

506. Seminar in Medieval History. (3). Prerequisite: Consent of department.

507. Seminar in Renaissance and Reformation. (3). Prerequisite: Consent of department.

508. Seminar in 17th and 18th Century Europe. (3). Prerequisite: Consent of department.

509. Seminar in English History. (3). Prerequisite: Consent of department.

510. Seminar in Modern German History. (3). Prerequisite: Consent of department.

511. Seminar in Modern French History. (3). Prerequisite: Consent of department.

512. Seminar in Slavic History. (3). Prerequisite: Consent of department.

513. Seminar in the History of Science. (3). Prerequisite: Consent of department.
514. Seminar in Latin American History. (3). Prerequisite: Consent of department.

520. Seminar in American Colonial History. (3). Prerequisite: Consent of department.

521. Seminar in American Constitutional History. (3). Prerequisite: Consent of department.

522. Seminar in American Diplomatic History. (3). Prerequisite: Consent of department.

523. Seminar in American Civil War and Reconstruction. (3). Prerequisite: Consent of department.

524. Seminar in American Economic History. (3). Prerequisite: Consent of department.

525. Seminar in American Social and Intellectual History. (3). Prerequisite: Consent of department.

526. Seminar in the American West. (3). Prerequisite: Consent of department.

527. Seminar in American State and Local History. (3). Prerequisite: Consent of department.

528. Seminar in 20th Century America. (3). Prerequisite: Consent of department.

531. Reading Seminar in American History. (3). Prerequisite: Consent of department. May be repeated for credit.

532. Reading Seminar in American History. (3). Prerequisite: Consent of department. May be repeated for credit.

534. Reading Seminar in Latin American History. (3). Prerequisite: Consent of department. May be repeated for credit.

535. Reading Seminar in the History of Science. (3). Prerequisite: Consent of department. May be repeated for credit.

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

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

555. Reading Seminar in Ancient History. (3). Prerequisite: Consent of department. May be repeated for credit.

556. Reading Seminar in Medieval History. (3). Prerequisite: Consent of department. May be repeated for credit.


595. Special Topics in History. (1-3). Open only to graduate students. May be repeated for credit to a maximum of 4 hours.


ITALIAN (See Romance Languages)
JOURNALISM

Major. The major in journalism consists of at least 26 hours, including journalism 115, 226, 330, 380, 446 and 447, and a concentration of not less than 15 hours in one additional field of study in a school or college of the University. In addition, one of the following sequences must be completed:

News-Editorial Sequence: Journalism 336, 444 and 448.
Radio-Television Sequence: Journ. 325, Speech 114, 225 and 314.

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. Prerequisite: English 211 or 225 or concurrent enrollment in one.

226. Newswriting. (3). 2R; 3L. Required for the major in Journalism. Evaluation, reporting and writing of various types of news stories. Qualified students will participate in production of the laboratory newspaper, The Sunflower. Prerequisite: Journalism 115 and sophomore standing. Reasonable typing competence required.

232. Introductory Photojournalism. (3). 2R; 3L. Basic photographic theory and technique, with emphasis on aspects of importance to journalists, writers and editors. Using the department's cameras and laboratory facilities, students take, develop and prepare photographs for publication. Prerequisite: Journalism 226.

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: Journalism 232.

238. Advertising Principles. (3). Survey of advertising fundamentals and media in relation to modern business activities; introduction to copywriting, layout, visualization, market research, packaging and related problems. Prerequisite: Journalism 115.

247. Journalism Research. (2). Introduction to basic research technique and sources of particular value to the professional journalistic, and their application in the preparation of several research papers. Prerequisite: Journalism 226.

Upper Division Courses


325. Radio and television news. (3). 2R; 3L. Reporting and writing news with emphasis on the special requirements of broadcast media. Prerequisite: Journalism 226.

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

336. Editing. (3). 2R; 3L. Selection, evaluation and preparation of copy and pictures for publication; copyreading, rewriting, headline and caption writing, page makeup. Prerequisite or concurrent: Journalism 330.
338. Advertising Copy and Layout. (3). Advanced studies in the structure of advertising campaigns, including direct mail, outdoor, print, promotional literature; also includes the preparation of advertising materials for the electronics media. Prerequisite: Journalism 238.

360. Journalism Internship. (1-4). On-the-job experience and training in news, advertising or public relations. Special readings and research projects for students professionally employed in the communications media. Prerequisite: Journalism 330.

380. History of Communications. (3). Research into the development of mass media. Emphasis will be given to the development and presentation of original research papers. Bibliography and criticism in mass communications. Prerequisite: Journalism 330.

427. Writing for Magazines. (2). Researching and writing non-fiction articles for submission to magazines and newspapers. Enrollment limited. Prerequisite: Journalism 330.


440. Student Publications. (3). For those who are or plan to be journalism teachers or advisers 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 emphasis on ethical and legal considerations. Prerequisite: Journalism 380.

445. Editorial writing. (3). A study of editorial judgment, including practice in the writing of editorials and editorial page features. A study of research materials available to editorial page writers. Prerequisite: Journalism 380.


447. Law of the Press. (3). An examination of libel laws, including studies of the laws themselves, with substantive research into case histories. Prerequisite: Journalism 380 and senior standing.

448. Special Topics in Journalism. (3). Directed individual research in various aspects of journalism and mass communications, or related topics. Preparation of a major term paper. Prerequisite: Journalism 380 and senior standing.

450. Public Relations. (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: Journalism 330 or 439.

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 program. 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 some 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. 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 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.

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

**Lower Division Courses**

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

122. Discrete Mathematics II. (3). Linear algebra and related topics. Prerequisite: 121.

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.

243. Introductory Analysis II. (5). A continuation of Mathematics 142. Includes a study of integration and applications and an introduction to infinite series. Prerequisite: Mathematics 142 with a C or better.

244. Introductory Analysis III. (3). A continuation of Mathematics 243. Includes a study of multiple integration, and partial derivatives. Prerequisite: Mathematics 243, with a C or better.

245. Survey of Analysis. (3). A brief but careful introduction to mathematical analysis intended for students of humanities and social sciences. Prerequisite: Mathematics 141. Credit in both 245 and 142 is not allowed.

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.

**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. (Not for graduate credit.)

412. Modern Geometry. (3). Fundamental concepts of geometry. Prerequisite: Mathematics 313 or consent of department.

414. Fundamental Concepts of Algebra II. (3). A continuation of Mathematics 313. Prerequisite: Mathematics 313 with a C or better.

416. Topics in Number Theory. (3). Prerequisite: Mathematics 315 and consent of department.

431. Intermediate Analysis III. (3). A continuation of Mathematics 336. Prerequisite: Mathematics 336 with C or better.

437. Elementary Topology. (3). Primarily the topology of metric spaces. Prerequisite: Mathematics 335 with a C or better or consent of department.

438. Introduction to Complex Analysis. (3). Basic treatment of analytic functions. Prerequisite: Mathematics 335 or 447 with a C or better 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.


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 113.

MUSIC

See page 256 for requirements and curriculum.

PHILOSOPHY

The Department of Philosophy offers a wide range of courses in order to enable an undergraduate major to acquire familiarity with the varieties of philosophic inquiry, and to pursue in some detail those topics in which he becomes especially interested.

MAJOR: A major requires (1) a minimum of 24 semester hours of philosophy courses, at least 12 of which must be upper division courses, and (2) included within the 24 hour major, certain required courses selected from three areas of study as follows:

I. Logic (3 hours): 225 or 325 or 426.
II. Value Theory (3 hours): 244 or 313 or 360 or 375.
III. History of Philosophy (6 hours): 331, and 333 or 334.

MINOR: A minor consists of 15 hours of philosophy selected in consultation with the department, with the aim of orienting the student to the philosophical aspects of his major field.

Lower Division Courses

121. Introduction to Philosophy. (3). An introduction to the philosophic 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.

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.

* When applicable, Philosophy 490 (Special Studies), can be substituted for one or more of the required courses, with the approval of the department.
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 (3). A study of the basic philosophic systems from the Pre-Socratic to the Hellenistic Period, with an emphasis on the works of Plato and Aristotle.


334. Late Modern Philosophy. (3). A study of the philosophical thought of the eighteenth century with selections from such philosophers as Berkeley, Hume, and Kant.

335. Nineteenth Century Philosophy. (3). A study of the philosophical thought of the nineteenth century including selections from such philosophers as Hegel, Fichte, Schelling, Schopenhauer, Mill, Marx, Kierkegaard, Pierce, and Nietzsche.

340. Epistemology. (3). A critical examination of the nature of knowledge and of the philosophical problems concerning skepticism, knowledge of the self, material objects, other minds, the past, present and future, universals, and necessary truths. Selections from both historical and recent writings. Prerequisite: Phil. 121 or equivalent.

350. Metaphysics. (3). An exploration of some basic topics in the theory of reality. Issues include such notions as space, time, substance, causality, particulars, universals, appearance, essence and being. Prerequisite: Phil. 121 or equivalent.

356. American Philosophy. (3). A study of philosophy in America with readings selected from such authors as Peirce, James, Royce, Santayana, Dewey, Lewis, and Quine.

360. Ethical Theory. (3). A concentrated study of ethical theory in the context of certain fundamental ethical problems. Prerequisite: 121 or 244 or equivalent.

366. Philosophy of Literature. (3). An exploration of the philosophic themes present in literature. Special attention is devoted to literature as an aesthetic phenomenon and the associated problems of the essential nature of literature as a particular art form, the author’s intentions, the criteria of aesthetic appreciation, and literature as knowledge. Emphasis on the special type of literature—poetry, drama, the novel, the short story—is the instructor’s choice.

369. Existentialism. (3). An examination of the leading contemporary philosophic movement in Europe as expressed in the writings of Kierkegaard, Nietzsche, Schopenhauer, Heidegger, Sartre, Camus and Jaspers. Prerequisite: Phil. 121 or equivalent.
375. Aesthetics. (3). A study of the various philosophic conceptions of the fine arts, and an analysis of the notions of imitation, imagination, expression, creativity, feeling, intuition and technique, as they relate to the aesthetic context of artist, audience and the work of art.

380. Phenomenology. (3). A study of the phenomenological movement in philosophy, with special attention to its source in Husserl, and an introduction to its recent developments in such thinkers as Scheler, Heidegger, Sartre, Merleau-Ponty, and Straus. Prerequisite: 121 or equivalent.

420. Logical Theory. (3). A study of the views of selected philosophers concerning the nature and function of logic and other selected problems in logical theory. Prerequisite: Philosophy 225 or 325, or consent of instructor.

425. Philosophy of Science. (3). Consideration of the presuppositions, results and limitations of the natural and social sciences; the relations among the sciences; the nature of the philosophic problems and scientific methods used.

426. Advanced Symbolic Logic. (3). 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 and 346, and one semester of Chemistry. For a Bachelor of Arts degree, one upper division physics laboratory course and three additional hours of physics are required. For a Bachelor of Science degree, three upper division physics laboratory courses and eight additional hours of Physics are required. Also required for the Bachelor of Science degree is a reading knowledge, or two semesters, of German, Russian, or French.

MINOR: A minor in Physics consists of General College Physics (123-124 or 243-244) and at least six additional hours of physics.

Lower Division Courses

103. Introductory Physics. (5). 4R; 3L. A general physics course for liberal arts students and those who have not had physics in high school. Topics to be included are: Mechanics, heat, electricity and magnetism, wave phenomena, and modern physics. Not open to students who can meet the prerequisites for Physics 243. Prerequisite: One year of high school algebra.

123-124. General College Physics. (5-5). 4R; 3L. First semester: Mechanics, heat and sound. Second semester: Electricity, light, and modern physics. Intended for students who have a working knowledge of algebra and trigonometry but who have had no calculus. Prerequisite for 123: High school trigonometry or Math 141. Prerequisite for 124: Physics 123 or 243.

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. Prerequisite: High school physics, or 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.

320 & 321. Classical Physics Laboratory. (1-1). 3L. An intermediate laboratory with experiments drawn from the following areas of classical physics: Mechanics, optics, electricity and magnetism. Corequisite: Physics 333 or 345.
333-334. Electricity and Magnetism. (3-3). Direct and alternating currents; electric and magnetic field theory including an introduction to Maxwell’s electromagnetic wave theory. Prerequisite for 333: The sequence of Physics 123-124 with a grade of B or better in both, or Physics 244 with a grade of C or better, and Math 244 with a grade of C or better.

339-340. Elementary Mechanics. (3-3). Motion of a particle in one and several dimensions; motion of systems of particles; motion of rigid bodies; moving coordinate systems, mechanics of continuous media, and the Lagrangian Equations of Motion. Prerequisite for 339: The sequence of Physics 123-124 with a grade of B or better in both, or Physics 244 with a grade of C or better, and Math 244 with grade of C or better. Prerequisite for 340: Physics 339.

345. Physical Optics. (3). Electromagnetic waves, diffraction and interference, radiation, scattering, and optical properties of solids. Prerequisite: The sequence of Physics 123-124 with a grade of B or better in both, or Physics 244, and Math 244.

350. Thermophysics. (3). The laws of thermodynamics, thermodynamic potentials and applications; distribution functions, Boltzmann equation, transport phenomena and fluctuations; introduction to statistical mechanics. Prerequisite: The sequence of Physics 123-124 with a grade of B or better in both, or Physics 244, and Math 244.

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

421 & 422. Modern Physics Laboratory. (1-1). 3L. An advanced laboratory with experiments drawn from various areas of modern physics. In 421, the emphasis is on a determination of the fundamental constants of physics. 422 is devoted to experiments in nuclear physics. Prerequisite for either course: Physics 311, and 320 or 321.

425. Electronics. (2). 1R; 4L. Provides a working knowledge of electronic devices and circuits for the student or research worker who has little or no background in electronics. Prerequisite: Consent of instructor.

454-455. Modern Physics. (4-4). Introduction to quantum mechanics, the Schroedinger equation, elementary perturbation theory, one- and multi-electron atoms, physics of the nucleus. Prerequisite: Math 346; Physics 311 and 340. Physics 454 is a prerequisite for 455.

460. Introduction to Theoretical Physics. (3). Techniques of mathematical physics and their application to boundary value problems in mechanics, electricity and magnetism, wave motion, etc. Prerequisite: Physics 334, 340; Math 346.

Graduate Courses


512. Elementary Statistical Mechanics. (3). An introduction to the basic concepts and methods of statistical mechanics with applications to simple physical systems. Prerequisite: Math. 346; Physics 340.

515-516. Introduction to Solid State Physics. (3-3). The basic knowledge of the nature and properties of the solid state including the structural, thermal, mechanical, electrical, and magnetic properties. Electron theory of metals, band theory of solids. Prerequisite: Physics 311, or department consent, and Math 346.

521. Individual Readings. (1 to 3). Prerequisite: 30 hours of physics and department consent. May be repeated for credit up to three hours.
529. Selected Topics in Physics. (2 or 3). May be repeated for credit up to six hours. Prerequisite: Department consent.

533-534. Elementary Quantum Mechanics. (3-3). Elementary principles, formulations, and methods of quantum mechanics with special application to atomic and molecular phenomena. Prerequisite: Physics 340 and 454 or department consent, and Math. 346.


537-538. Nuclear Physics. (3-3). The nuclear two-body problem and nuclear forces, models of the nucleus, nuclear decay, theory of nuclear reactions, and strange particles. Prerequisite: Physics 455.

550. Seminar. (1). Review of current periodicals. Reports on student and faculty research. May be repeated for credit up to two hours. Prerequisite: 20 hours of physics.

551. Research and Thesis. (1-3). May be repeated for credit up to six hours.

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 methods 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.

317.° **Urban Politics.** (3). A participatory analysis of political relations in the urban community.

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 juridical impact of the feudal system and the philosophic legacy of the ecclesiastical writers during the third. (Formerly offered as Pol. Sci. 343 & 344.)

360. Primitive Law and Government. (3). Same as Anthropology 360. (See for description.)

400. Ethnic Politics. (3). An intensive analysis of the literature and data on the role of ethnic groups in the political system. Attention will be given to the network of relationships which affect, and are affected by, ethnic groups. Participants in the course will be expected to develop and complete a research project for presentation and evaluation.

420.° Politics of Developing Areas. (3). A survey of the political systems in Latin America, Africa, the Middle East, South and Southeast Asia. Special attention to colonialism as a system, the effects of colonialism and patterns of emerging nations.

423.° Government and Politics of Latin America. (3). An examination of the political institutions and processes which currently exist in the Latin American republics. Emphasis will be on the social, economic and psycho-cultural factors which affect these institutions and processes. In addition, students will be given an opportunity to participate in an original research experience.

426.° Comparative Politics of the Middle East. (3). An examination of the political institutions and processes of Middle Eastern governments. The social, economic and Islamic cultural factors which 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.
440. American Political Behavior. (3). An intensive examination of the patterns of political behavior in the United States through primary and secondary analysis of existent data. Emphasis will be given to the development and presentation of an original research paper. Prerequisite: Consent of instructor.

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 in 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 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.


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**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
<th>Description</th>
<th>Prerequisite(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>342.</td>
<td>Psychological Statistics</td>
<td>3</td>
<td>Emphasizes basic quantitative techniques in measurement and evaluation of behavior.</td>
<td>Psych. 112, Math. 121 &amp; 122 or Math 141, or consent of instructor.</td>
</tr>
<tr>
<td>343.</td>
<td>Experimental Psychology</td>
<td>3</td>
<td>Laboratory study of behavior stressing experimental design and research techniques.</td>
<td>Psych. 112 and 342.</td>
</tr>
<tr>
<td>346.</td>
<td>Advanced Social Psychology</td>
<td>3</td>
<td>An intensive review of a selected contemporary issue in social psychology.</td>
<td>Psych. 112 and consent of instructor.</td>
</tr>
<tr>
<td>350.</td>
<td>Physiological Psychology</td>
<td>3</td>
<td>Physiological factors in behavior.</td>
<td>Psych. 211.</td>
</tr>
<tr>
<td>360.</td>
<td>Psychology Tutorial</td>
<td>3</td>
<td>Selected topics in psychology. (May be repeated for a maximum of 6 hours credit.)</td>
<td>Average of B in psychology courses which must include Psych 211 and 212 and consent of instructor.</td>
</tr>
<tr>
<td>370.</td>
<td>Comparative Psychology</td>
<td>3</td>
<td>Behavioral research and principles at different phylogenetic levels.</td>
<td>Psych. 112 and 211.</td>
</tr>
<tr>
<td>401.</td>
<td>Introduction to Clinical Psychology</td>
<td>3</td>
<td>Application of psychological principles to the field of problem behavior.</td>
<td>Psych. 275, 444, and 465.</td>
</tr>
<tr>
<td>410.</td>
<td>History of Psychology</td>
<td>3</td>
<td>Psychological theory and experimentation from ancient to modern times.</td>
<td>10 hours of Psychology.</td>
</tr>
<tr>
<td>443.</td>
<td>Operant Conditioning Laboratory</td>
<td>3</td>
<td>Experimental laboratory stressing analysis of behavior by operant techniques.</td>
<td>Psych. 112 and 211.</td>
</tr>
<tr>
<td>456.</td>
<td>Special Investigation</td>
<td>1-3</td>
<td>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.)</td>
<td>10 hours of Psychology and consent of instructor.</td>
</tr>
<tr>
<td>460.</td>
<td>Developmental Psychology</td>
<td>3</td>
<td>Survey of theories of child development and applications to special aspects of the developmental process.</td>
<td>Psych. 260.</td>
</tr>
<tr>
<td>468.</td>
<td>Human Factors</td>
<td>3</td>
<td>Explores the impact of modern machines on man and the problems of performance, training, perception, and error resulting from man-machine confrontations. Surveys current literature and experimentation with some attention to industrial design criteria.</td>
<td>Psych. 342 and 343.</td>
</tr>
<tr>
<td>469.</td>
<td>Human Factors Laboratory</td>
<td>3</td>
<td>Applications of human factors principles and guidelines. Experimentation, measurement, equipment design, field studies and analysis of complex machines and equipment.</td>
<td>Psych. 468.</td>
</tr>
</tbody>
</table>


* With sufficient reason a student may apply for consent of instructor to waive course prerequisite.

Graduate Courses

502. Seminar in Clinical Psychology. (2). Intensive study of clinical theory, research, and practice. Prerequisite: Consent of instructor.

503. Clinical Psychology Laboratory. (2). 4L. Practical experience in observation, recording and interpretation of a wide range of behavior, introduction to structured interviewing, clinical research, and communication of observation. Prerequisite: 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: Psych. 401 or 502, 444, and consent of instructor.

526. Techniques of Behavior Modification. (2). Different techniques of behavior modification, individual and group, survey of research. Prerequisite: 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.
551. Seminar in Physiological Psychology. (3). Intensive study of theory and research in physiological factors in behavior. Prerequisite: 350 or equivalent and consent of instructor.

560. Systematic Psychology. (3). A critical survey of systems of psychology. Prerequisite: Consent of instructor.


570. Seminar in Current Developments. (3). Intensive study of current issues, techniques, research and application. May be repeated for different topics. Maximum credit 6 hours. Prerequisite: Consent of instructor.

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

575-576. Thesis. (2-2). Prerequisite: Consent of instructor.

585. Seminar in Perception. (3). Intensive study in theory and research in perceptual processes. Prerequisite: 485 or equivalent and consent of instructor.

RELIGION

The program in Religion 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 30 hours; 21 in Religion and 9 in related fields, to be selected in consultation with the advisor.

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

Minor: The minor consists of 15 hours in Religion 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.
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.

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

Comparative Religion. (3). A rapid survey of the religious experiences of people in their efforts to secure and conserve the essential values of life.

History of Religions 1. (3). Emphasis on historical insights useful for understanding religion in its cultural setting and the development of major religious concepts.

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

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.

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.”

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

Philosophy of Religion. (3). (Same as Philosophy 446.)

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.

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

Special Studies. (3). A concentrated study of a contemporary theologian, theological movement or religious issue, announced by the instructor when the course is scheduled. May be repeated for credit. Prerequisite: Consent of the instructor.

ROMANCE LANGUAGES

French

Major: A 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 305 or Spanish 334 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.

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 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.
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**


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 systems which are integrated around systematic violations of the control norms. Competing theories are presented and evaluated within the context of the assumption that man is a social product. Prerequisite: Soc. 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.

*Prerequisite may be waived by department consent.

Graduate Courses

500. Research Methods in Sociology. (2 or 3). The application of research methods to sociological data. Includes research design, collection of data, development of questionnaires, schedules and scales, interviewing methods, analysis of data, and summary. Prerequisite: Soc. 410 and department consent.


515. Seminar on the Family. (2). Review of recent research on the family and the theoretical implication thereof. Prerequisite: Soc. 315 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.

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 other theatre courses. All Theatre majors will be expected to participate in some area in the production of the University Theatre plays, in consultation with the staff.


(4) (Speech Education): Speech 212, 213, 143, or 228, 243, 244, 259, 461, 465, and 3 hours to be elected with consent of the area adviser.

Students completing option (1) must participate in intercollegiate forensics for a minimum of two semesters prior to the senior year.

Students completing option (4) must complete three semesters of co-curricular activities. These may consist of two semesters of intercollegiate forensics and one semester of theatre; or one semester of intercollegiate forensics and two semesters of theatre.

Option (4) is strongly recommended for those preparing to teach, although option (1) or (2) may be acceptable upon approval of the department. Students not planning to seek qualification for teaching may substitute within option (4) with the consent of the department. Students planning to teach should also check state certification requirements.

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 view point 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.)


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.

470. The Audience. (3). Analyses of speech audiences, including those of radio, television, public address, and theatre. Demographic and psycho-sociological dimensions and characteristics. Quantitative and qualitative techniques of audience measurement and evaluations thereof.

472. Practicum in Audience Measurement. (3). Application of research techniques to practical problems in audience measurement. Identification of specific problems. Constructions of measuring instruments (e.g., questionnaires), sampling techniques, collection of data, tabulation, analysis, and reports of findings. Prerequisite: Speech 470 or department consent.

475. Directed Study. (1-4). Individual study or projects. Prerequisite: Department consent. May be repeated for credit with department consent.
Graduate Courses

500. Introduction to Graduate Study in Speech. (3). Major emphasis is placed upon the principles of research, bibliographical data, and historical, descriptive, and experimental research methods useful in speech, broadcasting, and drama. This course should be taken at the beginning of the graduate program.

503. Educational and Instructional Broadcasting. (3). Investigation of the methods of producing and using educational and in-school instructional radio and television programs.

506. Regulation and Responsibility in Broadcasting. (3). Government and broadcasting relations; review of basic radio and television law; emphasis on responsibilities of broadcast 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.


524. Development of Modern Theatre Styles. (3). An examination of the major movements in the modern theatre since 1850. Emphasis is on both literary and physical elements of styles.

530. Theories of Rhetoric: Classical. (3). An intensive study of the rhetorical theories of classical writers from 466 n. c. to the decline of Roman oratory. Principal emphasis will be on Isocrates, Plato, Aristotle, Quintilian, Cicero, and Longinus.

531. Theories of Rhetoric: Medieval, Renaissance, and Modern. (3). A study of the emerging patterns of rhetoric from the Second Sophistic to modern times. Analysis of the rhetorical systems associated with such figures as Augustine, Fenelon, Bulwer, Sheridan, Steale, Rush, John Quincy Adams, Blair, Campbell, and Whately.


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 Business Education.

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 91. The program of high school preparation recommended for students entering the University College is given on page 92.

Students may enter the College of Business Administration from the University College, other degree-granting colleges within the University, or other universities and colleges, provided they have completed 24 semester credit hours and have earned a credit point index as follows: 24-63 hours, 1.700; 64 or more hours, 2.000, and are not on academic probation.

PROBATION

A student will be placed on probation at the end of any semester in which he does not have a cumulative grade point index of 1.700 for 24-63 credit hours and 2.000 for 64 or more credit hours. A student on probation may not enroll for more than 12 semester hours. Probation is removed when the cumulative grade point index reaches the required level. The student remains on probation if he earns at least a 2.000 index in the term during which he is on probation and his cumulative grade point index does not yet meet the minimum standards.
A student on probation shall be dismissed from the College of Business Administration if he fails to meet either of the requirements of his probationary status. When dismissed, a student will not be permitted to re-enroll in the College of Business Administration for a period of 18 weeks. Readmission after a lapse of 18 weeks is not automatic. Students must apply to the College of Business Administration Exceptions Committee to be considered for readmittance on a final probationary status.

GRADUATION REQUIREMENTS

In addition to fulfilling the general requirements of the University for graduation, each student shall elect at least 6 hours from the departments represented in Groups I through IV of the prescribed fields of study exclusive of courses in economics.

Candidates for either of the two baccalaureate degrees offered by the College shall complete at least 56 semester hours of courses offered outside the College (Economics 221 and 222 may count as courses outside the College. History 336, 337, 338 and Pol. Sci. 453 may not count as courses outside the College.) In addition, such students shall complete at least 50 semester hours of courses offered by the College.

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:

<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. 213, Introductory Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. 235-236, Cost I &amp; II or Acctg. 274, Managerial Accounting</td>
<td>5</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. 340, Money, Banking and Public Policy</td>
<td>3</td>
</tr>
<tr>
<td>Eco. 421, Production, Price and Distribution Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Adm. 261, Administrative Process</td>
<td>3</td>
</tr>
<tr>
<td>Adm. 265, Communication and Human Relations I</td>
<td>2</td>
</tr>
<tr>
<td>Adm. 266, Communication and Human Relations II</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>* Students taking an emphasis in the Department of Economics may substitute Math. 141, Algebra and Trigonometry, for Math. 121-122, upon department consent.</td>
<td></td>
</tr>
</tbody>
</table>

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

ACCOUNTING

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acctg. 235-236, Cost I and II</td>
<td>5</td>
</tr>
<tr>
<td>Acctg. 315-316, Intermediate I and II</td>
<td>6</td>
</tr>
<tr>
<td>Acctg. 345, Tax</td>
<td>5</td>
</tr>
<tr>
<td>Acctg. 403, Advanced I</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. 413, Auditing</td>
<td>3</td>
</tr>
<tr>
<td>Adm. 434, Law and Business</td>
<td>5</td>
</tr>
</tbody>
</table>

ADMINISTRATION

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adm. 370, Quantitative Methods and Research</td>
<td>4</td>
</tr>
<tr>
<td>Adm. 481-482, Administrative Policy I &amp; II</td>
<td>5</td>
</tr>
<tr>
<td>Upper division electives in Administration</td>
<td>12</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eco. 414, Gov't Regulation of Economic Activity</td>
<td>3</td>
</tr>
<tr>
<td>Electives in Economics (12 hours upper division courses, including not more than six hours from among Eco. 305, 307 and 406)</td>
<td>12-23</td>
</tr>
</tbody>
</table>
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 Business Education 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, Communication and Human Relations I</td>
<td>2</td>
</tr>
<tr>
<td>Adm. 266, Communication and Human Relations II</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>Bus. Ed. 133, 138, 237, Typewriting**</td>
<td>6-8</td>
</tr>
<tr>
<td>Bus. Ed. 201, Secretarial Office Machines</td>
<td>2</td>
</tr>
<tr>
<td>Bus. Ed. 202, Calculating Machines</td>
<td>1</td>
</tr>
<tr>
<td>Bus. Ed. 231, 234, 240, Shorthand</td>
<td>4-9</td>
</tr>
<tr>
<td>Bus. Ed. 136, 203, Records Management and Office Procedures</td>
<td>4</td>
</tr>
<tr>
<td>Bus. Ed. 345, Transcription</td>
<td>3</td>
</tr>
<tr>
<td>Bus. Ed. 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—Bus. Ed. 138 and Bus. Ed. 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; Bus. Ed. 136, 138, 201, 202, 203, 231, 234, 237, 240 or 345 (138, 231, and 234 may be taken in high school), and 248; science or Math. 121; six hours of humanities; nine hours of general university requirements as outlined on page 55; 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 Bus. Ed. 133. If taken in high school, no credit is given for Bus. Ed. 231; free electives shall be substituted for this course.
BUSINESS TEACHER EDUCATION DEGREE

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 204.

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 182.

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 worksheet 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. 316.

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 statements. Prerequisite: Open only to students without previous credit in accounting or by department consent.

502. Managerial Accounting. (3). Use of accounting data to analyze management problems; concepts of cost analysis, return on investment analysis, operations and capital budgeting. Prerequisite: 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 socioeconomic conditions is stressed. Prerequisite: 15 hours of accounting.

512. Contemporary Accounting Theory. (3). An advanced discussion of the framework of theory underlying current accounting thinking and procedures; a study of its development and the influence of professional organizations in this development. Areas of theoretical controversy are emphasized. Prerequisite: 15 hours of accounting.


533. Professional Auditing Techniques and Practice. (3). Professional aspects of auditing practice and procedures. Techniques of working paper preparation, report writing, and professional ethics are stressed. Prerequisite: Acctg. 413.

550. Accounting Research and Writing. (3). An advanced seminar offering opportunity for oral discussion and written reports on matters of current interest in diverse areas of the accounting field. A major course objective is to develop the student’s ability for independent research, as well as presentation and defense of his findings. Prerequisite: 24 hours of accounting.

563. Seminar in Taxation. (3). An advanced review and discussion of current problems in federal income taxation and tax practice. Prerequisite: 3 hours of federal taxation.

ADMINISTRATION

The requirements for an emphasis in Administration on a Bachelor of Business Administration degree are listed on page 182.

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 Computers. (3). The development, present applications and future uses of computers in business, education, government, and science. Analysis of the social, political, and economic significance of computers.

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

265-266. Communication and Human Relations I-II. (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.

375. Computer Concepts and Programming. (3). An analysis of digital computer programming systems. Flowcharting and programming of business applications and statistical procedures. Prerequisites: Acct. 213 and Econ. 238 or concurrent enrollment in Econ. 238 or department consent.

401. International Marketing. (3). Problems and procedures of marketing in foreign countries, including effects of foreign cultures and marketing systems on the design of marketing programs. Prerequisite: Adm. 300.

402. Marketing Information Systems. (3). Methods of obtaining internal and external marketing information, including marketing research. Includes design of marketing information systems, data sources, and research procedures. Prerequisite: Adm. 300 and Econ. 238.

403. Marketing Decision Processes. (3). Examination of decision theory and processes, including Bayesian analysis and model building, as they are used in marketing. Prerequisites: Econ. 238 and Adm. 300.

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 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.


408. Selling and Sales Force Management. (3). An analysis of current behavioral concepts of personal selling and the problems and policies involved in managing a sales force. Prerequisite: Adm. 300.

409. Price Problems and Policies. (3). An examination of the pricing problems confronting a marketer and an analysis of the policies and decision processes used by manufacturers and middleman in pricing. Prerequisite: Econ. 222 and Adm. 300.

410. Marketing Programs. (3). An integration of all the aspects of the marketing mix into an effective and coordinated marketing program. Prerequisite: 6 hours of marketing.
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). Analysis of investment risks, financial information, and industry characteristics. Examination of corporate, government, municipal, and financial institution securities and of other investment types. Personal portfolio construction, supervision, and management. Prerequisite: Adm. 343.

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. Capital Markets and Financial Institutions. (3). Introduction to the capital markets system. The management and operations of financial institutions. Each major type of financial institution is viewed in the context of its competitive environment with respect to both asset and liability management. Prerequisite: Adm. 343 and Econ. 340.

444. Commercial Bank Management. (3). Bank asset and liability management; internal organization of commercial banks; current problems and recent innovations in commercial banking. Prerequisite: Adm. 443.


446. Financing International Operations. (3). Aspects of financial planning for corporations with overseas operations; analysis of sources and uses of corporate funds abroad; effects on international financial administration of the characteristics of foreign money and capital markets and foreign financial institutions. Prerequisite: Adm. 343.

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.

COLLEGE OF BUSINESS ADMINISTRATION 189
467. Organizational Behavior. (3). Examination of theories of organizational behavior. Topics covered include motivation, group processes, communication, authority, discipline, and management development. Management of human factors to achieve organizational objectives. 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). May be repeated by department consent.

491. Independent Study. (1-5).

Graduate Courses

500. Marketing Systems. (3). An intensive analytical introduction to the combination of institutions which comprise the overall marketing system and to the marketing function as a major subsystem within the individual business firm.

501. Marketing Management. (3). The development of marketing programs or 'mixes' to obtain sales and profits under a variety of operating conditions. Concerned with the management of specific problem areas such as product, channels, promotion and pricing.

502. Marketing Strategy. (3). Integration of long-range marketing and corporate policies. Budgetary control and evaluation of the effectiveness of marketing systems. Organization of the marketing department and its relation to the total organization. Prerequisite: Adm. 501 or consent.

503. Marketing Analysis. (3). Application of the scientific method to the solution of marketing problems. Prerequisite: Adm. 501 or consent.

505. Consumer Decision Processes. (3). An examination of different aspects of the behavior of consumers and of the factors that help explain that behavior. Includes an analysis of current concepts and models. Prerequisite: Adm. 501 or consent.

509. Marketing Theory. (3). Utilization of marketing research findings to analyze current marketing theory. Development of conceptual and theoretical frameworks for marketing analysis. Prerequisite: Six hours of marketing, including Adm. 501.

532. Law and Society. (3). An analysis of our legal system in operation. Includes legal philosophy and the ends of law, the basic characteristics and subject matter of law, and legal reasoning and process. The role of the legal system in society is examined through study of the concept of freedom of contract. Prerequisite: Consent.

533. Political and Social Environment of Business. (3). An examination of the political and social environment within which business operates. A consideration of how business interacts with society, including the role of governmental and legal constraints, changing social patterns and forces, and competing ideas and values. Prerequisite: Adm. 532 or consent.

540. Financial Systems. (3). An intensive analytical introduction to finance from a management viewpoint, including theory of financial management, the financial institutional structure, and an analysis of a variety of practical problems of business finance. Prerequisite: Consent.

542. Structure and Policies of Financial Institutions. (3). The development, management, and impact of policies of financial institutions including planning, measuring, and achieving financial goals. Prerequisite: Adm. 541 or consent.


545. Security Analysis. (3). Analysis and valuation of investment securities issued by corporations and governmental agencies. Prerequisite: Adm. 441 or consent.

546. Capital Budgeting. (3). Organization and operation of the capital budgeting system; problems in partial decentralization and in comparability of estimates of funds flow. Contemporary methods of treating uncertainties and constraints; application of programming techniques. Determination of appropriate discount rates. Prerequisite: Consent.


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. Quantitative Decision Theory II. (3). Topics such as sample design, Chi-square, variance analysis, and correlation and regression analysis are approached from conceptual and decision-making points of view. Prerequisite: Adm. 571.

574. Computer Systems and Procedures. (3). Planning, development, and operation of business computer systems. Emphasis given to information handling and development of real-time management information systems. Study of computer applications in the areas of marketing, production and finance. Consideration of human factors in a man/machine communication system. Prerequisite: Adm. 471 and consent.
575. Management Science. (3). Provides quantitative bases from which the student may develop his analytical abilities for use as a decision-maker. Areas of study include: mathematical programming, game theory, forecasting, queuing theory, and simulation. Prerequisite: Adm. 571 or consent.


581. The Philosophy of Management. (3). Concentrated readings and research to define the relation of management leadership to our society. Prerequisite: Consent.


586. Seminar in Research Methodology. (3). Study of concepts and procedures in the design and performance of research.

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

591. Directed Studies. (1-5). Prerequisite: Consent. May be repeated by consent.

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

BUSINESS EDUCATION

Major: No major is offered in the department but courses in business education 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 183 and page 204.

Minor: There is no minor offered in the department.

Students who are enrolled for less than 9 hours may not enroll in business education courses until the last day of final registration. However, business education courses are open to all University students upon the approval of the Business Education Department. A college graduate is permitted to enroll for shorthand and typing with the consent of the department and the dean. For exception to these rules, a written application must be made to the chairman of the department for consideration with the dean of the college concerned. The facilities available determine the enrollment. The decision as to the availability of equipment is made by the chairman of the department and the Dean of the College of Business Administration.

Although students may audit courses in business education, available space in the classrooms is a major factor in the number of auditors. No credit is given toward graduation for repetition of first-year shorthand or typewriting taken in high school even though a grade is recorded in the course.
Lower Division Courses

133. Beginning Typewriting. (2). 3R. Correct fingerling, mechanical operation of a typewriter, and introduction to business forms. No credit is given to students with a unit in high-school typewriting. (Credit earned in this course does not apply on the Bachelor of Science in Business Administration Degree or the Certificate of Applied Science in Secretarial Training.) In enrolling for this course, preference is given to students specializing in business or pursuing a teacher-training program.

136. Records Management. (2). All basic filing systems. Prerequisite: Bus. Ed. 133, or one year high-school typewriting, or department consent.

138. Advanced Typewriting. (3). Stress is placed on business, letter, and manuscript forms; tabulation; and timed production problems. Prerequisite: Bus. Ed. 133 or one year of high-school typewriting, or department consent.

201. Secretarial Office Machines. (2). 3L. Designed to familiarize students with office machines, including transcribing machines, executive typewriters, duplicating machines, copying machines, key punch machine, and other secretarial office equipment. Some part-time office experience. Prerequisite: Bus. Ed. 237, or department consent.

202. Calculating Machines. (1). 2L. Designed to familiarize students with adding machines, rotary calculators, and printing calculators. Prerequisite: Department consent.


231. Elementary Shorthand. (3). 5RDL. Theory of Gregg Diamond Jubilee Shorthand. No credit given to students with one unit of high-school shorthand. Prerequisite: Bus. Ed. 133 or concurrent enrollment, or one unit of high-school typewriting, or department consent.


237. Technical Typewriting. (3). Letter forms used in business, difficult tabulating projects, legal typewriting, and advanced timed production problems. Emphasis is placed on accuracy at a high rate of speed to meet office standards. Prerequisite: Bus. Ed. 133 or two units secretarial training in high school, or department consent.

240. Technical Shorthand. (3). 3R; 1L. Advanced dictation with emphasis on technical vocabularies. Prerequisite: Bus. Ed. 234 with a grade of C or better, and Bus. Ed. 237, or department consent.

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

Upper Division Courses

300. Office Practice. (3). 2R; 1L. Advanced office duties, techniques, and procedures. Also includes various methods of teaching office machines and the functional use of selected machines as well as a survey of available equipment. Prerequisite: Bus. Ed. Major or Minor with credit in Bus. Ed. 237.

345. Transcription. (3). 2R; 2L. Emphasis on transcribing advanced shorthand notes with speed, accuracy, and correct form. Prerequisite: Bus. Ed. 240 with a grade of C or better, or department consent.
440. Office Management. (2). Relationship of the office function to the business enterprise including office location and layout, selection of office furniture, equipment, and supplies; principles of office organization; supervision of office personnel; office services; and control of office output.

460. Directed Studies. (1-5).

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.


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.

470. International Trade. (3). Study of the theory of international trade and its empirical foundations. An analysis of private and public barriers to trade, within the context of theory and contemporary events. Prerequisite: Eco. 421 or consent of instructor.
471. Economic Growth and Development. (3). Survey of leading growth theories with an emphasis on the processes of development and capital formation in developed and underdeveloped economies. Determinants of real income, resource allocation, investment criteria, balance of payment problems, national policies, and related topics analyzed within this framework. Prerequisite: Eco. 222.

472. International Finance. (3). Concepts and theories of balance of payments equilibrium, foreign exchange rate determination, and capital movements; current problems and policies related to balance of payments disequilibrium, international liquidity, and the functioning of the international monetary system. Prerequisite: Eco. 421 or consent of instructor.

475. Natural Resources and Regional Planning. (3). A study of the approaches to the optimal allocation of natural resources. Criteria for policy decisions; evaluation of the social and economic benefits and costs of the use of resources through time. Prerequisite: Eco. 222.

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.)


596. Thesis. (2).
The principal purpose of the College of Education is to provide professional programs appropriate for the development of competent teachers, administrators, supervisors, and counselors for schools. In addition to preparing broadly educated professionals, the College faculty provides leadership in professional service and research designed to contribute to the improvement of both the schools and teacher education at local, state, and national levels.

The curricula listed in the sections that follow offer an organization of courses which gives opportunity for systematic study. They are oriented from the notion that understanding of self and one's world are necessary bases for professional growth and are arranged to permit the development of (a) understanding of the culture characteristic of a democratic society and education's place within it; (b) a philosophy of education consistent with living within this society; (c) an adequate professional preparation and the opportunity to relate content to the problems of living; (d) knowledge of human growth and development; and (e) skills in the application of principles of human learning and adjustment.

ACCREDITATION AND CERTIFICATION

The College of Education is accredited by all the pertinent agencies which accredit the University. Its accreditation by the State Board of Education permits it to recommend to that body the awarding of appropriate teachers' certificates without examination.

Within the college, programs are available leading to the baccalaureate degree and to state teachers' certificates at either the elementary or secondary level. Through the 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.)
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 TO THE COLLEGE

Candidates for admission to the College of Education must have met the general entrance requirements of the University, see page 91, 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 THE TEACHER EDUCATION PROGRAMS

Admission to this college, however, is tentative, and is not to be construed as approval for one of the teacher education programs. To be admitted as a candidate for a state teacher's certificate approval by the Admissions Committee of the College of Education must be gained. Application to this committee and qualification by it must be accomplished during enrollment in the course Fd. Ed. 232, Introduction to the Study of Education. Eligibility to enroll in subsequent courses of the professional sequences is determined in this course. These provisions and the requirements below apply as well to those teaching candidates enrolled in any other college of the University.

BACCALAUREATE REQUIREMENTS

There are several sets of requirements that must be met to achieve graduation. These apply not only to undergraduates in the College of Education who are seeking the degree Bachelor of Arts in Education but to all who seek the institution's recommendation for a teaching certificate. There are certain differences planned for those who would teach the Fine Arts and these differences are described in the Fine Arts section of this catalogue.

A student enrolled in the College of Education must maintain 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 dismissal 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.
Prospective teachers in the specialized fields of art, music, and special education are subject to certain departmental requirements. Majors in these curricula must also complete general and professional education requirements listed under secondary education. School Psychology requires five years.

ELEMENTARY EDUCATION

I. The following general program is required of all elementary education candidates:

General Education

(66 + 4 hours minimum.) (Must meet minimum requirements in first five areas.)

Area I. Science-Mathematics .............................................. 15-17 hours
(2 or more divisions—4 hour Lab. required)
(a) Chemistry, Geology, Biology, Physics
 * (b) Mathematics 373-374 (6 hours)
(c) Engineering 300
(d) Geography (Physical)
(e) Other

Area II. Communications .............................................. 8-12 hours
(a) English Composition (6 hours)
(b) Speech 111
(c) Other

Area III. Humanities .................................................... 15-27 hours
(4 or more divisions. 12 hours other than Modern Languages)
 * (a) Literature (6 hours)
(b) History (all)
(c) Art-Music (No skill courses)
(d) Philosophy-Religion
(e) Modern Languages
(f) American Studies (Not 498-499)
(g) Humanities 102
(h) Other

Area IV. Social Science .................................................. 15-27 hours
(4 or more divisions)
 * (a) Psychology 111, 112, 211, 212, 246, 260, 275 (6 hours required)
(b) Sociology
(c) Anthropology
(d) Economics
(e) Political Science
(f) Geography (Human)
(g) Other

Area V. Physical Activities ............................................. 4 hours
(a) Air or Military Science
(b) Physical Activities (101 Series)
(c) Marching Band

Area VI. Electives ......................................................... 1-13 hours
(As approved by Advisor)

II. The following professional program is required of all elementary education candidates:
PROFESSIONAL EDUCATION

Area I. FOUNDATIONS EDUCATION ......................... 8 hours
  *(a) Introduction to Education 232
  *(b) Educational Psychology 233

Area II. MAJOR IN ELEMENTARY EDUCATION ........... 28 hours
  *(a) Reading 320A or 320B
  *(b) Science in Elem. School 321
  *(c) Social Studies in Elem. School 406
  *(d) Math in Elem. School 344A or 344B
  *(e) Language Arts in Elem. School 319
  *(f) Teaching the Kindergarten Child 318
  *(g) Student Teaching 447
  *(h) Seminar in Student Teaching 448

Area III. ALLIED FIELDS ........................................ 15 hours
(Hours used here cannot be used to meet requirements in General Education.) (Student must have three divisions from a, b, c, d, e. Two divisions from f, g, h, i, j, k, l, m.)
  (a) Art 241
  (b) Children’s Literature 216
  (c) Music 251 and/or 252, 305
  (d) English 315
  (e) Physical Education 115, 117, 210, 225
  (f) Individual Studies 322
  (g) Anthropology 124, 202
  (h) Economics 221, 222, 203, 307, 310
  (i) Geography 125, 210, 342, 364, 402, 422
  (j) Kansas History 441
  (k) Political Science 100, 121, 211, 219
  (l) Sociology 111, 210, 226, 315, 320, 322, 334
  (m) U. S. History 131, 132, 314, 432, 433, 444

RELATED FIELDS OF STUDY IN EDUCATION ............ 1-13 hours
(Not required on Elementary Major.) May be used in lieu of Electives in Area VI.
  Area I. Logopedics
  Area II. Physical Education
  Area III. Library Science
  Area IV. Students desiring certification in Early Childhood Education should design their program as a part of the Elementary Education program.

TOTAL HOURS .................................................. 124 hours
Upper Division .............................................. 40 hours

SECONDARY EDUCATION

All prospective secondary education graduates must satisfy the general requirements of the University as they are distributed in section I below; must complete one of the professional sequences as set out in sections II and III below; and must fulfill the teaching specialty emphasis of a program as specified in the Teaching Field section which follows: Only those specialties listed among the combined curricula and departmental majors and minors in that section may be counted.

I. The following general program is required of all secondary education candidates:

* Specific requirements.
Area I. **MATHEMATICS AND NATURAL SCIENCES** .......................... 12 hours
A minimum of four hours must be a laboratory science. Must include courses from two of the four areas of biological science, physical science, mathematics and Engineering 300.

Area II. **COMMUNICATIONS** .................................................. 8 hours
(a) English 111, 211, 225, 311, 312, 313, 314 (6 hours)
(b) Speech 111 (2 hours)

Area III. **HUMANITIES** ......................................................... 12 hours
(a) Literature (English or Foreign) (6 hours)
(b) Options (2 divisions 6 hours)
   1. History 101, 102, 103, 113, 114, 131, 132, all upper division courses except 300 and 498
   2. Art—all Art History courses except 407g and 463; Music—113, 114, 161, 315, 316, 331, 332, ensembles and applied music where background justifies; Speech 143
   3. Philosophy all courses; Religion 125, 130, 230, 240, 260, 333, 337, 340, 360, 446
   4. Humanities 102
   5. American Studies—all courses except 498 and 499

Area IV. **SOCIAL SCIENCE** ................................................... 12 hours
(Courses must be taken in at least 3 of the 5 divisions. Psych. 111 is required.)
(a) Psychology 111, 112, 246
(b) Economics 221, 222 and any upper division course
(c) Political 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 hours credit)

Area V. **ELECTIVES** ............................................................. 6 hours

Area VI. **PHYSICAL ACTIVITIES** ......................................... 4 hours
(a) Aerospace Studies; all courses
(b) Military Science; all courses
(c) Physical Activities (any 101-108 series)
(d) Marching Band

II. The following program is required of all who plan to qualify for the standard secondary teaching certificate, except those enrolling in III below:
   (A) Study in a major field normally taught in secondary schools.
   (B) Study in at least one minor field. In no case will the minor consist of less than 15 semester hours.
   (C) Complete the following sequence in professional education:

Area I. **EDUCATIONAL PSYCHOLOGY** ................................. 6 hours
   Ed. Psych. 333 and 433 *

Area II. **FOUNDATIONS OF EDUCATION** ............................. 6 hours
   Fd. Ed. 232 and 428 *

Area III. **SECONDARY EDUCATION** .................................. 11 hours
   Sec. Ed. 442 * and 447 *

   (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 Area II, above.
GROUP 1

The American Culture ............................................................................. 40 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; History 131-132 or 313-314, or 431-432; and elect
from Phil. 356; English 301, 302, 303, 461; History 433, 436, 437, 444, 447,
448; Anthropology 309, 310, 323, 336, 337; Pol. Sci. 458, 459.

GROUP 2

The Physical World .................................................................................. 22 hours
Intermediate algebra, and geometry completed on high school or college
level; Math. 121 and 122 or Math. 373 and 374; Sci. Sur. 101 and Biology
100; one laboratory science course of no fewer than 4 hours, though the
total shall be 15 hours—from the sciences; P. E. 212 or 225, and 210 or 400.
(These may overlap I above.)

IV. TEACHING FIELDS

The major is generally made up of not fewer than 30 semester
hours. (For specific exceptions see mathematics, language, and the
combined curricula programs.) The student may elect one of the ma-
jors or minors listed on page 206 which are offered in the Fairmount
College of Liberal Arts, College of Fine Arts, or College of Business
Administration. The student must meet the specific course require-
ments of the department in which the major is offered. For example:
A student may elect to major in history because he wishes to become
a high school history teacher. To do so he must complete the History
major as prescribed by the History Department in Fairmount
College of Liberal Arts. In addition he will complete university
core curriculum requirements, the Professional Education sequence,
and other requirements for the teacher's certificate prior to gradu-
ation. Each student should work closely with an education aca-
demic advisor to be sure that he meets certification requirements.
A check sheet of all requirements is available from the College of
Education in the Dean's Office.

COMBINED CURRICULA

The teaching assignment after graduation often involves a com-
bination of subjects more or less closely related. For this reason
intensive study in the combined disciplines listed below is offered
in lieu of a departmental major and minor.

BUSINESS EDUCATION

Major: Teachers of the business subjects in high schools of
Kansas are required to have 24 semester hours in the field with the
equivalent of 6 semester hours in each subject taught, of which at
least two semester hours must be resident college credit in other than the beginning course.

**Business Education (College of Business)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting 113 and 114 **</td>
<td>6</td>
</tr>
<tr>
<td>Administration</td>
<td>9</td>
</tr>
<tr>
<td>Principles of Administration 261</td>
<td>3</td>
</tr>
<tr>
<td>Marketing 300</td>
<td>3</td>
</tr>
<tr>
<td>Law and Society 332</td>
<td>3</td>
</tr>
<tr>
<td>Economics</td>
<td>9</td>
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<tr>
<td>Economics 221-222</td>
<td>6</td>
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<tr>
<td>Consumer Economics 190</td>
<td>3</td>
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<tr>
<td>Administration 343 or Economics 340</td>
<td>3</td>
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<tr>
<td>Business Education</td>
<td>20</td>
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<tr>
<td>Typewriting</td>
<td>6</td>
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<tr>
<td>** Shorthand</td>
<td>6</td>
</tr>
<tr>
<td>Office Practice</td>
<td>3</td>
</tr>
<tr>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>Records Management</td>
<td>2</td>
</tr>
<tr>
<td>Electives: One upper division business course in any area</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL: 128 hours**

**Minor:** Accounting 113, 114; Economics 221, Business Education 136, 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:** Biol. 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

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* Economics 221 and 222 fulfill 6 hours of the Social Science requirement and the business requirement as well.

** Accounting 235-236 and Accounting 315-316 may be substituted for shorthand.
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, 36 hours in the field of social studies are required for certification with a minimum of 6 hours preparation in each specific subject taught, with the exception of History and Political Science which require a minimum of twelve hours. 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 four options:

Options

(A) Hist. 432, 433, 438, 448.
(B) Hist. 331, 333, 431, 437.
(D) Courses listed in the Afro-American Studies section of the College of Liberal Arts portion of the catalog. See page 111.

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.

V. DEPARTMENTAL MAJORS AND MINORS

Selection of teaching fields for the junior or 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. The teaching field or major should be declared not later than the beginning of the junior year.

The student who wishes to become a secondary teacher may elect his major and minor from the following fields. Only those marked with an asterisk (*) will be accepted as a major by the College of Education. Any of the following fields is suitable as
a supporting minor. The specific course requirements of the department from which the major work is taken will prevail:

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<tr>
<th>Accounting</th>
<th>⊹ Logopedics</th>
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<tbody>
<tr>
<td>American Studies</td>
<td>⊹ Mathematics</td>
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<tr>
<td>Anthropology</td>
<td>♻ Music</td>
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<td>Art</td>
<td>♻ Natural Sciences—Biological</td>
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<tr>
<td>⊹ Biology</td>
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<td>⊹ Business Education</td>
<td>♻ Philosophy</td>
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<td>⊹ Classical Languages</td>
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<td>♻ French</td>
<td>♻ Religion and Philosophy***</td>
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<td>Journalism</td>
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**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 with the Asst. Dean of the College of Education. (School Psychology requires five years.)

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

### AEROSPACE STUDIES

#### AIR FORCE ROTC

The purpose of Air Force ROTC is to select and 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 freshman 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 may be eligible for scholarships which provide full tuition, laboratory expenses, inci-
dental fees, book allowances, and $50.00 per month. Applicants are selected on the basis of scores on a qualifying test, quality of academic work, and rating by an interview board. Applications from AFROTC freshmen, sophomores, and juniors are normally submitted near the end of the Fall Semester. Additional scholarships designed for AFROTC cadets are listed under “Financial Aids and Awards” of this catalog.

EXTRACURRICULAR ACTIVITIES

Field Trips to various Air Force installations and activities are scheduled throughout the year for members of AFROTC. 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, IR/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, IR/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 36½ 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: Arts 241 or consent of instructor.

Upper Division Courses

406. Art Curricular and Supervision Methods. (4). The construction of an art program of study outline for elementary grades and junior and senior high school; techniques in the supervision of an art education program.

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. (3). 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 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. Experienced Administrator’s Workshop. (1-2). Scheduled each summer on a variety of administrative topics. Problem centered teaching based upon case studies and simulated situations.

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. (Offered fall, spring and summer.)
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 only.)

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. (Offered fall, spring and summer.)

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. (Offered summer only, odd numbered years.)


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 summer.)

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 summer.)

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 fall and summer.)

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. (Offered spring only.)

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 spring and odd numbered years in summer.)

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 fall and odd numbered years in summer.)

538. Advanced Group Dynamics. (2). A laboratory course in theories of group dynamics, with emphasis upon their application to uses in education, especially in the classroom and in faculty-administrator relationships. Prerequisite: E. A. S. 460 and consent of the instructor. (Offered spring when sufficient demand exists.)

COLLEGE OF EDUCATION  211
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)


EDUCATIONAL PSYCHOLOGY

Lower Division Courses

233. The Elementary School Child. (4). His socio-cultural context, developmental characteristics, with stress upon application to instruction. Prerequisite: Psych. 111, Fd. Ed. 232 (or department consent) and sophomore standing.

Upper Division Courses


361. Educational Measurements. (3). Fundamental statistical methods applied to educational problems; construction, administration, and analysis of teacher made examinations. Prerequisite: Ed. Psych. 233 or 333.


404. Understanding of the Mentally Retarded Child. (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.


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. Prerequisite: 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.


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 to the problems 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: Approval 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 these manuscript form. Prerequisite: Ed. Psych. 560. May be repeated for a maximum total of 2 hours credit.


* 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.

Upper Division Courses

318. Methods for the Kindergarten Teacher. (3). To acquaint students with all aspects of the kindergarten program and introduce the wide variety of materials available and in use. Prerequisites: Ed. Ed. 232 and Ed. Psy. 233.
319. Language Arts in the Elementary School. (3). Objectives, methods and materials of teaching the language arts including listening, oral and written communications, spelling and handwriting. Students will be given an opportunity to acquire skill in manuscript and cursive writing. Prerequisites: Fd. Ed. 232 and Ed. Psy. 233.


321. Science in Elementary Education. (3). This course will encompass the areas of: Development of scientific concepts in children, strategy, tactics and A-V aids in teaching elementary school science, stating objectives in terms of expected pupil behavior, and evaluation of those objectives, off-campus observation and participation, and introduction to experimental science. Prerequisite: Fd. Ed. 22 and Ed. Psych. 233.

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

344A and 344B. Mathematics in the Elementary School. (3). A study of the basic methods of instruction with emphasis given to relating mathematical concepts to cognitive development and learning. Specific attention will be given to current curriculum practises, materials and evaluation technique. Section A is for teachers of primary grades K-3. Section B is for intermediate grade teachers 4-6. Prerequisite: Math 373 and 374. Math. 374 may be taken concurrently.

405. Developmental Reading. (3). To acquaint students and teachers with all of the aspects of current reading theory and pertinent reading research. Also to point out the possibilities of applying this theory and research to actual teaching of children in the classroom. Prerequisite: El. Ed. 320.


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 for teachers in service. Prerequisite: El. Ed. 321 or consent.

443. Parent Education for Pre-school Teachers. (3). An introduction to ways of working with parents of pre-school children; analysis of formal and informal approaches with emphasis on the teacher's role in developing these procedures. Prerequisites: El. Ed. 444 or consent of instructor.

444. Early Childhood Education. (3). An introduction to the problems and philosophy of educating children in the pre-school years.

445. Guidance of the Pre-school Child. (3). Study of the dynamics of behavior of the pre-school child in his relations with peers and adults; in his methods of coping with developmental aspects of growth; and the teacher's role in guiding such behavior. Prerequisite: El. Ed. 444 or consent.
446. Methods and Materials in Pre-school Education. (3). The study of teaching methods for the teacher of the pre-school child and the preparation of materials to enhance the learning experiences of these children. Prerequisite: Ed. Ed. 444 or consent of instructor.

447E. Student Teaching in the Elementary School. (3-10). The student teaching program provides full-time participation in the public schools under guidance of a master teacher and a college supervisor. Prerequisite: Ed. Ed. 319, 320, 321, 344, 406.

The student teaching semester is required of all students who are working toward a degree certificate in elementary education. Every student wishing to receive the above certificate must file an application with the coordinator of elementary student teaching. Application for the fall semester must be filed by May 1; spring semester by November 15. Applications may be secured in Room 117, CEC. (The only exception ever granted to the requirement of thirteen semester hours is to the transfer student that has taken student teaching elsewhere or may have taught a number of years.) Any deviations from established grade point averages and other regulations must be approved by the Elementary Education Department.

447L. Student Teaching for Logopedics Majors. (4). These students will be assigned to a self-contained classroom in the elementary school for the first nine weeks and then assigned by the Department of Logopedics for the second nine weeks of the semester. Prerequisite: Senior Standing. Ed. Ed. 232, Ed. Psy. 233, El. Ed. 320, 321, 344, and 406.

447M. Student Teaching in the Elementary School. (3). Prerequisite: Music Majors.

447P. Student Teaching in the Elementary School. (3). Prerequisite Physical Education Majors.

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.

* Prerequisites may be waived for equivalent experience by department 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: Ed. 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. (1-3). A project submitted in thesis manuscript form. Prerequisite: Ed. Psy. 560. May be repeated for a maximum total of 2 hrs. credit.

563. Trends in Theories of Instruction. (3). Uses materials from public school work groups and from research journals to examine development of modern practices.


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

INDUSTRIAL EDUCATION

Industrial Education includes the following areas of specialization: industrial arts education and vocational-industrial education.

Industrial arts education prepares young men to become industrial arts teachers at the junior high and senior high level. The person selecting this field will teach young people about the tools, materials, processes, and products of industry. Industrial arts instructors teach such general courses as metals, electricity-electronics, woods, plastics, drafting, auto mechanics, or a combination of some of these in a comprehensive general shop. Work experience in his specialty is not demanded of the industrial arts teacher, but it is highly desirable.

Vocational-industrial education is for persons who wish to become certified vocational-industrial instructors. The vocational-industrial educator, like the industrial arts educator, deals with tools, materials, and processes of industry, but stresses skill development more than is possible in the industrial arts program. Instructors in this field teach vocational subjects in such fields as drafting and design, machine shop practice, electronics, auto mechanics, industrial plastics, and the like. Certification for vocational teaching does require a minimum of 2,000 clock hours of occupational experience in the field taught.

COMBINED MAJOR AND MINOR: Required—Ind. E. 111, 120, 124, 135, 155, 180, 260, 319, 401, and Sec. Ed. 443. An additional 21
hours of industrial education will be selected in consultation with
the student's major advisor, completing the combined curricula
with a minimum of 50 semester hours.

Lower Division Courses

111. Introduction to Industrial Education. (2). Industrial Education as a
career; an introduction to present day programs and the opportunities avail-
able; a survey of materials and processes used in industry; recommended as a
first course in the department.

120. Drafting I. (3). 2R; 3L. An introduction to orthographic projection,
pictorial representations, with emphasis placed on auxiliary view, sectional
views, sketching, revolutions, dimensioning, lettering, care and use of drafting
instruments.

121. Drafting II. (3). 2R; 3L. A study of the relationship of views in drafting
with emphasis on rotation, projection of solids, planes, and lines using
standard drafting techniques and procedures. Prerequisite: Ind. Ed. 120.

124. Woodwork I. (3). 2R; 3L. A study of the use and care of hand and
power tools, methods of finishing, wood technology, and an overall view of
the woods industry.

125. Woodwork II. (3). 2R; 3L. A study in design, construction, and finishing
of woodworking projects, with special emphasis on woodworking machine
tools, including methods and processes used by industry. Prerequisite: Ind.
Ed. 124.

135. Metalwork I. (3). 2R; 3L. A basic course dealing with the processes,
equipment, materials and products of the metal-working industry; lab experi-
ence in sheetmetal, benchmetal, forging, founding, welding, and machine tools.

155. Auto Mech. I. (3). 2R; 3L. The fundamental principles of the operation
of a motor vehicle. A study made of motors, transmissions, differentials,
steering, brakes, carburetion, and the electrical system.

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 principles of electricity and
electronics as related to home and industry. Emphasis on electrical theory,
transmission, and utilization. Laboratory activities include experimentation
and fabrication of electrical components.

181. Electricity II. (3). 2R; 3L. A study of basic concepts of alternating
current electricity with emphasis on reactance and impedance of resonant and
non-resonant circuits. Prerequisite: Ind. Ed. 180.

225. Drafting III. (3). 2R; 3L. Development of working drawings in machine,
aircraft, steel structural, electrical, architectural details, pipe, map,
patent drawings— all conforming to industrial and prescribed standards. Pre-
requisite: Ind. Ed. 121.

236. Metals II. (3). 2R; 3L. A study of materials, machines and handtools
used by the sheetmetal industry and an introduction to basic machine tool
operations. Prerequisite: Ind. Ed. 135.

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 develop-
ment; construction of molds and forms for molding, casting, laminating, and
 thermoforming. Prerequisite: Ind. Ed. 260.
282. Electronics I. (3). 2R; 3L. A basic study of electronics including the function of components, dc and ac theory, vacuum tube characteristics and applications, and power supplies. Experimentation and project construction. Prerequisite: Ind. Ed. 180.

283. Electronics II. (3). 2R; 3L. A study of basic electronic circuits and systems, including an introduction to radio circuits and systems, with proper circuit analysis techniques receiving major emphasis. Prerequisite: Ind. Ed. 282.

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

Upper Division Courses

319. Shop Planning and Organization. (3). Selection, purchase, and organization of shop equipment and supplies; developing and maintaining necessary records and reports; planning of shop facilities.

325. Woodwork III. (3). 2R; 3L. For advanced woodworking students, with special emphasis on tools, materials, and construction practices as they relate to the building trades. Prerequisite: Ind. Ed. 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. 125.

327. Drafting IV. (3). 2R; 3L. Advanced study for drafting students with emphasis on problems growing from the needs of students based on past performances and progress. Complete dwelling and machine problems. Special emphasis on industrial practices and procedures. Prerequisite: Ind. Ed. 225.

337. Metals III. (3). 2R; 3L. A study of the structure, physical and mechanical properties of metals and the effect of heat treatments on these characteristics; the methods of hot working metals including forging, foundry, and arc, acetylene and tungsten inert gas welding. Prerequisite: Ind. Ed. 135.

350. Metalwork IV. (3). 2R; 3L. Fundamentals of benchwork and basic operations on lathes, mills, grinders, shapers, and drills. Prerequisite: Ind. Ed. 236.

351. Metalwork V. (3). 2R; 3L. Emphasis on advanced machine tool operations; new techniques of industry and the making of basic tools and dies. Prerequisite: Ind. Ed. 350.

362. Plastics III. (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. 262.

384. Electronics III. (3). 2R; 3L. Course includes the theory, instrumentation, and application of semi-conductors in electronic circuitry. Emphasis will be placed on the utilization of transistors and newly developed semi-conductors. Prerequisite: Ind. Ed. 282.

385. Electronics IV. (3). 2R; 3L. Motors and generators; synchros and synchro control systems; servo control devices and systems; industrial measurement and control systems; introduction to microwave 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 relationships of the librarian to the teaching staff, the organization of technical and mechanical processes such as circulation and order routines, the repair of books, and teaching the use of the library to students.


405. The School Library Program. (2). Emphasis is on planning and implementing an effective school library program. Explores objectives and standards, and deals with all phases of instruction, services and activities through which the school library contributes to the total instructional program of the school.

LOGOPEDICS

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; in addition, Logopedics 447 and 448 are required for those planning to qualify as speech
clinicians in the public schools; Logopedics 441 and 455 are required for those majoring in audiology, while Logopedics 440 is required for those majoring in deaf education. All of these clinical courses are designated by the symbols (R) and (L) which stipulate the number of clock hours of Recitation or Laboratory required per week. Other courses are designated with the symbols (R) and (D) which indicate the number of clock hours of Recitation and Demonstration offered each week.

Undergraduate students may major in Logopedics in either the College of Education or the Fairmount College of Liberal Arts and Sciences. 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. Students planning to qualify as speech clinicians in the public schools are required to complete, in addition, Logopedics 327, 447 and 448.

*Optional*—Logopedics 132, 415, 435, 436, 437, 455, 461, 462 and 470.

The major with emphasis in audiology consists of 30 hours and includes the following courses:


*Optional*—Logopedics 132, 324, 326 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:* One full semester of student teaching is required for all who are working toward certification as a public school speech clinician. In order to complete this requirement, students must take Logopedics 417 and 441 in a clinical setting and 447 and 448 in a public school setting for a total of 13 hours credit.

The assignment for student teaching begins with the opening of the public school and the student is expected to follow the public school calendar, on a half-day basis, for a semester.

Admission into the student teaching semester requires a grade point average of 2.5, a 2.5 average in the major field, a grade of C
or higher in Speech 111 or its equivalent, and recommendation of the major department.

By arrangement with the Department of Elementary Education, any of these emphases in Logopedics may be combined in a dual major with Elementary Education. The education requirements are given on page 201.

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.

SPECIAL 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.

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326. Application of Techniques. (2). IR; 6L. Supervised application of techniques to cases with simpler problems. Observation of more difficult communicative disorders. Introduction to techniques used with stutterers and aphasics. Prerequisite: Logopedics 324 with a grade of C or better, concurrent enrollment in Logopedics 324, or department consent.

327. Speech Therapy in the Public School: Methods and Procedures. (3). Organization, administration, and professional relationships in public school speech therapy programs. Emphasis given to procedures and materials for surveying, scheduling, therapy lesson planning and record keeping. Prerequisite: 315 and 324 with grades of C or better or consent. (May be taken concurrently with 324.)

415. Organic Anomalies of Speech. (3). 3R; 1D. Specific congenital and post-natal anomalies that produce speech disorders, including cleft palate and mongolism. Prerequisite: Logopedics 324 with a grade of C or better, or department consent.

417. Supervised Practicum in Speech Pathology. (3). IR; 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 view-point in both subhuman and human infants. Prerequisite: Department consent.

447. Student Teaching in Public School Speech Therapy. (4). One half time participation in a public school speech therapy program under the guidance of a certified clinician and a college supervisor. Prerequisite: Senior standing, Logopedics 327, and permission of the Department.

448. Seminar in Public School Speech Therapy. (3). Taken concurrently with Logopedics 447. Discussion and evaluation of the student’s teaching experience in the public school speech therapy program.

450. Workshop in Logopedics. (1-4). This course will be offered from time to time on various aspects of speech and hearing habilitation.

461. Neurology of Cerebral Palsy and Aphasia. (4). Ground work of neuro-anatomy and neuro-physiology required for the understanding of conditions resulting from lesions of the nervous system. Prerequisite: Logopedics 315 and 324 with grades of C or better, or department consent.

462. Cerebral Palsy. (4). 3R; 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 psychosocial 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.

562. Presentation of Research. (1-2). A project submitted in thesis manuscript form. Prerequisite: Logopedics 505. May be repeated for a maximum total of 2 hours credit.

568. Seminar in Clinical Research. (3). Emphasis is given to a review of recently published research which reflects applicability in the clinical setting. Techniques of experimental design are discussed. Prerequisite: Logopedics 505 with a grade of C or better, or department consent.


AUDIOLOGY

Upper Division Courses

431. Introduction to Audiology. (3). 3R; 1D. History and scope of the field. Elementary anatomy of the ear, auditory testing. Rehabilitation and training of the deaf and hard of hearing. Prerequisite: Logopedics 315 with a grade of C or better, or department consent.

435. Anatomy, Physiology, and Pathology of the Ear. (3). 3R; 1D. Detailed study of the ear. Prerequisite: Logopedics 431 with a grade of C or better, or department consent.

436. Introduction to Audiometrics. (3). 3R; 1D. Techniques and interpretation of hearing tests. Prerequisite: Logopedics 431 with a grade of C or better, or department consent.
437. Speech Reading and Auditory Training. (3). 3R; 1D. Methods of teaching speech reading. Techniques used in auditory training. Prerequisite: Logopedics 431 with a grade of C or better, or department consent.

441. Supervised Practicum in Speech for the Deaf. (3). 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 hearing aids, principles and procedures in selecting a hearing aid; and adjustments to a wearable instrument. Prerequisite: Logopedics 436 with a grade of C or better, or department consent.

516. Advanced Clinical Audiology. (3). 2R; 6D. Diagnostic procedures in an audiological clinic. Techniques for administration and interpretation of advanced audiometric tests. Prerequisite: Logopedics 436 with a grade of C or better, or department consent. (Offered in alternate years.)

518. Seminar in Audiology. (3). Principles of the psychophysical dimensions of hearing, functions of the normal ear; problems in industrial noise. Prerequisite: Logopedics 436 with a grade of C or better, or department consent. (Offered in alternate years.)

DEAF EDUCATION

Upper Division Courses

432. Introduction to Deaf Education. (3). 3R; 1D. Comparison and contrast of the deaf child with the normal child in the areas of physical, mental, social and personality development. Evolution of educational programs and methods used with the deaf. Special aspects of curriculum development in schools and classes for the deaf. Agencies, professional organizations, and journals concerned primarily with education and rehabilitation of the deaf. Prerequisite: Logopedics 431 with a grade of C or better, or department consent. (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 revised 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 two conference hours in the fall per week and three conference hours per week in the spring; seniors attend three hours per week in the fall and two conference hours per week in the spring. Juniors and seniors must also attend one leadership laboratory hour each week. Advanced course students attend a six-week summer camp between their junior and senior years.

Prerequisites for enrollment in the advanced course are as follows:

1. Completion of the basic course or Armed Forces active duty service credit.
2. Physically qualified.
3. Scholastic grade point average of 2.0 or above.
4. Successfully complete survey and general screening tests.
5. Pass the Officer Qualification Test.
The testing and physical examinations are scheduled and arranged by the Military Science Department.

Advanced course students receive $50 per month for a minimum of 20 months. Attendance at summer camp is reimbursed by approximately $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, Ranger Company, 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. Pre-requisites 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. (2-3). 2C-3C; 1 Leadership Laboratory. Branches of the Army; Military Teaching Principles; Leadership: Small Unit Tactics and Communications. Prerequisite for 333: MS 223 and 224 or Basic Summer Camp.

F443 & S444. Second Year Advanced. (3-2). 3C-2C; 1 Leadership Laboratory. 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.

202. Fundamentals of Instrumental Music for Elementary School. (2). Materials and techniques focused on teaching instrumental music in the elementary schools. Includes observation in the public schools. For students primarily interested in teaching instrumental music in the elementary schools. Prerequisite: Music education major or consent of instructor.
203. Fundamentals of Vocal Music for Secondary Schools. (2). The teaching of music in the secondary school, consideration of objectives, examination of materials. For students primarily interested in teaching music in secondary schools. Includes observation in public schools. Prerequisite: Music education major or consent of instructor.

204. Fundamentals of Instrumental Music for Secondary Schools. (2). Techniques and materials focused on teaching instrumental music in Junior and Senior high schools. Emphasis on instrumental organization and administration, pedagogical practices, laboratory experiences, guiding student behavior, evaluation, and professional responsibilities. For students primarily interested in teaching instrumental music in the secondary schools. Prerequisite: Music education major or consent of instructor.

251. Music Fundamentals for the Classroom Teacher. (3). For students planning to teach in the elementary school classroom. Basic fundamentals of music with emphasis upon development of student's musical ability in singing, playing piano and classroom instruments.

252. Music Methods for the Classroom Teacher. (3). For the elementary classroom teacher. Development of children's musical growth through singing, listening, rhythmic and creative activities. Prerequisite: Music 251 or consent of instructor.

Upper Division Courses

301. Survey of Vocal Music for Secondary School. (3). An overview of activities in secondary vocal and general music programs. Includes study of objectives for secondary classes, consideration of materials and methods. For students primarily interested in teaching music in the elementary schools. Prerequisite: Music 201.


303. Survey of Vocal Music for Elementary Schools. (3). An overview of activities in the elementary general music program. Includes study of objectives for elementary classes, consideration of 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 secondary schools. Prerequisite: 204.

305. Advanced Techniques in Elementary School Music. (2). Consideration of methods, materials for teaching music in the elementary classroom with special emphasis on correlation with elementary curriculum. For elementary education majors minoring in music. Prerequisite: Music 252 or 201.

306. Music Methods for the Kindergarten Teacher. (2). Methods and materials for teaching music in the pre-school and kindergarten classroom. Development of the child's musical growth through singing, listening, rhythmic, and creative activities; survey of available materials; and continuation of playing, singing, and conducting skills appropriate for the kindergarten teacher. Prerequisite: Music 251 or consent of instructor.

337. Advanced Techniques in Woodwind Methods. (1). (See Music 337.)

339. Advanced Techniques in Brass Methods. (1). (See Music 339.)

340. Advanced Techniques in Percussion Methods. (1). (See Music 340.)

402. Advanced Techniques of Elementary School Music. (2). Emphasis on special problems related to preparation for student teaching; consideration of the instrumental and the general music programs at the elementary level. Prerequisite: Music 202 and 302.


(Requirements for admission to the student teaching semester.)

Senior standing.
Overall grade average 2.25.
Major field grade average 2.50.
English 111 with C or better or equivalent.
Speech 111 with C or better.
Ed. Ed. 232.
Ed. Psy. 333. (Elementary major may elect Ed. Psy. 233.)
Physical examination.
Students who have taken education courses at other institutions must have such courses validated and approved.
Music methods completed:
Elementary vocal 201, 301.
Elementary instrumental 202, 302 (plus Methods 135 through 140).
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.

530. Seminar in Music Theory. (3). (See Music 530.)

531. Developing the Child's Musical Understanding. (3). (See Music 531.)

532. Music in the Junior High School. (3). Elective for MME program. Suggested for credit toward Administrative Certification. To include administrative structures, the curriculum, adolescent development, teaching as behavior, and competencies needed for successful teaching.
535. Teaching in Music Education Materials (Vocal). (2). (See Music 535.)
541-542. Special Project in Music. (1-3; 1-3). (See Music 541-542.)
545. Seminar in Music Education Materials (Instrumental). (2). (See Music 545.)
551. Psychology of Music. (2). (See Music 551.) (Prerequisite 552.)
552. Introduction to Graduate Study. (3). (See Music 552.)
554. Research Seminar in Music Education. (3). (See Music 554.)
572. Philosophy of Contemporary Music Education. (2). (See Music 572.)
575. Thesis Research. (2). (See Music 575.)
576. Thesis. (2). (See Music 576.)
582. Marching Band Techniques. (2). (See Music 582.)
583. Band Organization and Administration. (3). (See Music 583.)
591-592. Seminar in Music History. (3-3). (See Music 591-592.)
593. Music of Antiquity Through the Renaissance. (3). (See Music 593.)
594. Music of the Baroque Era. (3). (See Music 594.)
595. Music of the Eighteenth Century. (3). (See Music 595.)
596. Music of the Nineteenth Century. (3). (See Music 596.)
597. Music of Twentieth Century. (3). (See Music 597.)

PHYSICAL EDUCATION, HEALTH, AND RECREATION

SERVICE PROGRAM

All P. E. 101 activity courses will meet two class periods each week and will carry one hour credit. Such courses will count toward graduation requirements, but will not replace any required academic hours.

Juniors and seniors may enroll for three hours of physical education per week for one hour of elective credit, not to replace any academic requirements for graduation.

When enrolling in P. E. 101 activity courses, the course numbers are to be 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 arrangements. Prerequisites: P. E. 101, 102, 103, 104.
101, 102, 103, 104. Physical Education for Women. (1 each). Two hours per week to be selected each semester on the advice of the advisor and in specific instances, the physician.

Team Sports: Basketball, field hockey, soccer, speed-o-wat, softball, and volleyball.

Individual Sports: Archery, badminton, bowling, tennis, golf, swimming, life-saving, water safety, fencing, gymnastics, track and field events.

Dance: Folk dance, square dance, modern dance I, II, III, theatre dance, social dance, ballet I, II, III, and Orchesis I, II.

Miscellaneous: Outing activities, recreational games, ice skating, horseback riding, 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, 433, and 444. Also P. E. 101, 102, 103, and 104 (service courses) will be required of all majors. In addition to these courses one of the following options must be completed.

Options

In addition to the Professional Core requirements, the following options for women are offered:

(A) (Secondary Physical Education) (Women) P. E. 203W, 204W, 212, 324, 350W, 351W and electives chosen from the following to complete 40 hours: P. E. 202, 211, 400, and 331.

(B) (Dance) (Women) P. E. 204W, 211, 212, 223, 324, 350W or 351W, 446 and electives chosen from the following to complete 40 hours: P. E. 202, 203W, 400, 424, and 331.

(C) (Men) P. E. 204M, 218M, 311M, 312M, 331, 335M, 336M, and 337M. Men Physical Education majors must pass a Sports Skills Proficiency Examination before being permitted to enroll in P. E. 311M or P. E. 312M.

Minor: The following courses are required in order to complete a minor in Physical Education: P. E. 111, 115, 329, and 330. In addition one of the following options must be completed.

Options

(A) (Physical Education) (Women) P. E. 212, 225, 203W, 204W, 350W or 351W. Prerequisite for 350W and 351W: Service courses in sports included in each course.

(B) (Dance) (Women) P. E. 212, 223, 324, 412, 424, 446. Pre-
requisite for professional courses are listed in the catalog. Dance 101 courses are recommended.

(C) (Men) P. E. 204M, 218M, 225, 311M, 312M, 331, and 3 hours of electives. Men Physical Education minors must pass a Sports Skills Proficiency Examination before being permitted to enroll in P. E. 331M or P. E. 312M.

(D) (Men and Women—Recreation) 202, 212, 225, 226, and 426. Minors with this option may be elected in the College of Liberal Arts in accordance with transfer regulations.

PROFESSIONAL COURSES

Professional courses for physical education, health, and recreation are offered in the College of Education and, unless otherwise indicated, are open to both men and women. Course numbers followed by M are for men only; by W for women only.

Lower Division Courses

111. Introduction to Physical Education. (2). Prerequisite for professional sequence—A survey study of health, physical education, and recreation as to their identification, purpose, and inter-relationship in the total field of education.

115. Personal and Community Health. (3).

117. First Aid. (2). Standard and/or advanced first aid with certification by the American Red Cross.


203W. Officiating Techniques for Women’s Sports. (3). Includes the study of the philosophies and standards of D. G. W. S., officiating techniques, basic skills, testing procedures, and laboratory work. Prerequisite: P. E. 101 Basketball and Volleyball or consent of Department.

204M. Body Mechanics and Gymnastics. (2). A fundamental skills and content laboratory course in gymnastics, designed to aid the physical education major in his ability to teach and coach this activity. Prerequisite: P. E. 101 Gymnastics or consent of Department.

204W. Body Mechanics and Gymnastics. (3). 2R; 3L. Principles of body mechanics and application to gymnastics including free exercise, tumbling, apparatus, and trampoline.


212. Folk and Square Dance. (2). 1R; 2L. Materials from different countries and teaching methods for high school and recreational groups. Prerequisite: Sophomore standing or department consent.


220M. Rules and Mechanics of Officiating. (2). 2R; 1L. Theory, rules, and mechanics of officiating major sports common to the high school and college athletic program.
223. Introduction to Dance. (2). 2R; 2L. History, philosophy, and basic background work in the field of dance. Prerequisite: One activity course in modern dance.

225. Methods in Elementary School Physical Education. (3). 2R; 2L. A study of the curriculum and methods of teaching physical activities to elementary children. Includes practice in playing and teaching games in the normal progression used in elementary physical education; and field work with children of elementary school age. Prerequisite: Sophomore standing.

226. Introduction to Community Recreation. (2). A study of the philosophy, origin, and development of modern recreation programs.

Upper Division Courses

300. Basic Driver Education and Training. I. (3).

301. Advanced Driver Training II. (3).

311M. Techniques in Physical Education I. (3). 2R; 3L. Emphasis upon development of skill and assimilation of teaching techniques. Activities covered are soccer, golf, bowling, and badminton. Prerequisites: Pass the Sports Skills Proficiency Examination in the above activities.

312M. Techniques in Physical Education II. (3). 2R; 3L. Emphasis upon development of skill and assimilation of teaching techniques. Activities covered are wrestling, tennis, and volleyball. Prerequisite: Pass the Sports Skills Proficiency Examination in the above activities.

324. Methods in Modern Dance. (2). Teaching techniques and compilation of materials for teaching dance in educational programs. Prerequisite: One semester modern dance 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.

331. Athletic Injuries and Training Techniques. (2). 2R; 1L. Injuries common to athletic activities, emphasizing prevention, first aid, treatment and care as prescribed by the team physician.

335M. Football Theory and Organization. (2). Advanced theory of team play, organization and management of competition, etc. Prerequisite: Phys. Ed. 118 or concurrent enrollment.

336M. Basketball Theory and Organization. (2). Theory of basketball, including methods of teaching fundamentals, individual and team offense and defense, various styles of play, and methods of coaching. Prerequisite: Phys. Ed. 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 officiation. 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. Prerequisite: Modern Dance I or P. E. 223 or P. E. 224 or consent of department.


436. Camp Administration. (3). Modern practice in camp organization, program-building, business practices, staff training and guidance. Problems in camping administration.

444. History, Philosophy, Curriculum, and Administration. (4). History, philosophy and objectives of physical education. The organizational and administrative problems of the health and physical education programs, and the management of the physical plant and curriculum.

446. Dance Composition and Production. (2). Prerequisite: Modern Dance I or P. E. 223 or P. E. 224 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

322. Individual Studies in Education. (2-3).

   A—Art Education in the Secondary Schools. (Same as Art Ed. 442.)
   B—Field and Laboratory Methods in Biology.
   D—Methods of Teaching Speech and Dramatic Art.
   E—The Teaching of English. Preparation for student teaching of English composition, grammar, and literature. Required of all English majors expecting to teach in junior and/or senior high schools, and strongly recommended for all English minors expecting to teach English in junior and/or senior high schools. Prerequisite: Completion of the requirements of the English Department for English majors and minors planning to teach English in junior and/or senior high schools.
   FL—The Teaching of Foreign Languages. Methods of teaching foreign languages, based on the audio-lingual approach and applied linguistics contrasted with traditional methods. Laboratory techniques, transition into reading and writing, planning, evaluation of student progress. Required of all foreign language majors expecting to teach in junior and senior high schools; strongly recommended for all minors expecting to teach.
   H—Methods of Teaching the Social Studies in Secondary Schools. Preparation for student teaching in history, political science, economics, sociology and psychology. Meaning and content of the broad field of the social studies, materials for instruction, preparation of teaching units, and evaluating instruction and student progress in the social studies.
   I—Methods of Teaching Industrial Education. Selection and arrangement of teaching content, methods of teaching, lesson planning, courses of study, testing and grading shop work, evaluating pupil progress, securing industrial education positions, and professional responsibility of the shop teacher.
   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.
Methods of Teaching in the Comprehensive General Shop. (3). 2R; 3L.
Preparation 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 Feb. 1 of the semester prior to the year in which the student intends to enroll. In addition, students must obtain approval from the representative of the subject area in which they wish to student teach before placement will be considered.

It is expected that students will student teach in their field of major interest. However, individuals who are well prepared in more than one field may apply to student teach in a second field. Those desiring to student teach in two fields must take the special methods course in the second field before entering the student teaching semester.

The assignment for student teaching begins with the opening of the public school semester, and enrollees must arrange to meet from 8 to 5 daily and to be available for selected evening programs throughout the semester.

Credit for the student-teaching semester will be entered on the transcript according to the following distribution:

Fd. Ed. 428. Social Aspects of the Teaching Process. (2 or 3).
Total—16 semester hours.

Workshops in Education. (1 to 4).

Special Studies in Education. (1-5). (a) Mathematics, (b) health and physical education, (c) language arts, (d) reading, (e) recent innovation, (f) science, (g) social studies, (h) other areas. Course designed for secondary school teachers. Only one pre-selected area will be emphasized during a semester. (Prerequisite: Teacher certification or consent of instructor.) This course may be repeated with advisor's consent.

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.

548. Teaching Reading in the Secondary School. (3). Emphasis upon the teaching of reading in the content areas. Secondary teaching experience or consent.

550. Special Problems in Education. (1 to 4). Directed reading and research under supervision of a graduate instructor. Prerequisite: Department consent.

557. Seminar in Secondary Education. (3).

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


FOUNDATIONS OF EDUCATION

Lower Division Courses

Upper Division Courses

425. History of Education. (3). Education’s career in relation to other institutions (political, religious, etc.) in promoting and inhibiting social change. Prerequisite: Fd. Ed. 232.

426. Comparative Education. (3). 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. (Also listed as Anthropology 449.)


489. Theories of Knowledge and the Curriculum. (3). What does it mean to “know” in the various curriculum areas, and what methods and measurements are implied? Prerequisite: 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: SPC 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: SPC 423, Ed. Psy. 500 or concurrent enrollment, and SPC 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: SPC 503.

525. Group Guidance. (2). Laboratory approach to the study of group formation, process, and communication as a tool for guidance services. Prerequisite: SPC 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. Prerequisite: Ed. Psy. 500, SPG 555 and consent of instructor.

562. Presentation of Research. (1-2). A project submitted in thesis manuscript form. Prerequisite: Ed. Psy. 560. May be repeated for a maximum of 2 hours credit.
566. Practicum in Guidance Services. (3). Supervised work in administration, test interpretation, group counseling, and other activities of the guidance counselor. Prerequisite: SPC 523 and 533 and consent.

567. Practicum in Group Guidance and Counseling Methods. (3). Supervised practice in group guidance and group counseling. Prerequisite: SPC 525 and SPC 556 and consent of instructor. 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.
College of Fine Arts

WALTER DUERKSEN, M. M., Dean

DEPARTMENT OF ART

MARVIN SPOMER, Chairman

The Department of Art forms a portion of the College of Fine Arts. The curriculum has developed to meet the opportunities and challenges of new generations. While not breaking with the past, the Department of Art looks toward the future. Drawing, color, two- and three-dimensional design are taught as fundamentals. Based on this background and experience, students are encouraged to develop their own idiom to employ a constantly enlarging array of tools and materials. The Department, its students, staff and graduates, prides itself in their professional attainment as productive researchers and creative and exhibiting artists. Visiting artists contribute through guest lectures and studio demonstrations.

The Department of Art offers professional courses designed to train and educate art students who are planning careers in the arts, and to allow students in other colleges to gain an understanding and appreciation of art.

Two undergraduate degrees are offered by the Department of Art: (1) The Bachelor of Fine Arts with major study in the following areas: Painting, Printmaking, Ceramics, Metalsmithing, Sculpture, Graphic Design, Art History. Minor study is available in Fashion Illustration. (2) The Bachelor of Art Education which meets state requirements for teacher certification.

ADMISSION

All entering freshmen will be enrolled in the University College. Upon completing 24 semester hours of specified courses with a minimum grade point average of 1.7 or upon completing 64 or more semester hours with a minimum grade point average of 2.000 the student is eligible to enroll in the Department of Art.

Transfer students may enroll in the Department of Art if transcript indicates that student has completed a minimum of 24 semester hours with a grade point average of 2.000 or higher. Transfer students unable to meet this minimum requirement will be enrolled in University College until this requirement is met.

Freshmen who elect to major in art should indicate this on the application for admission form by placing a mark opposite the words “College of Fine Arts” and by writing the word “Art” directly below.
PROBATION AND DISMISSAL

A student will be placed on probation for the next term in which he enrolls if his cumulative grade point index falls below the following levels: (1) 1.700 if the student has earned 24-63 credit hours. (2) 2.000 if the student has earned 64 or more credit hours. The cumulative grade point index must reach the above required level for probation to be removed.

No student on probation who enrolls in fewer than seven hours shall be dismissed for failure to raise the cumulative grade point index to the required level; however, if such a student has earned 12 or more hours in two or more terms, the cumulative grade point index including these hours shall be used to determine whether he shall be dismissed.

A student on probation will be dismissed if his cumulative grade point index fails to meet the required minimum standards and if his grade point index for the term during which he is on probation falls below 2.000. Exception to this limitation may be made on recommendation of the student’s adviser with the approval of his Dean. A student on dismissal must apply for readmission to the Committee on Admissions, Advanced Standing, and Exceptional Programs. If, upon readmission, the student on final probation does not achieve the required cumulative grade point index and his grade point index for that term falls below 2.000, he shall again be dismissed. Any further applications for readmission will be considered on the merits of the individual case, after a lapse of at least one calendar year.

REQUIREMENTS

No student shall be allowed credit toward graduation for D grade work in excess of one-quarter of the total hours. A grade average of 2.000 or better must be earned on all work taken at this University which could be applied to the degree sought.

The Department will accept the transfer of only one credit hour per semester of studio work totaling not more than six hours of the last thirty or ten hours of the total number of hours required for graduation in nonresident work, such as extension or correspondence courses, provided these are from accredited institutions.

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 30 hours in Art History which must include 101, 102, 463, and Art 229. To complete the requirements the candidate must take a minimum of 13 hours in one of the following three languages: German, French, or Italian; and 33 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 joint 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 30 art history hours. These hours will be distributed as follows: 101, 102, 463. In addition Art 229 must be taken. A minimum of 13 hours in one language is required (German, French, or Italian).

**MINOR:** Students will complete 15 art history hours. These hours will be distributed as follows: 101, 102, and 9 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, 343, 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, a Master of Arts in Art Education, or a Master of Arts in Graphic Design. 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 Art II.** (3). A survey of world art from the 14th century through the mid 19th century.

165. **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.

**Upper Division Courses**

343. Fiber and Fabric Processes. (3). Fiber processing and structuring in traditional and experimental processes in woven forms and other structural techniques using natural and man-made fibers. Prerequisite: Art 241 or consent of instructor.

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; techniques in the supervision of an art education program.

470f. 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—79 hours.*

- 30 hours Art History.
- 3 hours Art 229.
- 13 hours Foreign Language.
- 33 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.

161. Introduction to the Visual Arts. (3). An introduction to the understanding of images and materials in the visual arts in relation to the geographical, historical, religious, social, and economic conditions of the Western world. Designed for the non-art major.

211. Roman 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 to 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 Charlemagne. An emphasis will be put on style and iconography as it develops in mosaics and illustrated manuscripts.

308. Medieval Art II. (3). A study of Romanesque and Gothic architecture and sculpture with special attention being given to the developments in France.

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. May be repeated for credit. 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. May be repeated for credit. 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.

393. Graphic Design I. (3). Experimentation with visual phenomena and its use in the communication of ideas through visual means. Studio practice co-ordinated with discussion of art theory, philosophy, and history of design. Prerequisite: Art 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. Delineation. (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. May be repeated for credit. Prerequisite: Art 387 or 388.

493-494. Graphic Design III and IV. (3-3). Continuation of Art 394. May be repeated for credit. Prerequisite: Art 394.

497. Advertising Illustration II. (3). Continuation of Art 397. May be repeated for credit. 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. May be repeated for credit. 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.

Requirements—81 hours.
3 hours Open Program (studio).
9 hours Art History.
21 hours Painting.
18 hours Drawing.
6 hours Printmaking.
24 hours Art 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. May be repeated for credit. 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 plus encouragement to investigate traditional craftsman like techniques and methods.

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). Introduction to relief, mixed techniques, and collagraph printing. Prerequisite: Art 165.
Upper Division Courses

375. Printmaking III. (3). Introduction to lithography, printing from the stone in black and white. 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. May be repeated for credit. 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.

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

485. Sculpture V. (3). Advanced carving, construction and assemblage techniques. May be repeated for credit. Prerequisite: Art 385.

486. Sculpture VI. (3). Advanced casting techniques. May be repeated 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.
450. Art Workshop. (1-3). May be repeated for credit. (The area to be covered will be inserted at the time course is offered.)


**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) Metallurgy, (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 Metallurgy. (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.

551. Design and the Film. (3). Theory and production of films for communication purposes. Study of camera techniques and methods, timing and editing. Use of film dynamics, approach and concept for visual communication. May be repeated for credit.
553. Typography and Design. (3). The study of typography in visual communication and its use in graphic design. Laboratory work in designing, setting, printing and binding original design.

555. Design Theory. (3). Experimentation in visual phenomena and its use in the communication of ideas through visual means. Studio practice coordinated with discussion on design theory, philosophy and history of design. May be repeated for credit.

557. Production Techniques and Management. (3). Laboratory problems in planning and executing design work for the various graphic media. A study of office practices related to the operation of a studio and the production of art.

561. Methods and Media of Painting. (3). Painting methods from the 12th to 20th century. History and nature of materials. Includes encaustic, tempera, oil, oil-resin, synthetic media, grounds, supports, and surface protection. Prerequisite: Consent of instructor.


566. Museum Techniques II. (3). Continuation of museum functions and related activities. Problems in education, staffing, planning, and service programs. Students are required to participate in curatorial duties. Prerequisite: Art 565.

567. Special Problems in Life Drawing. (1 or 3). Drawing from life. Sketchbooks and portfolios required. May be repeated for credit.

570. Seminar in Advanced Criticism. (3). Aesthetics and philosophy of art criticism for advanced students.

572. 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, 3-5).

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 edu-
cation meeting the state requirements for the secondary three-year certificate and degree three-year elementary certificate. There are two options within this degree: 

(a) the Bachelor of Music Education General degree (Instrumental Emphasis) which is offered to satisfy the needs of the student whose chief performing medium is instrumental or keyboard, and who plans to enter the field of instrumental music teaching in the public schools; 

(b) the Bachelor of Music Education degree (Vocal Emphasis) which is offered to satisfy the needs of the student whose chief performing medium is voice or piano, and who plans to enter the field of vocal music teaching in the public schools.

(2) The Bachelor of Music in Performance may emphasize 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 counseling purposes.

Freshmen who elect to major in music should indicate this on the Application for Admission form by placing a mark opposite the words “College of Fine Arts,” and by writing the word “Music” directly below. This will provide the student with a faculty advisor from the School of Music staff.

For additional details write to the School of Music, Wichita State University, Wichita, Kansas 67208.
PROFICIENCY EXAMINATIONS

In order to determine the status of all students in applied music, proficiency examinations will be given following the registration period. Thereafter, repertoire cards will be maintained, recording the student's progress each semester. The piano proficiency examination for all music degree students may be taken by entering students whose background indicates they may pass this requirement without enrolling in class or private piano (non-piano majors). If the requirement is met, the student may elect other interest areas or additional private study in piano 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 DISMISSAL

A student will be placed on probation for the next term in which he enrolls if his cumulative grade point index falls below the following levels:

1. 1.700 if the student has earned 24-63 credit hours.
2. 2.000 if the student has earned 64 or more credit hours.

The cumulative grade point index must reach the above required level for probation to be removed.

No student on probation who enrolls in fewer than 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 dismissed if his cumulative grade point index fails to meet the required minimum standards and if his grade point index for the term during which he is on probation falls below 2.000. Exception to this limitation may be made on recommendation of the student's advisor with the approval of his Dean. A student on dismissal must apply for readmission to the Committee on Admissions, Advanced Standing, and Exceptional Programs. If, upon readmission, the student on final probation does not achieve

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the required cumulative grade point index and his grade point index for that term falls below 2.000, he shall again be dismissed. Any further applications for readmission will be considered on the merits of the individual case, after a lapse of at least one calendar year.

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

Student 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 ................................................................. 3 hours
Select in consultation with adviser.

GROUP VII

Electives from the areas of Music Literature, Music Theory, Counterpoint, Conducting, Orchestration, and Choral Literature ........ 4 hours

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.

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:
Music 127-128, 129-130, 227-228, 229-230, 323, 361, 371, 372,
441, 459-460, and 461 .............................................. 32 hours
History and Literature of Music:
Music 113-114 and 331 and 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 332-332 ....................................... 10 hours
Conducting:
Music 217 or 218 and 451 or 491 ............................... 4 hours
Ensembles ................................................ 12 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.

* Music 381 and 382 required of piano majors. Music 397 and 398, 497 and 498 required of organ majors.

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.

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 hours
Third performing medium .................................................... 2 hours
(The above must include 2 hours of piano and completion of keyboard proficiency; a portion of the applied music elective must be taken in voice. The above minimums are subject to requirements of the chief performing medium 22 and secondary medium 10. The piano majors pursuing the Bachelor of Music Education General Degree must include 2 semesters of voice as the second applied medium and 2 semesters in one orchestral instrument as the third applied medium).
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
(Instrumental majors are required a minimum of 6 hours in Music B, two of which will be waived if the student enrolls in 4 hours of Music M. Marching Band does not apply as ensemble credit. Air and Military Science students may, however, petition for 2 hours of Marching Band ensemble credit. A minimum of 4 hours of instrumental ensembles is required for keyboard majors following the Bachelor of Music Education General Degree program).
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
     - (Voice majors, secondary emphasis, are required to enroll for 2 hours of small vocal ensemble and 2 hours of opera workshop.
     - Keyboard majors are required to enroll for 5 hours of vocal ensemble; it is recommended that 2 of the remaining hours be in Piano Accompaniment or Chamber Music Performance.)

   - **Music Electives (May not be in applied music)** .................. 6 hours
     - (Piano majors in vocal emphasis program must elect Music 381.)

   - **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 20 or Voice 20.

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 20 or 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 subject 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 student.

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 Dupre'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). Preparatory study for Oboe 11. Materials will be selected to fit individual needs. Emphasis will be placed on tone production, playing position and embouchure. Study of major and minor scales and arpeggios. Sight reading and reed making.
Oboe 11-12. (2 to 4—2 to 4). Studies selected from Andraud, Ferling and Vade-Mecum. Solo literature selected from works of Corelli, Pierne, Valentine, Schumann and others of comparable difficulty. Major and minor scales and arpeggios to be played in eighth-notes at 88 M.M. Sight reading and reed making.

Oboe 21-22. (2 to 4—2 to 4). Continuation with studies from above texts and others such as Prestini and Barret. Solo literature selected from works of Cimarosa, Telemann, Handel and others of comparable difficulty. Major and minor scales and arpeggios to be played in eighth-notes at 120 M.M. Sight reading and reed making.

Oboe 31-32. (2 to 4—2 to 4). Studies selected from Vade-Mecum, Labate, Lasilli and Gillet. Solo literature selected from works of Britten, Albinoni, Guiraud, Marcello, Hindemith, and others of comparable difficulty. Study of English horn. Advanced work with increased speeds on all scales. Sight reading and reed making.

Oboe 41-42. (2 to 4—2 to 4). Orchestral studies and advanced studies such as those by Gillet. Solo literature selected from works of Haydn, Mozart, Strauss, Vaughan Williams and others of comparable difficulty. Advanced exercises on scales, arpeggios, and intervals. Senior recital. Sight reading and reed making.

CURRICULUM FOR CLARINET MAJORS


Clarinet 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 Italienne; 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 11 standing. Aspects such as embouchure, articulation, and other basic facilities.

Saxophone 11-12. (2 to 4—2 to 4). Studies selected from texts such as Ferling, Bozza, Allard, Rascher. Solo literature selected from works of Bozza, Milhaud, Handel, Bach, Ravel, Ibert. Emphasis on embouchure, flexibility, facility, and development of melodic control. All major and minor scales and arpeggios.

Saxophone 21-22. (2 to 4—2 to 4). Continuation of Freshman objectives. Increase in performance application and expansion of repertory. Etudes from texts above and others such as Perrin and Massis.
Saxophone 31-32. (2 to 4—2 to 4). Advanced studies from above-mentioned etudes and any other texts fitting needs of the individual student. Performance literature will involve the major concerti and chamber works such as those of Creston, Ibert, Bonneau, Clazounov.

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.

Bassoon 11-12. (2 to 4—2 to 4). Studies from Weissenborn: Books I and II; solos by Gailliard, Telemann, or from Boyd and Garfield; further development of embouchure, articulation, technique, tone control; major and minor scales; reed-making and adjustment.

Bassoon 21-22. (2 to 4—2 to 4). Studies from Weissenborn Book II, Milde Scales and Arpeggios; orchestral excerpts; solos by Gailliard, Vivaldi, Mozart, Weber; highest range, trills, alternate fingerings; tenor and treble clefs; all major and minor scales; reed-making and adjustment.

Bassoon 31-32. (2 to 4—2 to 4). Studies from Milde Concert Studies Book I and Gambaro Eighteen Etudes; orchestral excerpts; solos by Bach, Vivaldi, Saint-Saens, Ibert, Phillips, Hindemith; development of range, scales, technical problems, clefs, articulation and phrasing.

Bassoon 41-42. (2 to 4—2 to 4). Studies from Milde Concert Studies Book II, Bozza Fifteen Daily Studies, Bertoni Twelve Modern Etudes; orchestral excerpts; solos by Jacob, Bozza, Mozart, Grundahl; concentration on scales, arpeggios, articulation, technical problems and phrasing. Senior recital.

CURRICULUM FOR FRENCH HORN MAJORS

Horn 10. (1). Studies selected from: Farkas, Hauser, Franz and Kopprasch (I); all scales and arpeggios, two octaves. Compositions by Mozart, Corelli, Glazunov, Purcell and Butterworth.

Horn 11-12. (2 to 4—2 to 4). Etudes selected from: Farkas, Kopprasch (I), Alphone (I), Pottag and Hauser; all scales and arpeggios, two octaves. Compositions by Mozart, Franz, Corelli, Gipps, Cohen, Tillotson and Saint-Saens. Orchestra studies.

Horn 21-22. (2 to 4—2 to 4). Etudes selected from: Farkas, Cugnot, Alphonse (II), 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 selected from Schlossberg, Clark, Nagel, Concone, Brandt, Bousquet, Bozza, and Bartold. Solo literature selected from Frankenpohl, Persichetti, Mozart, Purcell, Bozza, Emmanuel, and Handel. Concentration on styles, transposition, and an introduction to orchestral excerpts. All major and minor scales and arpeggios to be played in eighth-notes at 120 M. M.


CURRICULUM FOR TROMBONE-(EUPHONIUM) MAJORS


Trombone 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, tenor clef, sight reading. All major and minor scales and 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 arpeggios to be played in eighth-notes at 120 M. M.

Trombone 31-32. (2 to 4—2 to 4). Studies by Blazhevich and Couillaud. Orchestral excerpts and solos by Cowell, Hindemith, McKay, Rimsky-Korsakov, Sanders, or their equivalent. Continued technical development and sight reading.

Trombone 41-42. (2 to 4—2 to 4). Studies by Bitsch. Orchestral excerpts and solos by Bach, Creston, Hindemith, Martin, Milhaud, Saint-Saens, or their equivalent. Sight reading and advanced legato studies. Senior recital.

It is recommended that all trombone (euphonium) majors have some playing experience on the companion instrument.

Tuba 10. (1). Studies selected from Arban, Bell, Cimera, Cornette and Pares. Basic development of embouchure, articulations, tone quality and control. Familiarity with major and minor scales.

Tuba 11-12. (2 to 4—2 to 4). Studies by Kopprasch and Rochut. Appropriate solos. Formation of a strong and flexible embouchure, control of the tongue, double and triple tonguing, octave transposition, sight reading. All major and minor scales and arpeggios to be played in eighth-notes at 80 M. M.
Tuba 21-22.  (2 to 4—2 to 4). Studies by Kopprasch and Rochut. Orchestral excerpts and appropriate solos. Range extension, rapid single and multiple tonguing, treble clef transposition, sight reading. All major and minor scales and arpeggios to be played in eighth-notes at 120 M. M.

Tuba 31-32.  (2 to 4—2 to 4). Studies by Blazheivich. Orchestral excerpts and solos by Frackenpohl, Hartley, McKay, or their equivalent. Continued technical development and sight reading.

Tuba 41-42.  (2 to 4—2 to 4). Studies by Bernard and Blazheivich. Orchestral excerpts and solos by Hindemith, Perichetti, Stevens, Wilder, or their equivalent. Sight reading. Senior recital.

It is recommended that all tuba majors have some playing experience on F and CC tubas as well as BB flat.

CURRICULUM FOR PERCUSSION MAJORS


Percussion 11-12.  (2 or 4—2 or 4). Studies selected from McMillan, Goldenberg, Feldstein, Bailey, and Firth. Emphasis on physical, technical, and musical factors on marimba and xylophone. Compositions of beginning to intermediate difficulty taken from selected standard repertoire.

Percussion 21-22.  (2 or 4—2 or 4.) Further study of marimba and xylophone pursued with studies selected from Torrobruno: 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 to 4—2 to 4). Further study of timpani pursued with studies selected from Seitz, Goodman, Firth and Knauer: Book II. Emphasis on timpani. Compositions of intermediate to advanced difficulty taken from orchestral and solo repertoire. The study of multi-percussion will be emphasized. Selected compositions from the repertoire will be used.

Percussion 41-42.  (2 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, Laeaux, Dont; scales and arpeggios in all keys in the first position; detailed study of shifting and positions; special blowing studies; concertos by Sitt, Rieding, Seitz, De-Beriot. Compositions of intermediate difficulty in the lower positions.

Violin 11-12. (2 to 4—2 to 4). Studies chosen from the following: Seveik, Schradieck, Dont Op. 37, Kreutzer; advanced scale and arpeggio technique; detailed study of double stops; sonatas by Handel, Tartini, Corelli, Veracini; concertos by Kreutzer, Rode, Viotti; single compositions of a more advanced nature.

Violin 21-22. (2 to 4—2 to 4). Rode and Fiorillo Etudes, Flesch Scale Studies; concertos by Spohr, Mendelssohn, Bach, Vivaldi; sonatas by Beethoven, Mozart; short numbers by romantic and modern composers.

Violin 31-32. (2 to 4—2 to 4). Mazas, Op. 36, Book 1, Special Studies; Double-stops; Bowing and Shifting studies. Sonatas by Eccles, Marcello, Haydn, Divertimento; Dumas, Lamento; Concerti by Telemann and Hofmeister.

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


Viola 11-12. (2 to 4—2 to 4). Mazas, Op. 36, Book I, Special Studies; Double-stops; Bowing and Shifting studies. Sonatas by Eccles, Marcello, Haydn, Divertimento; Dumas, Lamento; Concerti by Telemann and Hofmeister.


CURRICULUM FOR CELLO MAJORS

Cello 10. (1). Studies selected from Feuillard, Somlo, Friss, Dotzauer; scales and arpeggios through two octaves; shifting and bowing techniques; compositions in lower positions by Romberg, Krane, Stutschewsky.
Cello 11-12. (2 to 4—2 to 4). Studies chosen from Schroeder 170 Foundation Studies, Feuillard 60 Studies; scales and arpeggios in three octaves; sonatas by Corelli, Vivaldi, Vandini; shorter pieces using neck positions; concerti by Vivaldi, Bach.

Cello 21-22. 2 to 4—2 to 4). Continuation of studies from Schroeder, Feuillard, and Popper High School of Cello Playing; scales and arpeggios in three octaves in all keys; thumb position techniques; sonatas by Eccles, Handel Sammartini, Beethoven, Handel Sammartini, Beethoven, and Bach.

Cello 31-32. (2 to 4—2 to 4). Studies chosen from Popper and Duport; scales and arpeggios with a variety of bowing techniques; sonatas of Beethoven, Boccherini, Haydn, Kabalevsky; pieces by Popper, Bloch; Suites by Bach.

Cello 1-42. (2 to 4—2 to 4). Studies chosen from Duport, Piatti, Grutzmacher; traditional and synthetic scale materials in three octaves; sonatas of Brahms, Beethoven, Shostakovich; concerti by Tschaikowsky, Shostakovich, Schumann, Dvorak; contemporary pieces by Brown, Davidovsky; review of program materials. Senior recital.

CURRICULUM FOR STRING BASS MAJORS

String Bass 10. (1). Studies selected from Simandl's 30 Etudes for the String Bass; Shmuklovsky's Scales, Triads and Exercises; solos by Wagner, Handel, Bach, and Bakaleinkeff.


String Bass 41-42. (2 to 4—2 to 4). Simandl's Gradus ad Parnassum; advanced orchestral repertoire; sonatas by Hindemith, Schubert, Handel, and Birkenstock; concerti by Bottesini, Dragonetti, and Koussevitzky. Senior recital.

CURRICULUM FOR VOICE MAJORS

Voice 9-10. (1). The student must demonstrate an ability to sight read simple melodies, produce a pleasing tone quality with good intonation, and sing a prescribed number of songs with proper interpretation.

Voice 11-12. (2 to 4—2 to 4). Posture, breathing, tone production, diction, interpretation, ability to sing required songs with a well-produced tone, good intonation, clear diction, and musical interpretation. Repertoire in Italian and English songs.


Voice 21-22. (2 to 4—2 to 4). More advanced technical studies; remedial training as needed. Repertoire in Italian, English, and German songs.

Voice 41-41. (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 257. 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.)

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). (See: Music Education 305.)

306. Music Methods for the Kindergarten Teacher. (2). (See: Music Education 306.)

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.

* All piano majors are expected to enroll in Music P (Piano Repertoire). During the first semester of the junior year, piano majors enrolled in Music P will meet separately to receive class instruction in harpsichord. The second semester of the junior year will be devoted to an intensive study of one facet of the professional literature, such as the Beethoven sonatas.
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 advanced levels.


387. 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.

388. 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 departmental 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 musical-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.

441. Orchestration. (2). The study of instrumentation, emphasizing idiomatic scoring for various instrumental combinations, with an approach to the problems of full orchestra and band scores. Prerequisite: Music 228.

445. Choral Arranging. (2). Scoring for women’s, men’s, and mixed choruses, Performance and analysis of students’ arrangements in class. (Fall semester only.) Prerequisite: Music 228, 230.

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 contrapuntal 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 types 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


509-510. Contemporary Music Education. (2-2). A consideration of new approaches to the teaching of music with emphasis on expansion of students' concepts and practical knowledge of music. Study of the linear, vertical, durational, textural, and dynamic parameters of music. Experimentation with new ways of involving public school students in similar study.


521. Elementary Music Supervision. (3). (See: Music Education 521.)

530. Seminar in Music Theory. (3). An analytical study of the materials used in musical composition from antiquity to the present. The student will analyze music in his own medium, culminating in a presentation to the class; from these presentations a comprehensive synthesis of the compositional procedures in various style periods will be made. The course is designed to develop analytical perspective rather than compositional skills.

531. Developing the Child’s Musical Understanding. (3). Definition of understandings necessary for the attainment of musical awareness in the child. Exploration of classroom experiences directed toward the successful development of those understandings through the application of basic learning principles.

532. Music in the Junior High School. (3). To include administrative structures, the curriculum, adolescent development, teaching as behavior, and competencies needed for successful teaching.

541-542. (Music or Music Education). Special Project in Music. (1-3—1-3).
Individually supervised study or research with emphasis upon the personal
needs of the student. Prerequisite: Consent of instructor.

545. Seminar in Music Education Materials (Instrumental). (2). Critical
analysis of new materials and literature for band, orchestra, and small en-
sembles. Current bibliography. 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, psy-
chology of performance, and teaching. Aesthetic principles of listening. Pre-
quisite: Consent of instructor.

552. Introduction to Graduate Study. (3). Techniques of research and develop-
ment of bibliography in music and music education. Must be elected the
first available semester of enrollment.

554. Research Seminar in Music Education. (3). Continued application of
techniques of research. Completion of a major research project. Prerequisite:
Music 552.

559-560. Advanced Composition. (2-2). Original work in the large forms.
Continuation and expansion of 459-460. Prerequisite: Music 460 or equivalent.

571. Philosophy of Contemporary Music Education. (2). A study of historical
trends and contemporary philosophies relevant to music education, behavioral
objectives, and curriculum planning.

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. Graduate Recital. (2). Performance of a full recital featuring the chief
performing medium. Prerequisite: Consent of instructor.

575. (Music or Music Education). Thesis Research. (2).


582. Marching Band Techniques. (2). Study and analysis of current forma-
tions and pageantry for the marching band.

583. Band Organization and Administration. (2). Problems of organization
and administration particularly relevant to the band programs in the field of
music education. Band pageantry.

591-592. Seminar in Music History. (3-3). Areas of interest in music history
will be developed as fully as time permits. No effort at a chronological survey
will be made. Ideas evoking the most interest, and considered by the instructor
to be of the greatest professional benefit, will be taken when interest warrants.
Prerequisite: 331 and 332 or consent of instructor.

593. Music of Antiquity through the Renaissance. (3).


596. Music of the Nineteenth Century. (3).

597. Music of the Twentieth Century. (3).
School of Engineering
CHARLES V. JAKOWATZ, Ph. D., Dean

The many recent technological developments in engineering have resulted in considerable modification of engineering curricula. To meet such technological needs, the School of Engineering is dedicated to providing a vigorous and challenging experience to all students admitted to engineering. In particular, the curriculum includes a great breadth of subject material covering a broad spectrum of fundamental technical knowledge. In addition to such technical material, the engineering programs contain a sufficient number of courses in humanities, social sciences, communications, mathematics and physical sciences. A proper balance in the curriculum prepares the students to hold professional positions in the scientific-industrial community after the B. S. degree, or prepares him by means of additional graduate offerings for a more active participation in research and advanced study.

The faculty provides the student with a basic core of knowledge, including a large portion of scientific and analytical tools which will be required for the complex problems he is likely to face as an engineering leader. Thus, the student is being prepared for real-world problems which he will continually encounter throughout his professional career.

Because of the diverse nature of engineering subject material, the School of Engineering is organized into several degree granting departments. Curricula offerings in Aeronautical, Electrical, Industrial, and Mechanical Engineering are available at the Bachelor of Science level. The Master of Science degree is offered in Aeronautical, Electrical, Engineering Mechanics and Mechanical Engineering.

The curricula of the various departments at the undergraduate level contains a large portion of common courses (three years being common) with provisions for a fourth year of specialized departmental offerings. The student is allowed ample flexibility within a chosen major field to study select areas outside the “engineering core subjects.” Detailed program requirements for the majors in the various engineering fields are given under departmental offerings.

The programs in Engineering are offered in daytime and evening classes. The courses are the same whether they are taught in the daytime or at night. The curricula on the following pages are arranged for full-time sequences and contain all the requirements for the various undergraduate degrees.
The curricula of the Departments of Aeronautical Engineering, Electrical Engineering and Mechanical Engineering are accredited by the Engineers' Council for Professional Development.

Programs leading to the Master of Science Degree are offered in the Departments of Aeronautical, Electrical and Mechanical Engineering.

**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.

Particular attention is called to the requirement for Math 142 as a first semester offering in the engineering curriculum. Those high school students who have had college algebra and trigonometry in high school may take the Mathematics Department placement exam in Math 142 and, upon passing this, be directly assigned to Math 142.

A prerequisite for Math 142 is Math 141, a university course, algebra and trigonometry. New students who are not eligible for Math 142 must take and pass a placement exam to be accepted into Math 141. In addition one and one-half units of high school algebra and one unit of high school geometry are required. These latter courses are offered in regular University offerings for those students who have not included these subjects in their high school program.

**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 ½ 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

The curriculum in engineering is common for the first two years. For administrative purposes, the student is requested to choose a departmental curriculum in which to study. Change to another curriculum may be made during this period without loss of credit toward graduation.

Each of the curricula consists of three parts: (1) The General Requirements of the University, (2) an "Engineering Core" program, and (3) specialized department courses.

The recommended sequence of courses for all engineering students is outlined below. This sequence has been planned for completion of the program in the minimum time and to satisfy all university course requirements and prerequisites for engineering students. 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

Rapid progress in the development of airplanes, missiles, and space vehicles presents challenging opportunities for engineers interested in research, development, design, and teaching. A strong fundamental knowledge in mathematics, physics, and the engineering sciences is required of those persons who will contribute to future developments in aeronautical and astronautical engineering.

The curriculum in this field offers students an opportunity to develop this foundation and acquire competence in professional fields such as aerodynamics, flight and orbital mechanics, propulsion, control systems, and structural mechanics. Emphasis is placed on the fundamental principles involved in aeronautical engineering so that graduates will be prepared to contribute to this rapidly changing and growing field with its wide variety of engineering applications. Engineers trained in this field also may find challenging careers in other industries which are making use of many advanced concepts similar to those developed in the aeronautical field. The program requires the completion of 137 semester hours for graduation.

FRESHMAN

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<td>A. E. 324, Aerodynamic Theory</td>
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<td>Phys. 311, Modern Physics</td>
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<td>A. E. 398, Systems Dynamics</td>
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<td>A. E. 426, Flight Structures Lab.</td>
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### ELECTRICAL ENGINEERING

In the Electrical Engineering Department emphasis is placed on the intensive study of physical laws as are appropriate to the study of modern electrical devices, including electrical machines. The laws governing the individual behavior as well as behavior in the inter-connection of devices is particularly emphasized. Analysis and synthesis of electrical networks, or systems, is of particular concern in specialized courses. The undergraduate program in Electrical Engineering is sufficiently flexible so that a student may choose a program particularly appropriate to communication systems, modern control theory, computers, energy conversion, network and system theory, and microwave electronics.

Students in this curricula are required to have a strong interest in mathematics and physics. As a part of the curriculum students at the senior level are required to take on a senior project of their own choosing. Under the supervision of a faculty member the choice of subject material is varied, and represents a challenge to the student to exercise judgment and creativity in the analysis or design of an appropriate equipment. The program requires the completion of 138 semester hours for graduation.

### FRESHMAN

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<td>M. E. 389, Energy Conversion</td>
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<td>E. E. 482, Energy and Info. Trans.</td>
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Electrical Engineering electives may be selected from the following: E. E. 481, 483, 484, 490, 491, 492, 494, A. E. 324, I. E. 450, M. E. 402, Math. 335, 447, Phys. 345.

### INDUSTRIAL ENGINEERING

The Department of Industrial Engineering is concerned with instruction and research in the design, analysis, and operation of integrated systems of men, material, and equipment. In addition to a strong interest in the solution of real problems found in industry the curricula is devoted to the preparation of students who can examine and analyze real problems that are amenable to a system's engineering approach. The areas of primary interest within the Department are: (1) Operations Research, (2) Manufacturing Process Systems, and (3) Automated Industrial Engineering Systems. A modern, well equipped laboratory is also available to supplement classroom theory in human factors engineering, manufacturing processes, work measurement, and factory planning. The program requires the completion of 136 semester hours for graduation.

### FRESHMAN

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<th>Course</th>
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The curriculum in Mechanical Engineering is based upon three central parts of an integrated program of study. The first part provides the student with a basic series of courses in physics, mathematics, and appropriate humanities. This is followed by a core of engineering science subjects embracing the concepts and techniques which are judged to be fundamental to the requirements of the modern Mechanical Engineer. The third part of the program permits the student to take specialized Mechanical Engineering Department courses. Study in all three of these fields is distributed throughout the entire curriculum in order to provide a fully integrated program.

The objective of this program is to provide the background for careers in design, research, development, production and technical management in a wide variety of industries and fields. The course of study will equip the student for the development of systems and processes involving mechanical, thermal, and electrical energy, including the generation, conversion, metering, control, and utilization of these energy sources.

The student will be prepared to accept the challenges of the entire industry, including those concerned with food products, aircraft, chemical products, automotive products, aerospace systems, agriculture, petroleum, electrical products and consumer products, to mention a few. In fact, many employers seek the mechanical engineer because of his versatility.
The faculty and laboratory facilities of the Department provide the elements for a well-balanced, coherent program. In the senior year, the program provides for a selection of specialized electives, where the student may emphasize a study of design, fluid flow, heat transfer, instrumentation, or systems and controls. The student is urged to work out a suitable program of study with consultation of the faculty. The program requires the completion of 138 semester hours for graduation.

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**SOPHOMORE**

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**SENIOR**

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<td>M. E. 448,* Mech. Engr. Projects</td>
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*Mechanical Engineering electives may be selected from the following: M. E. 404, 405, 421, 422, 433, 456, 459, Math. 335, 447. Appropriate courses from other engineering departments may be selected if they suit the academic needs of the student. Electives must have the approval of the student's departmental adviser.

* Total of 2 hours required for graduation.

**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.

SCHOOL OF ENGINEERING 283
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 279.

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.

Lower Division Courses


225. Digital Computer Programming. (3). Programming concepts and data processing equipment. Detailed development of Fortran with emphasis on use of disk and machine organization for flexibility and versatility in programming. Problem orientation dependent upon class background and interest. Prerequisite: Math. 121 or equivalent. Not open to students with Engr. 127 or equivalent.

Upper Division Courses

300. Engineering Science in Society. (3). A course to demonstrate and explain—in depth but without technical jargon—developments in engineering science in the past century which have influenced large portions of society. Emphasis will be placed upon conceptual understanding of scientific phenomena and devices. Guest lecturers and demonstrations will be used extensively. Prerequisite: Upper division standing.

361. Fluid and Heat Flow. (4). 3R; 3L. Pressure and velocity fields, kinematics of perfect and real fluids; similarity; temperature fields and heat transfer, conduction, convection, radiation; introduction to gas dynamics. Prerequisites: Physics 244E, Math. 346, and M. E. 298.


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: Engr. 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. 324 or concurrent.


417. **Projects in Aeronautical Engineering.** (2). 4L. Design, analysis, or research problems under supervision of faculty advisor. May be taken for 1 hour credit in each of two consecutive semesters. Department consent.

418. **Missile and Space Dynamics.** (2). Fundamentals of space vehicle trajectory and performance analysis. Department consent.


426. **Flight Structures Laboratory.** (1). 3L. Special projects in the design and analysis of flight vehicle structures. Prerequisite: A.E. 425.

427. **Computer Solution of Engineering Equations.** (2). Numerical solution of ordinary and partial differential equations utilizing computer methods and machinery. Prerequisite: Math. 346.


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.

477. **Vibrations Analysis.** (3). Free, forced, damped and undamped vibrations for one and two degrees of freedom. Classical, numerical and energy solutions for multi-degree of freedom systems. Introduction to continuous systems. Prerequisite: A. E. 398.

498. **Computer Aided Design.** (3). An introduction to the concept of man-computer coupling in an active environment and its relationship to the analysis, design and synthesis of engineering problems. 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.

500. **Structural Dynamics I.** (3). Matrix methods for the analysis of the free and forced vibrations of multiple degree of freedom structures. Prerequisite: A. E. 477.


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.


520. Theory of Elastic Stability. (3). Buckling and bending of columns, beams, plates, and shells. Prerequisite: Consent of instructor.


530. Theory of Elasticity. (3). Elements of the common theory of elasticity with emphasis on two-dimensional problems in strain and stress.


533. Continuum Mechanics. (3). A unified development of the basic theories and equations of solids and fluids in invariant tensor notation. Formulation of problems of elasticity, plasticity and fluid mechanics. Prerequisite: Consent of Instructor.
535. **Experimental Stress Analysis.** (3). The theoretical bases and techniques of the common methods of experimentally determining stress and strain in structural and machine parts. Selected laboratory demonstrations.

537. **Advanced Engineering Dynamics.** (3). Kinematics and kinetics of particles and rigid bodies for two and three dimensional motion. Introduction to vibratory motion. Lagrange's equations.

538. **Random Vibration.** (3). Characterization, transmission and failure of mechanical systems subjected to random vibration. Analysis and measurement methods for random data. Prerequisite: Consent of instructor.

539. **Energy Methods in Mechanics.** (3). The principles of virtual work, potential energy, and potential coenergy applied to static equilibrium of rigid and deformable, discrete, and distributed mass bodies. Also, energy methods extended to the dynamics of discrete mass systems.


541. **Transform Methods in Mechanics.** (3). The LaPlace, Hankel, Legendre, Fourier, and Jacobi transform solutions of differential equations arising in engineering mechanics. Prerequisite: Consent of instructor.


560. **Selected Topics in Engineering Mechanics.** (1-3). Supervised study or research. May be repeated to a total of 3 hours.

561. **Selected Topics in Aerodynamics and Fluid Mechanics.** (1-2). Supervised study or research. May be repeated to a total of 3 hours.

562. **Selected Topics in Propulsion.** (1-3). Supervised study or research. May be repeated to a total of 3 hours.

563. **Selected Topics in Guidance and Control.** (1-3). Supervised study or research. May be repeated to a total of 3 hours.

576. **Thesis.** (1-4).


676. **Thesis.** (1-16)). May be repeated to a maximum of 36 hours.

**ELECTRICAL ENGINEERING**

**Lower Division Courses**

200-IIB Honors. **Engineering Concepts.** (1-4). Introduction to the modes of thought and action inspired by science and engineering which are increasingly used in business, government, economics, education and medicine.
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.


477. Special Topics in Electrical Engineering. (1-4). New or special courses are presented under this listing on sufficient demand. May be repeated for credit. Prerequisite: Department consent.

480. Transient and Frequency Analysis. (3). Review of classical transient analysis and Fourier Series; Introduction to LaPlace and Fourier Transforms with emphasis on network response; complex frequency concepts; signal spectra. Prerequisite: E. E. 392, Math. 398.

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. 464, E. E. 486 or concurrent enrollment.


485. Electrical Design Project I. (1). 3L. A design project under faculty supervision chosen according to the student's interest. Prerequisite: Department consent.


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. 464, 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.
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.

582. Methods of Systems Analysis. (3). Methods of analysis of both linear and nonlinear systems. Time-domain techniques; singularity functions, resolution of signals from elementary functions, solution of differential and difference equations. Transform techniques; Laplace, Fourier and Z transforms, frequency spectra, complex frequency, complex integration, significance of singularities. Matrices and vector spaces as used in systems work. Prerequisite: E. E. 480 or Department consent.

583. Electromagnetic Field Theory I. (3). Introduction to advanced mathematical treatment of electric and magnetic fields 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. Prerequisites: 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.


593. State-Variable Techniques in Systems II. (3). A continuation of the study of state-space concepts in the areas of nonlinear systems, optimal and suboptimal control of systems with wide classes of performance measures. Prerequisite: E. E. 592 or Department consent.


ENGINEERING GRAPHICS

Lower Division Courses

110. Engineering Graphics I. (2). 4L. Basic special relationships involving lines and planes, auxiliary views of solids, and problems in intersections. Prerequisite: Math. 141 with a C or better.

115. Architectural Drawing. (3). 9L. The study of materials and construction details pertaining to the design of simple buildings including 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, biometrics, work sampling, predetermined time standards and time formula derivation. Prerequisite: Department consent.


356. Introduction to Numerical Control. (2). An introduction to the concepts and techniques of the operation of machine tools from numerical data; including open and closed loop systems, point to point and continuous path processing, and a discussion of the various means of data representation. Prerequisite: Department consent.


449. The Human Factor in Engineering Design. (2). The synthesis of human physiological, psychological, sociological and legal limitations and influence on design of consumer, public and experimental products. Prerequisite: Department consent.


453. Production Control. (3). Techniques of production planning, scheduling, and dispatching. Applications to automation and computer control. Prerequisite: Department consent.


455. Numerical Control and Parts Programming I. (3). The study and application of the various parts programming languages with particular emphasis on the APT language. Prerequisite: I. E. 356 or Department consent.

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). 2R; 3L. 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. Prerequisite: 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. (4). 3R; 3L. 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.
443. Mechanical Engineering Design III. (3). Kinematic synthesis and dynamic analysis as applied to machine design. Introduction to mechanical control theory. Prerequisite: M. E. 441.

448. Mechanical Engineering Projects. (1 or 2). 3L or 6L. A design, analysis or research project under faculty supervision. Problems are selected according to the student's interest. Student may take one hour for two semesters or two hours in a single semester. Prerequisites: Senior standing or department consent.

450. Topics in Mechanical Engineering. (1-3). Investigation of selected phases of Mechanical Engineering. Prerequisite: Department consent.

456. Analysis in Engineering. (3). Analytical techniques applied to engineering problems. Prerequisite: Math 346.

459. Mechanical Control I. (3). Theory and analysis of the dynamic behavior of mechanical, thermal, fluid and electromechanical control systems as based on the laws of physics and linear mathematics. Prerequisite: A. E. 398 or department consent.

Graduate Courses

501. Boundary Layer Theory. (3). Development of the Navier-Stokes Equation, laminar boundary layers, transition to turbulence, turbulent boundary layers, introduction to homogeneous turbulence. Prerequisites: M. E. 557 and Math. 447, or department consent.

530. Cryogenic Engineering I. (3). Study of cryogenic problems in Mechanical Engineering involving production of low temperatures; properties of solids and liquids; fluid flow; heat transfer; insulation and applications at low temperatures. Prerequisites: Math. 447, M. E. 555, or department consent.

546. Fatigue and Fracture Mechanics. (3). Methods of fatigue and fracture mechanics together with reliability study as applied to Mechanical Engineering Design problems. Prerequisite: 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 II. (3). Application of feedback methods to mechanical and combined control systems. Prerequisite: Math. 447, M. E. 459, or equivalent.
560. Electromechanical Control Systems. (3). Description, analysis, and design of electro-mechanical control systems with an emphasis on actual devices. Prerequisite: M. E. 459 or department consent.

561. Similitude in Engineering. (2). Critical analysis of models and analogies as aids to engineering design. Prerequisite: 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.

567. Theory of Rational Design. (3). Design decision techniques including: frequency, axiomatic and Bayesian formulation, statistical inference techniques, Jaynes' maximum entropy principle, error analysis. Prerequisite: Department consent.

568. Rational Design Methods. (3). 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
GORDON B. TERWILLIGED, Ed. D., Director

SUMMER SCHOOL

The University maintains its summer session as an extension of the regular scholastic year. All work is offered by regularly qualified instructors, and the standards of achievement are identical with those required in the academic year. Credits earned in the summer session are accepted by all colleges accredited by or belonging to the associations which accredit the University or in which it has membership.

All the colleges and divisions of the University function during the summer session. Credit toward 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, 67208.

ADMISSION REQUIREMENTS AND ENROLLMENT

The Rules governing admission to the summer session are the same as those for the regular session.

The student may enroll in as many credit hours as the number of weeks for which he is enrolled. Dates for registration are published in the Bulletin of the Summer School.

FEES

For information regarding fees, see page 44.

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.
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