

The University of Akron

AKRON, OHIO

MAY, 1951

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With Announcements For 1951 - 1952



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UNIVERSITY CALENDAR

1951

- January 3, WednesdayClasses resumed.
- January 18, ThursdayFounders Day.
- January 27, SaturdayTermination of semester final examinations.
- January 29-31, Monday through
WednesdayOrientation Program.
- February 1, 2, Thursday and
Friday, February 3, Saturday
until noon.....Final registration for Day Session.
- February 5, MondayClasses begin for Day Session.
- February 5-9, Monday to Friday, 6:30 p.m., February 10, Saturday until noon.....Registration for Evening Session.
- February 12, MondayEvening classes begin.
- February 22, Thursday.....Washington's Birthday—a holiday.
- April 2-7, Incl.Spring recess.
- April 9, MondayClasses resumed.
- May 12, SaturdayExaminations for candidates for graduate degrees
with a major or minor in education and
psychology.
- May 24, ThursdayMay Day.
- May 30, WednesdayMemorial Day—a holiday.
- June 9, SaturdayTermination of semester final examinations.
- June 10, SundayBaccalaureate.
- June 12, TuesdayCommencement.
- June 15, Friday and
June 16, Saturday until noon.....Final registration for Summer Session.
- June 18, MondaySummer Session classes begin.
- July 4, WednesdayIndependence Day—a holiday.
- July 27, FridaySix-week classes end.
- August 10, FridaySummer Session ends.
- August 27, Monday to September
8, Saturday until noonPre-registration for entering freshmen.
- September 10-13 Incl.Orientation Program
- September 13, 14, 15, Thursday,
Friday, and Saturday
until noonFinal registration for Day Session.

1952

- September 17, Monday Classes begin for Day Session.
- September 17-21, Monday through
Friday, 6-8:30 p.m. and
September 22, Saturday
until noon Registration for Evening Session.
- September 24, Monday Evening classes begin.
- November 22-24, Thursday
through Saturday Thanksgiving recess.
- December 20, Thursday, at 10:05
p.m. Christmas recess begins.
- January 3, Thursday Classes resumed.
- January 18, Friday Founders Day.
- January 26, Saturday Termination of semester final examinations.
- January 28-30, Monday through
Wednesday Orientation Program.
- January 31, February 1, Thurs-
day and Friday, February 2,
Saturday until noon Final registration for Day Session.
- February 4, Monday Classes begin for Day Session.
- February 4-8, Monday to Friday,
6-8:30 p.m., February 9,
Saturday until noon Registration for Evening Session.
- February 11, Monday Evening classes begin.
- February 22, Friday Washington's Birthday — a holiday.
- April 7-12, Incl. Spring recess.
- April 14, Monday Classes resumed.
- May 10, Saturday Examinations for candidates for graduate degrees
with a major or minor in education and
psychology.
- May 22, Thursday May Day.
- May 30, Friday Memorial Day — a holiday.
- June 7, Saturday Termination of semester final examinations.
- June 8, Sunday Baccalaureate.
- June 10, Tuesday Commencement.
- June 13, Friday and June 14,
Saturday until noon Final registration for Summer Session.
- June 16, Monday Summer Session classes begin.
- July 4, Friday Independence Day — a holiday.
- July 25, Friday Six-week classes end.
- August 8, Friday Summer Session ends.

UNIVERSITY FACULTY AND ASSISTANTS

1950-51

NOTE: The dates in parentheses indicate the beginning of service at Buchtel College or the University of Akron; unless otherwise stated, service began in the month of September.

HEZZLETON E. SIMMONS, *President of the University* (1910)

B.S., Buchtel College; M.S., University of Pennsylvania, 1912; D.Sc., College of Wooster; LL.D., University of Toledo.

PAUL ACQUARONE, *Associate Professor of Botany and Geology* (1931)

B.S., Pennsylvania State College; Ph.D., Johns Hopkins University, 1929.

AUBREY ALLMAN, *Instructor in Natural Science* (1946)

B.S., University of Akron, 1940.

WESLEY ALVEN, *Assistant Professor of Psychology* (1945)

Th.B., Northern Baptist Theological Seminary; Ph.B., Loyola University; M.A. in Education, University of Akron, 1944; Ph.D., Western Reserve University, 1950.

DAVID E. ANDERSON, *Director of Testing Laboratory and Assistant Professor of Chemistry* (1923)

B.A., Augustana College; M.S., University of Chicago, 1923.

EINAR ANDERSON, *Instructor in Accounting* (1947)

B.S., B.A., University of Akron, 1942.

JULIA ANICH, *Instructor in English* (1946)

B.A., University of Akron; M.A., Western Reserve University, 1950.

†FREDERIC E. AYER, *Dean Emeritus of the College of Engineering* (March, 1914)

C.E., Lafayette College, 1900; D.Eng., University of Akron, 1947; P.E., Ohio.

SUMMERFIELD BALDWIN, 3RD, *Professor of History* (February, 1943)

A.B., A.M., Ph.D., Harvard University, 1923.

IRENE C. BEAR, *Professor of Home Economics* (1948)

B.S., Illinois Wesleyan University; M.A., Texas State College for Women, 1937.

HELEN BECKER, *Associate Professor of Primary Education* (1949)

B.S., M.A., Ed.D., Columbia University, Teachers College, 1949.

RUSSELL J. BEICHLY, *Assistant Professor of Physical Education and Basketball Coach* (March, 1940)

B.A., Wittenberg College, 1926.

ROBERT BERRY, *Business Manager* (August, 1946)

B.S., University of Akron, 1942.

MICHAEL BEZBATCHENKO, *Instructor in Mechanical Engineering* (June, 1949)

B.M.E., University of Akron, 1948. P.E., Ohio.

§MAXWELL P. BOGGS, *Treasurer of the University* (March, 1927)

B.A., Muskingum College, 1924.

WARREN C. BRAY, *Assistant Professor of Accounting and Finance* (1949)

B.S., University of Massachusetts; M.A., Columbia University, 1943.

PHILLIPS HAMLIN BROWN, *Assistant Professor of Economics* (1949)

B.A., University of Missouri; M.B.A., Harvard Business School, 1943.

CHARLES BULGER, *Dean Emeritus of Buchtel College of Liberal Arts, and Hilton Professor of Modern Languages* (February, 1910)

Ph.B., Buchtel College; A.M., Ph.D., University of Wisconsin, 1925.

†Retired June 1947.

§Deceased 1950.

- RENA NANCY CABLE, *Associate Professor of Art* (1927)
B.E., M.Ed., University of Akron, 1931.
- RAY CAMPBELL, *Instructor in Education* (1947)
B.A.Ed., M.A.Ed., University of Akron, 1948.
- ABRAHAM CANTOR, *Assistant Professor of Bacteriology* (1949)
B.A., M.A., Ph.D., University of Pennsylvania, 1940.
- ANNA BELLE CHALFANT, *Assistant Professor of French* (1947)
B.A., Ohio State University; M.A., Middlebury College, 1934.
- ERNEST H. CHERRINGTON, JR., *Dean of Buchtel College of Liberal Arts and Professor of Astronomy* (August, 1948)
B.A., M.S., Ohio Wesleyan University; Ph.D., University of California, 1935.
- FRANCES CLARK, *Instructor in Accounting* (1946)
B.S., University of Akron; M.Ed., University of Pittsburgh, 1946.
- KENNETH COCHRANE, *Director of Athletics and Associate Professor of Physical Education* (1948)
B.E., University of Akron; M.Ed., University of Pittsburgh, 1941.
- WALTER A. COOK, *Buchtel Professor of Chemistry* (1926)
B.A., M.A., Ph.D., University of Cincinnati, 1924.
- GERALD CORSARO, *Assistant Professor of Chemistry* (1948)
B.S., Fenn College; M.S., Ph.D., Western Reserve University, 1944.
- †BEATRICE S. COUNTS, *Assistant Professor of Home Economics* (1929)
B.A., Ohio Wesleyan University; B.S., Simmons College; M.S., Columbia University, 1926.
- BETTE DANEMAN, *Instructor in Political Science* (1949)
B.A., Western Reserve University; M.A., Brown University, 1949.
- E. O. DAVIDSON, *Instructor in Marketing and Salesmanship* (February, 1947)
B.S., Grove City College; M.S., Temple University, 1940.
- EMILY DAVIS, *Professor of Art* (1945)
B.A., Ohio State University; M.A., Columbia University, Teachers College; Ph.D., Ohio State University, 1936.
- RICHARD C. DAVIS, *Instructor in Mathematics* (1946)
B.S.Ed., University of Akron, 1938.
- HARMON O. DEGRAFF, *Professor of Sociology and Chairman of the Division of Social Sciences* (1930)
B.A., M.A., State University of Iowa; Ph.D., University of Chicago, 1926.
- JOHN DENISON, *Alumni Secretary and Director of Alumni and Public Relations*
University of Akron.
- WALDO DEVORE, *Instructor in Physics* (1950)
B.S., M.S., Ohio University, 1950.
- HJALMER W. DISTAD, *Professor of Education* (1934)
B.S.Ed., M.A., Ph.D., University of Minnesota, 1926.
- HOWARD M. DOUTT, *Professor of Secretarial Science* (February, 1926)
B.A., University of Akron; M.A., University of Chicago, 1934.
- CHARLES DUFFY, *Pierce Professor of English Literature* (1944)
Ph.B., University of Wisconsin; M.A., University of Michigan; Ph.D., Cornell University, 1939.
- THEODORE DUKE, *Associate Professor of Latin and Greek* (1946)
B.A., University of Akron; M.A., Western Reserve University; Ph.D., Johns Hopkins University, 1946.
- ELMER ENDE, *Associate Professor of Music* (1930)
B.Mus., American Conservatory of Music, Chicago; M.A., Ohio State University, 1930.
- HOWARD R. EVANS, *Dean of the College of Education and Professor of School Administration* (1929)
B.A., Indiana State Teachers College; M.A., Columbia University; Ph.D., Northwestern University, 1930.
- THOMAS EVANS, *Assistant Football Coach and Instructor in Physical Education* (April, 1948)
B.A., College of Wooster, 1935.

†On Leave February 1, 1951 to June, 1951.

- ROBERT FERGUSON, *Special Instructor in Music* (1946)
B.Mus., University of Pittsburgh, 1939.
- *HARRY FLEAK, *Instructor in Political Science* (1948)
A.B., A.M., Columbia University, 1948.
- ELDORA FLINT, *Associate Professor of Secretarial Science* (1929)
B.E., University of Akron; M.S.Ed., Syracuse University, 1935.
- VAUGHN WILBUR FLOUTZ, *Associate Professor of Chemistry* (1941)
B.A., Olivet College; M.A., Ph.D., University of Colorado, 1932.
- OMER R. FOUTS, *Associate Professor of Physics* (1926)
B.A., Wittenberg College; M.A., Ohio State University, 1925.
- *MRS. ARDATH FRANCK, *Instructor in Speech* (1946)
B.S.Ed., M.A., Kent State University, 1947.
- DONFRED H. GARDNER, *Dean of Students and Professor of History* (1924)
B.A., M.A., Princeton University, 1923.
- JAMES W. GLENNEN, *Associate Professor of Modern Languages* (1934)
B.A., University of Akron; M.A., Western Reserve University; Ph.D., University of Pennsylvania, 1943.
- DENNIS GORDON, *Associate Professor of Accounting* (1946)
B.A., M.B.A., University of Chicago, 1938. C.P.A., Ohio, 1947.
- *PETER GRANDE, *Instructor in Chemistry* (1946)
B.S., University of Akron, 1946.
- FRED S. GRIFFIN, *Professor of Mechanical Engineering* (1921)
M.E., Ohio State University, 1911; P. E., Ohio.
- OSSIAN GRUBER, *Instructor in Business Administration* (1946)
B.A., University of Minnesota; M.B.A., Northwestern University, 1928.
- GORDON HAGERMAN, *Assistant Dean of Students* (July, 1941)
B.A., University of Akron, 1941.
- E. K. HAMLEN, *Associate Professor of Coordination* (March, 1946)
B.M.E., University of Akron, 1928; P.E., Ohio.
- RICHARD HANSFORD, *Acting Adviser of Men* (August, 1949)
B.A.Ed., University of Akron, 1949.
- MRS. PHYLLIS HARDENSTEIN, *Instructor in Speech* (February, 1947)
B.A., University of Akron, 1946.
- LESLIE P. HARDY, *Director of Adult Education, Professor of Adult Education and Vice President in Charge of Finance* (1934)
B.S.Ed., Kent State University; M.S.Ed., University of Akron, 1935.
- ROBERT W. HENDERSON, *Assistant Professor of Psychology* (1949)
B.A., Miami University; M.A., University of Akron; Ph.D., University of Kentucky, 1949.
- ELIZABETH J. HITTLE, *Instructor in Speech* (1950)
B.S.Ed., University of Akron; M.A., Kent State University, 1949.
- IRENE HORNING, *Instructor in Biology* (1946)
B.S., Western Reserve University, 1934.
- WILLIAM HOUGHTON, *Head Football Coach and Assistant Professor of Physical Education* (April, 1948)
B.A., Ohio Wesleyan University, 1933.
- †FRED F. HOUSEHOLDER, *Professor Emeritus of Physics* (1918)
B.A., M.A., University of Wisconsin, 1916.
- JOHN HULL, *Instructor in English* (1946)
B.A., University of Akron, 1936.
- PAUL O. HUSS, *Associate Professor of Electrical Engineering* (January, 1941)
B.S.Ed., B.S.E., M.S.E., Sc.D., University of Michigan, 1935; P.E., Ohio.
- *GEORG IGGERS, *Instructor in German* (1948)
B.A., University of Richmond; M.A., University of Chicago, 1945.
- DONATO INTERNOSCIA, *Associate Professor of Modern Languages* (1938)
B.A., Broadview College; M.A., Ph.D., Northwestern University, 1938.
- ROBERT T. ITTNER, *Associate Professor of Modern Languages* (1950)
B.A., Ph.D., University of Illinois, 1937.

*Resigned 1950.

†Retired June 1950.

- EDWARD W. JONES, *Assistant Professor of Geography* (January, 1944)
B.S., Western Reserve University; M.A., Kent State University, 1940.
- *GERTRUDE KAIN, *Instructor in Home Economics* (1947)
B.A., University of Akron, 1943.
- JACK KAMINSKY, *Instructor in Philosophy* (1950)
B.S., City College of New York; M.A., Ph.D., New York University, 1950.
- MRS. H. LOUISE KATZ, *Instructor in Zoology* (1947)
B.S., M.A., Ohio State University, 1947.
- *ALICE KAUFFMAN, *Assistant Professor of Home Economics* (1948)
B.A., University of Wisconsin; M.S., Iowa State College, 1944.
- MRS. MARY KEATING, *Adviser of Women* (1949)
B.S. in Sec. Sc., University of Akron, 1936.
- DON A. KEISTER, *Professor of English and Director of the Introductory Course in the Humanities* (1931)
B.A., M.A., University of Akron; Ph.D., Western Reserve University, 1947.
- *SAMUEL KELLY, *Instructor in Physics* (1948)
B.S., Knox College, 1930; M.A., New York State College for Teachers, 1940.
- DAVID KING, *Associate Professor of Political Science* (1927)
B.A., Maryville College; M.A., University of Chicago, 1925.
- MRS. MARY KONSTAND, *Instructor in Secretarial Science* (1946)
B.S.Ed., University of Akron; M.S., Boston University, M.S., University of Akron, 1948.
- WALTER C. KRAATZ, *Professor of Biology* (1924)
B.A., University of Wisconsin; M.A., Ph.D., Ohio State University, 1923.
- LUCILLE D. LAMKIN, *Associate Professor of Physical Education* (1943)
B.S.Ed., M.A., Ohio State University, 1934.
- R. D. LANDON, *Dean of the College of Engineering and Professor of Civil Engineering* (February, 1946)
C.E., M.S., University of Cincinnati, 1927; P.E., Texas and Ohio.
- EBBA LARSON, *Assistant Registrar* (August, 1926)
University of Akron.
- DOROTHY LAUBACHER, *Assistant Professor of Home Economics* (1950)
B.S., M.A., Ohio State University, 1941.
- ERNEST R. LAWRENCE, *Assistant Professor of Political Science* (February, 1950)
B.S., Columbia University; B.A., M.A., Syracuse University, 1948.
- WARREN W. LEIGH, *Professor of Commerce and Business Administration and Chairman of the Division of Applied Arts* (1926)
B.A., University of Utah; M.B.A., Ph.D., Northwestern University, 1936.
- CLARENZ LIGHTFRITZ, *Special Teacher of Piano* (November, 1941)
Bowling Green State University; private instruction with Ernest White and Miss Rena Wills.
- EMMA D. LINDSEY, *Instructor in Physics* (1950)
M.A., Edinburgh University in Scotland; M.A., Ohio State University, 1950.
- WILL LIPSCOMBE, *Associate Professor of Mathematics* (1921)
B.S., Florida College; M.S., Ohio State University, 1926.
- BERNARD S. LOGAN, *Assistant Professor of History* (1949)
B.A., Bridgewater (Va.) College; M.S., Ph.D., University of Wisconsin, 1949.
- DANIEL LOMAZ, *Instructor in Electrical Engineering* (1948)
B.E.E., Fenn College, 1947.
- §BURDETTE LOWE, *Instructor in Mathematics* (1947)
B.S., Montana State College; M.S., University of Colorado, 1925.
- STEWART MCKINNON, *Assistant Professor of Commerce* (1949)
B.A., M.A., University of Wisconsin, 1941.
- †JAMES McLAIN, *Instructor in Economics* (1946)
B.A., University of Akron; M.A., Western Reserve University, 1942.
- ANDREW MALUKE, *Assistant Professor of Physical Education and Assistant Coach of Football* (February, 1946)
B.S. in Ed., University of Akron; M.A., Kent State University, 1949.

*Resigned 1950.

§Deceased 1950.

†On leave academic year 1950-51.

- *DOROTHY MARTY, *Instructor in Spanish* (1946)
B.A. in Ed., M.A. in Ed., University of Akron, 1948.
- DORIS MATHIAS, *Assistant to the Adviser of Women* (1950)
B.A., University of Akron, 1950.
- MARGARET EVELYN MAUCH, *Associate Professor of Mathematics* (1945)
B.S., Huron College; M.S., Ph.D., University of Chicago, 1938.
- *MRS. HELEN METZ, *Instructor in Modern Languages* (1945)
B.A., Smith College, 1920.
- **WILLIAM MUIR, *Assistant Football Coach and Instructor in Physical Education* (1948)
B.S., Springfield College, Mass., 1939.
- RAYMOND J. NELSON, *Messenger Professor of Philosophy and Chairman of the Division of Humanities* (1946)
B.A., Grinnell College; Ph.D., University of Chicago, 1949.
- JAY L. O'HARA, *Professor of Economics* (January, 1934)
B.A., University of Michigan; Ph.D., University of Minnesota, 1927.
- †MRS. VIRGINIA OLIVO, *Assistant Professor of Economics* (February, 1946)
B.S., University of Akron; M.S., Ph.D., University of Chicago, 1950.
- MRS. CHARLOTTE PACKAN, *Instructor in Art* (1946)
B.S., University of Akron; M.A., Western Reserve University, 1940.
- MRS. HELEN PAINTER, *Assistant Professor of Education* (1945)
B.A., M.A., Ed.D., Indiana University, 1941.
- WILLIAM I. PAINTER, *Associate Professor of Education* (1945)
B.A., Oakland City College; M.A., Ph.D., Indiana University, 1933.
- HELEN PARK, *Instructor in Biology* (1947)
B.S., Ottawa University; M.A., Nebraska University, 1923.
- IVAN PARKINS, *Instructor in Political Science* (1948)
B.S., United States Naval Academy; M.A., University of Chicago, 1948.
- VIRGIL PARMAN, *Professor of Music* (1948)
B.A., Kansas Wesleyan; M.M.Ed., Northwestern University, 1942.
- EDWARD PAUL, *Instructor in English* (February, 1947)
B.A., University of Akron, 1947.
- †ROBERT H. PEALY, *Assistant Registrar* (February, 1946)
B.S. in Sec. Sc., University of Akron, 1937.
- OMAR PEREZ, *Instructor in Spanish* (1950)
B.A., Ohio University; M.A., University of Nebraska, 1948.
- W. M. PETRY, *Associate Professor of Mechanical Engineering* (1946)
B.S.M.E., University of Missouri, 1937. P.E., Ohio.
- WILLIAM D. PLANT, Jr., *Assistant to the Public Relations Director* (1950)
B.A., University of Akron, 1944.
- JOHN J. POTTINGER, *Instructor in Education* (1949)
B.S., University of Edinburgh; M.S.Ed., University of Akron, 1950.
- MRS. RUTH PUTMAN, *Assistant Professor of English* (1934)
B.A., Howard College; M.A., Western Reserve University, 1938.
- RUTH MARGUERITE RAW, *Assistant Professor of English in the College of Engineering* (1929)
B.A., M.A., Hiram College; M.A., Columbia University, 1924.
- ALVIN M. RICHARDS, Jr., *Assistant Professor of Civil Engineering* (1949)
B.C.E., University of Akron; M.S., Harvard University, 1949.
- DALLAS RIDDLE, *Instructor in Statistics and Business Administration* (1949)
B.S. in Bus. Adm., University of Akron; M.B.A., Harvard Business School, 1943; L.L.B., Western Reserve University, 1949.

*Resigned 1950.

†On leave to September 1, 1951.

**Resigned 1951.

- MABEL RIEDINGER, *Associate Professor of Education* (February, 1947)
B.A., Mt. Union College; M.A., University of Chicago; Ed.D., Teachers College, Columbia University, 1946
- EDGAR C. ROBERTS, *Assistant Professor of English* (1926)
B.S.Ed., M.A., Ohio State University, 1924.
- CLARA G. ROE, *Associate Professor of History* (1947)
B.A., University of Michigan; M.A., University of Chicago; Ph.D., University of Michigan, 1943.
- CECIL ROGERS, *Treasurer* (1932)
B.S., University of Akron, 1932.
- CHARLES ROGLER, *Associate Professor of Sociology* (1949)
B.A., M.A., University of Michigan; Ph.D., University of Kansas, 1935.
- MRS. MARGARET F. ROGLER, *Assistant Professor of Marketing* (1948)
B.S., University of Nebraska; M.S., University of Denver, 1944.
- LOUIS ROSS, *Assistant Professor of Mathematics* (February, 1946)
B.S., B.A., M.A. in Ed., University of Akron, 1939.
- RAY H. SANDEFUR, *Associate Professor of Speech* (1950)
B.A., B.S.Ed., Emporia State Teachers College; M.A., University of Colorado; Ph.D., State University of Iowa, 1950.
- WILLIAM F. SCHLENK, *Associate Professor of Civil Engineering* (1948)
B.S.C.E., M.S.C.E., State University of Iowa, 1948. P.E., Ohio.
- RICHARD H. SCHMIDT, *Registrar and Professor of Chemistry* (April, 1918)
B.A., Wesleyan University; M.A., Columbia University, 1915.
- GWENDOLYN SCOTT, *Assistant Professor of Health and Physical Education* (1949)
B.S.Ed., Bowling Green State University; M.A., Ohio State University, 1948.
- FREDERICK S. SEFTON, *Professor of Physical Education* (1915)
B.S., Colgate University; M.Ed., Harvard University, 1925.
- SAMUEL SELBY, *Ainsworth Professor of Mathematics and Chairman of the Division of Natural Science* (1927)
B.A., M.A., University of Manitoba; Ph.D., University of Chicago, 1929.
- MRS. LUCY T. SELF, *Assistant Professor of Secretarial Science* (February, 1933)
B.A., Ohio Wesleyan University, 1920.
- *PHILIP S. SHERMAN, *Assistant Dean of Students* (August, 1936)
B.A., University of Akron, 1936.
- ROY V. SHERMAN, *Professor of Political Science and Director of the Introductory Course in Social Science* (1929)
B.A., M.A., Ph.D., State University of Iowa, 1927.
- KENNETH F. SIBILA, *Professor of Electrical Engineering* (February, 1940)
B.S.E.E., M.S.E.E., Case Institute of Technology, 1937. P.E., Ohio.
- FRANK SIMONETTI, *Assistant Professor of Business Administration* (February, 1942)
B.S., University of Akron; M.B.A., Boston University, 1941.
- HARRY A. SMITH, *Associate Professor of Physical Education* (1928)
B.E., M.Ed., University of Akron, 1929.
- HENRY SMITH, *Assistant Professor of Music Education* (1947)
B.M., Illinois Wesleyan; M.A., Carnegie Institute of Technology; Ed.D., Teachers College, Columbia University, 1949.
- PAUL C. SMITH, *Associate Professor of Electrical Engineering* (1925)
B.S.E.E., Purdue University, 1917. P.E., Ohio.
- †ALBERT I. SPANTON, *Dean Emeritus of Buchtel College of Liberal Arts*
Ph.B., Buchtel College; M.A., Harvard University; Litt.D., University of Akron, 1988.
- JOHN F. STEIN, *Special Teacher of Voice* (1933)
Private instruction with Herbert Witherspoon, Enrico Rosati, and Maria Kurenko.
- WILLIAM J. STEVENS, *Instructor in English* (1950)
B.A., M.A., Dalhousie University, Halifax, N. S., 1939.

*Resigned 1950.

†Retired June 1948.

- THOMAS SUMNER, *Instructor in Chemistry* (1950)
B.S., Yale University, February, 1946.
- ERNEST A. TABLER, *Assistant Director of Adult Education and Assistant Professor of Mathematics* (1935)
B.S., Kent State University; M.A., Western Reserve University, 1933.
- PHILIP TEAGLE, *Veteran Coordinator in the Registrar's Office* (August, 1949)
B.S., University of Akron, 1949.
- MRS. HELEN S. THACKABERRY, *Assistant Professor of English* (February, 1940)
B.A., M.A., State University of Iowa, 1937.
- ROBERT E. THACKABERRY, *Associate Professor of English* (1938)
B.A., M.A., Ph.D., State University of Iowa, 1937.
- ERNEST R. THACKERAY, *Associate Professor of Physics and Head of the Department* (1949)
B.A., M.A., University of Saskatchewan; Ph.D., University of Wisconsin, 1948.
- *GEORGE TOMPKINS, *Assistant Professor of Industrial Management* (1948)
B.S., M.S., University of Illinois, 1947.
- PAUL THOMPSON, *Instructor in Psychology* (1948)
B.A., Kenyon College; M.A., Western Reserve University, 1939.
- EVELYN M. TOVEY, *Associate Professor of Nursing Education* (1950)
B.S. and M.S. in Nursing, Western Reserve University, 1950.
- MRS. AUDRA TENNEY TUCKER, *Associate Professor of Secretarial Science* (1926)
B.A., University of Akron; M.A., New York University, 1936.
- PAUL E. TWINING, *Professor of Psychology* (November, 1941)
B.S., Ottawa University (Kansas); M.A., University of Kansas; Ph.D., University of Chicago, 1938.
- WAYNE TYLER, *Instructor in English* (1948)
B.A., M.A., University of Wisconsin, 1936.
- †CLARENCE R. UPP, *Associate Professor Emeritus of Mechanical Engineering* (1925)
M.E., Ohio State University, 1910. P.E., Ohio.
- ULYSSES S. VANCE, *University Editor and Associate Professor of Journalism* (1923)
B.A., State University of Iowa, 1923.
- DONALD S. VARIAN, *Associate Professor of Speech* (1934)
B.A., M.A., University of Wisconsin, 1934.
- LESTER WEINBERG, *Assistant Professor of Civil Engineering* (June, 1946)
B.C.E., University of Detroit, 1946; L.S., P. E., Ohio.
- GEORGE STAFFORD WHITBY, *Professor of Rubber Chemistry and Director of Rubber Research* (1942)
A.R.C.Sc., B.S., University of London; M.S., Ph.D., D.Sc., McGill University, 1939; LL.D., Mount Allison University, New Brunswick, Canada.
- MRS. FLORENCE N. WHITNEY, *Assistant Professor of English* (1936)
B.A., Dakota Wesleyan University; M.A., Columbia University, 1913.
- NELLIE WHITTAKER, *Special Instructor in Piano* (1945)
B.E., M.Ed., University of Akron, 1935.
- EARL R. WILSON, *Associate Professor of Mechanical Engineering* (1929)
B.M.E., Ohio State University, 1916. P.E., Ohio.
- MARY H. WILSON, *Assistant Professor of Home Economics* (April, 1943)
B.S., Iowa State College, 1932.
- MAURICE WINCE, *University Physician* (February, 1950)
B.S., University of Akron; M.D., Ohio State University, 1942.
- EUGENE WITTERS, *Assistant Professor of Music* (1941)
B.S. in Ed., Bowling Green State University, 1933.
- ALVIN C. WOLFE, *Assistant Professor of Chemistry* (October, 1942)
B.A., M.S., Ph.D., Ohio State University, 1941.

*Resigned February, 1951.

†Retired June, 1950.

WINNIGENE WOOD, Assistant Professor of Home Economics (1944)

B.S., Miami University; M.A., Teachers College, Columbia University, 1939.

PHAIDRA ZERVOS, Instructor in English (1948)

B.A., University of Akron; M.A., Columbia University, 1948.

JOHN ZIEGLER, Instructor in Accounting (February, 1947)

B.S.Ed., Kent State University; B.A., University of the Philippines; M.B.A., Ohio State University, 1940; C.P.A., Ohio, 1949.

PART-TIME FACULTY AND ASSISTANTS

(On a Temporary Basis)

MRS. EDNA ARCHER, Instructor in Art (1947)

B.E., University of Akron; M.A., Columbia University.

BARBARA BARNES, Graduate Assistant in Botany (1949)

B.S., University of Akron, 1949.

***EMERSON BATDORFF, Instructor in Journalism (1949)**

B.A., University of Akron, 1940.

MRS. MARTHA CATT, Instructor in Home Economics (1950)

B.S., Carnegie Institute of Technology, 1933.

MRS. RUTH CLAYTON, Instructor in Psychology (February, 1948)

B.A., M.A., Ohio State University; Ph.D., Western Reserve University, 1948.

GEORGE DAVERIO, Instructor in Commerce (1949)

B.S., Ohio State University; LL.B., Akron Law School, 1939.

PAUL DEWEY, Instructor in Commerce (1947)

B.S. Bus. Adm., University of Akron, 1948.

PHILIP J. DIETRICH, Instructor in Journalism (1947)

B.J., Northwestern University, 1931.

ROBERT GROTZ, Instructor in Psychology (1949)

B.S., University of Akron, 1943.

RUTH HOSTETLER, Instructor in Home Economics (November, 1949)

B.S.Ed., University of Akron, 1944.

FRANK IRELAND, Instructor in Psychology (1948)

B.A., B.D., Kenyon College; M.S., University of Michigan, 1946.

WILLIAM IRELAND, Instructor in Sociology (February, 1947)

B.S., University of Akron; M.A., Ohio State University, 1940.

JAMES JACKSON, Instructor in Journalism (1947)

B.A., Middlebury College, 1926.

ROSE MARY KRAUS, Instructor in Art (1947)

B.E., University of Akron; M.A., Columbia University, 1926.

EVAN REED, Instructor in Business Law (1946)

B.A., Juris Doctor, University of Michigan, 1933.

H. LEE ROSE, Graduate Assistant in Zoology (1950)

B.S., University of Akron, 1950.

MRS. EVELYN RUTH, Instructor in Art (1950)

B.S., University of Akron, 1948.

HELEN SULLIVAN, Instructor in Physical Education (1947)

B.E., B.A., M.A. in Ed., University of Akron, 1944.

MRS. B. EVANGELINE WITZEMAN, Associate Professor of Psychology (1942)

B.S., M.S.Ed., University of Akron; Ph.D., Western Reserve University, 1940.

*Resigned December 31, 1950.

LIBRARY

- DOROTHY HAMLEN, *Librarian and Professor of Bibliography* (February, 1937)
B.A., University of Akron; B.S.L.S., Western Reserve University, 1942.
- GENIE J. PRESTON, *Associate Professor of Bibliography* (1939)
B.A., Northwestern University; M.A., University of Illinois, 1936.
- MRS. LOIS MYERS, *Assistant Professor of Bibliography* (1946)
B.A., Wittenberg College; B.S.L.S., Carnegie Institute of Technology, 1939.
- ZOLA JONES, *Assistant Professor of Bibliography* (1946)
B.A., M.A., Boh Jones College; B.S.L.S., Western Reserve University, 1946.
- MRS. MARTHA SEVERYN, *Instructor in Bibliography* (1945)
B.A., University of Akron, 1945.
- PAULINE FRANKS, *Instructor in Bibliography* (April, 1950)
B.S.Educ., Kent State University; B.S.L.S., Western Reserve University, 1940.
- BETTY J. CLINEBELL, *Library Assistant in Charge of Science and Technology Library* (July, 1949)
B.S., University of Akron, 1949.
- MRS. RUTH HANSON, *Library Assistant in Charge of Reserve Room* (August, 1949)
B.A., University of Akron, 1949.
- MRS. ADDIE MITCHELL, *Library Assistant in Charge of Education Library* (1949)
(1949)
B.S.Ed., Kent State University, 1949.
- BILLIE G. MEESE, *Library Assistant in Charge of Audio-Visual Aids* (1948)
B.S., University of Akron, 1948.
- †MRS. BARBARA CLARK, *Library Assistant in Catalog Department* (July, 1950)
B.A., University of Akron, 1950.
- NORMA SPICER, *Clerical Assistant in Catalog Department* (1948)
- JOANNE RETT, *Clerical Assistant in Order Department* (1949)
- LUCILLE PHILPOTT, *Clerical Assistant in Serials Department* (1948)
- MRS. WILMA BLANKENSHIP, *Secretary to the Librarian* (1949)

UNIVERSITY HEALTH SERVICE

- MAURICE WINCE, M.D., *University Physician*
- MRS. EMMA HENRY, *Nurse*

DIRECTING TEACHERS FOR SUMMER SESSION, 1950

MISS DEAN BOYD	Barberton High School
HERBERT BRACKEN	Central High School
EMIL D'ZURIK	Barberton High School
L. L. EVERETT	Barberton High School
JOSEPHINE FLICKINGER	Barberton High School
WILLIAM GOOD	Barberton Elementary
HARLAND HORTON	Central High School
MRS. EDNA C. KIDWELL	Central High School
HARRY E. KUNTZ	Central High School
PAUL G. LYON	Spicer Elementary School
NORA SANTROCK	Barberton Elementary School
DONALD D. SCHONER	Central High School
JOHN VAN SICKLE	Central High School
L. O. WEISS	Central High School

†On leave February 1, 1951 to June 1, 1951.

**TEACHERS IN SPICER DEMONSTRATION
LABORATORY SCHOOL**

MARY LOUISE BEVERLY .....Prin.	CATHERINE REDINGER
MILDRED COLLIS .....2nd Gr.	.....Kindergarten
CAROLINE FRENCH .....4th Gr.	MARY REDINGER .....3rd Gr.
VIRGINIA GILLOOLY .....8th Gr.	MAUDE RUMSEY .....6th Gr.
VIRGINIA GOSON .....6th Gr.	EULALIE SAUVE .....4th Gr.
ELMER HOFFMAN .....7th Gr.	DOROTHY SCHORLE .....2nd Gr.
GRACE ION .....5th Gr.	ANNA MAY SERUCH .....5th Gr.
ROSE KRAUS .....3rd Gr.	MARYELLEN SIMONSON .....Music
BESS LEVENSON .....1st Gr.	FAN WALCOTT .....8th Gr.
JEANNETTE MARSH .....L.S.S.	LUCILLE WORKMAN .....U.S.S.
OLGA ZEMLANSKY .....7th Gr.	

DIRECTING TEACHERS, 1950-1951

ROSE AHERN .....Portage Path	VERNON S. CULP .....West
MARGARET ALLEN .....West	LAJOIE DAUM .....Springfield Twp.
FLORENCE AMREIN .....South	MRS. LAVONNE DAVIS .....Lane
DAVID APPELBY .....Buchtel	PHILIP DIENOFF .....Garfield
JAMES APPELBY .....Central	MRS. MARY DITTEMORE.....Rankin
MRS. FRANCES BAKER.....Schumacher	FRIEDA DODSON .....Lincoln
MRS. ALTA BARBER .....Leggett	MRS. FLORENCE DOUGHERTY
OTIS J. BARNHILL .....Hower	.....Schumacher
ELIZABETH BARROW .....Robinson	HAZEL EASTERDAY .....Lane
MRS. EDNA BAUCH .....Schumacher	MARTHA EFFINGER .....Seiberling
LOUIS BAUMAN .....Kenmore	MRS. EFFIE ENGERRAND
KATHRYN BIETZ .....East	.....Margaret Park
FANNIE BIONDO .....Glover	CLINTON ENSWORTH.....Schumacher
JEAN BLAKE .....East	MRS. MARGARET ERB.....Fraunfelter
MRS. ZELLA BOEDICKER	EUNICE FACKLER .....Lincoln
.....Norton Center	HELEN FISHER .....Rankin
JOHN BOGNER .....Ellet	ANNA MAE FLINT .....Garfield
EUGENIA BOTOSHAN .....Garfield	MRS. CATHERINE FRANKS
MRS. ELSIE BOWMAN .....Glover	.....David Hill
MRS. LOUDELL BOYES, .....Garfield	MRS. LULA FRATER .....Crouse
PAUL BRYANT .....West	MRS. THELMA GRIMES .....Lane
HELEN BUCKWALTER .....Glover	RUTH HAINES .....Central
MRS. RUTH CABLE .....Mason	MRS. ELEANOR HALAS
ANITA CAHILL .....East	.....Margaret Park
GEORGE CAPES .....Central	VIDA HALL .....South
MRS. EVA CHAMBERS.....Betty Jane	LAURETTE HARRISON .....Central
MARTIN CHAPMAN .....Bryan	MRS. MARY HARVEY .....King
ROBERT COLE .....Garfield	FOREST HAWK .....Itinerant
MARGARET CONLEY .....Central	MATILDA HERMAN .....Itinerant
DONNA COOPER .....Margaret Park	MRS. NORA HUSTON .....Garfield

DIRECTING TEACHERS, 1950-51
(Continued)

MRS. IVA JAMES <i>Betty Jane</i>	MRS. ALMA SCHAMBRON..... <i>Central</i>
OLGA JOHNSON <i>East</i>	HELEN L. SCHURR <i>Lincoln</i>
MRS. PRISCILLA KING <i>Ellet</i>	MRS. DORIS SIDNELL
MRS. EVELYN KIRK... <i>Firestone Park</i>	.....<i>Cuyahoga Falls</i>
MRS. BESS KRAHL <i>Fairlawn</i>	LUTHER SMITH <i>East</i>
MIKE KRINO <i>East</i>	LEONARD SNYDER <i>Ellet</i>
ROBERT LARSON <i>South</i>	ARLENE SPAHR <i>Ellet</i>
HELEN M. LYNCH <i>Kenmore</i>	BEATRICE SPRAGUE <i>Central</i>
MRS. RUTH LYNCH <i>Harris</i>	MRS. LELA ST. JOHN <i>Bryan</i>
RUTH MAHONEY <i>Lincoln</i>	MARY STAFFORD <i>Portage Path</i>
MRS. LUCY McMURTREY	ELIZABETH STUMP <i>East</i>
..... <i>Fraunfelder</i>	HELEN SULLIVAN <i>East</i>
MRS. CATHERINE MEISNER... <i>West</i>	MRS. BURNISE TAYLOR <i>North</i>
MRS. BELLE MONAHAN... <i>Seiberling</i>	MRS. ALBERTA THOMPSON
MOULTON ORMEROID <i>Garfield</i>	.....<i>Cuyahoga Falls</i>
CLARENCE PARSELL <i>East</i>	JOSEPHINE TRAVERSO <i>Leggett</i>
MRS. MILDRED PARSONS	ROBERT E. TUCKER <i>West</i>
..... <i>Margaret Park</i>	ROBERT VERNON <i>Garfield</i>
MRS. MIRIAM PENNINGTON	WALLACE WARD <i>Hower</i>
..... <i>Garfield</i>	MRS. ELIZABETH WASHKO... <i>Leggett</i>
MRS. ANNE PETRY <i>Heminger</i>	EDWARD WEIHE <i>David Hill</i>
WILBUR PFEIFER <i>Garfield</i>	NELLIE WHITTAKER <i>Lincoln</i>
DOROTHY PRESTON <i>North</i>	PARKER WILCOX <i>North</i>
MARY PUSATERI <i>South</i>	MRS. NELL WILLIAMS <i>South</i>
CHARLES QUERRY <i>Central</i>	MRS. MARY ANN WOJNO <i>South</i>
MRS. JANE RAPP <i>Mason</i>	NELLE YODER <i>Jennings</i>
MRS. ELIZABETH RUSSELL... <i>Crouse</i>	OLGA ZEMLANSKY <i>Spicer</i>
WILLIAM SATTERLEE <i>South</i>	CHARLES ZENO <i>Jennings</i>
HARRY SCHALLER <i>Buchtel</i>	

AKRON PUBLIC SCHOOL OFFICERS
COOPERATING WITH THE COLLEGE OF EDUCATION

OTIS C. HATTON, M.A.	<i>Superintendent of Schools</i>
A. J. DILLEHAY, B.Ed., M.A.	<i>Executive Director</i>
GEORGE F. WEBER, M.A.Ed.	<i>Executive Director</i>
S. F. JAMESON, B.A., M.A.	<i>Assistant Superintendent</i>
MARY LOUISE BEVERLY, B.S.Ed., M.S.Ed.	<i>Principal of Spicer School</i>

OTHER COOPERATING SCHOOLS

FRED H. BODE, B.S.Ed., M.A.	<i>Superintendent of Schools, Cuyahoga Falls</i>
GORDON M. DeWITT, B.A., M.A.	<i>Principal, Cuyahoga Falls High School</i>
A. R. GAFFGA, B.S., M.A.	<i>Superintendent, Norton Center</i>
G. S. HAMMOND, B.A., M.A.	<i>Superintendent of Schools, Springfield Township</i>
V. H. LYNCH, M.A.	<i>Principal, Springfield Central Elementary School</i>

1950-51 EVENING SESSION FACULTY

- EDNA L. ARCHER *Art for the Grades*
B.E., University of Akron; M.A., Columbia University.
- R. P. BEASLEY *Federal Taxation*
B.A., M.A., Vanderbilt University, 1937.
- EUGENE BELL *Drawing and Rendering*
B.S. in Ed., University of Akron; Art Students League, New York.
- JAMES R. BERRY *Business Policy*
B.S. Bus. Adm., University of Akron, 1939.
- EDWARD M. CAMPBELL *Elementary Surveying*
B.S.C.E., University of Akron, 1949.
- CLIFFORD FARMER *Accounting*
B.S., University of Akron, 1950.
- ROBERT H. FARWELL *Production Management*
B.S. in M.E., Worcester Poly. Tech., 1945; M.B.A., Wharton School, University of Penna., 1949.
- ANNA MAE FLINT *Intermediate Dictation*
B.S. in Sec. Science, University of Akron; M.S., Northwestern University, 1949.
- M. A. FULLER *Engineering Drawing*
B.E.E., University of Akron, 1936.
- RICHARD GANTZ *Economics*
- LEROY V. GARVER *Money and Banking*
B.A., Baker University, 1920.
- EARL GILLELAND *Production Management*
B.A., University of Akron, 1928.
- JOSEPH GOLDIN *Empirical Equations and Nomography*
B.S.Ch.E., Wayne University, 1939.
- SAMUEL GOLDMAN *Business Law*
B.A., Miami University; LL.B., Harvard Law School, 1948.
- PAUL L. GRIFFIN *Engineering Drawing*
B.I.E. Ohio State, 1950.
- LELAND J. HANCOCK *Business Organization and Management*
B.S., West Virginia University; Litt. M., University of Pittsburgh, 1946.
- MARY HARBAGE *Elementary Education*
B.A., Ohio State University; M.A. Ohio State University, 1949.
- JEAN HARPER *Public Health Nursing*
B.A., Oberlin College, R.N., P.H.N. certificate, M. S. in Nursing, Western Reserve University, 1943.
- ROBERT E. HARTZ *Human Relations in Business and Industry*
B.A. in Ed., M.A. in Ed., University of Akron, 1947.
- R. W. HERBERICH *Insurance and Security*
B.A., Harvard College, 1943.
- ELMER C. HOFFMAN *Science for Elem. Grades*
B. A., University of Akron, 1947.
- RUTH HOFFMASTER *Spanish*
B.A., University of Akron; M.A., Language Schools of Middlebury College, 1942.
- N. C. JESSEN *Metallurgy*
Technical High School, Germany; P.E., Ohio.
- T. DONALD JOHN *Journalism*
Assistant News Editor, Akron Beacon Journal.
- CYRIL JONES *Public Speaking*
B.A., M.A. in Ed., University of Akron, 1934.

- EDWARD KARON *Psychology*
M.A., Ohio University.
- MIDA ELIZABETH KERR *Teaching of Arithmetic*
B.E., University of Akron; M.E., University of Akron, 1937.
- JOHN T. KIDNEY *Industrial Safety*
Manager, Employee Division, Goodyear Tire & Rubber Company.
- WILLIAM KURTH *German*
B.A., University of Akron, 1937.
- WILLIAM R. LANTZ *Purchasing*
University of Akron.
- MAURICE MORTON *Chemistry*
B.Sc., Ph.D., McGill University, Montreal, Canada, 1945.
- FRED W. MOYER *Bus. Org. and Management*
B.S., Ohio State University; M.A., Ohio State University; Ph.D., Ohio State University, 1949.
- GEORGE MURPHY *Plant Maintenance*
Mech. Eng., Carnegie Institute of Technology.
- GILBERT NALLEY *Introduction to Education*
B.S. in Ed., University of Akron; M.S. in Ed., University of Akron, 1934.
- MRS. BETTY J. OBLISK *Shorthand*
B.S. in Ed., University of Akron, 1947.
- WILLIAM DEWEY PLANT JR. *Fund. of Speech*
B.A., University of Akron; B.S., University of Akron, 1948.
- THOMAS M. POWERS *Business Law*
B.A., Cornell University; LL.B., Cleveland Law School, 1927.
- H. T. PROTHEROE *Figure Drawing*
B.S., University of Akron, 1941; Cleveland School of Art.
- K. L. REYNOLDS *Personnel Relations*
B.S., University of Illinois, 1927.
- MRS. EVELYN JOLLIFF RUTH *Design*
B.S., University of Akron, 1948
- GUY SMART *Business Org. and Management*
Public Accountant
- RUSSELL SMITH *Time Study*
B.S. Bus. Adm., Kent State University, 1940.
- JOHN K. SMUCKER *Auditing*
B.S. Bus. Adm., Ohio State University, 1945; C.P.A., Ohio.
- LEONA STERLEY *Shorthand*
B.S. in Sec. Science, University of Akron; M.A. in Bus. Education, New York University, 1942.
- MRS. MARY E. THORNHILL *French*
B.S., Middlebury College; Certificate d'Etudes Francaises, University of Lyon, Lyon, France, 1938.
- L. C. TURNER *Speech*
B.S., Hiram College; M.A., University of Akron, 1929.
- SUMNER VANICA *Audio-Visual Aids*
B.A., M.A. in Ed., University of Akron, 1944.
- C. W. VOBBE *Industrial Plants*
B.B.A., University of Toledo, 1935.
- MRS. BETTY WETTSTYNE *Typewriting*
B.S. in Sec. Science, University of Akron; M.B.A., University of Chicago, 1944.
- ROBERT WILSON *Radio Production*
Manager, W.A.D.C. Broadcasting Station.
- CHARLES WINSLOW *Psychology*
B.S., Wesleyan University; M.A., Ph.D., Columbia University, 1933.

RUBBER RESEARCH STAFF

G. STAFFORD WHITBY, *Professor of Rubber Chemistry, Director of Rubber Research (1942)*

A.R.C.Sc., B.S., University of London; M.S., Ph.D., D.Sc., McGill University, 1939;
LL.D., Mount Allison University, New Brunswick, Canada.

MAURICE MORTON, *Assistant to the Director of Rubber Research (October, 1948)*

B.S., Ph.D., McGill University, 1945.

PETER SALATIELLO, *Research Chemist (December, 1947)*

B.S., M.S., Holy Cross College, Worcester, Massachusetts, 1947.

NATHAN WELLMAN, *Research Chemist (July, 1947)*

B.S. Chem. Eng., Purdue University; M.S., Ohio State University, 1936.

HAROLD LANDFIELD, *Research Chemist (1948)*

B.T.C., Lowell Textile Institute, 1941.

P. E. LAUDERBACH, *Research Chemist (July, 1949)*

Allegheny College.

HOWARD STEPHENS, *Research Chemist (1950)*

B.S., M.S., University of Akron, 1950.

RESERVE OFFICERS' TRAINING CORPS

INFANTRY

- JAMES E. MALONEY, JR.**, *Professor of Military Science and Tactics (1949)*
B.S., United States Military Academy, 1931. Lieutenant Colonel, Infantry.
- LAWRENCE L. LARSEN**, *Associate Professor of Military Science and Tactics (1949)*
B.S., Michigan State College, 1937. Major, Infantry.
- ***WILFRED C. FORD**, *Assistant Professor of Military Science and Tactics (1947)*
B.S., United States Military Academy, 1942. Captain, Cavalry.
- EDWARD M. BROWN, JR.**, *Assistant Professor in Military Science and Tactics (1950)*
B.S., University of Virginia, 1948; First Lieutenant.
- ***KENNETH G. MOSSER**, *Assistant Professor of Military Science and Tactics (1949)*
Captain, Infantry.
- WAYNE H. BURKE**, *Instructor in Military Science and Tactics (1949)*
Warrant Officer Junior Grade.
- JOHN A. DUNLEAVY**, *Instructor in Military Science and Tactics (1949)*
Master Sergeant, Transportation Corps.
- ***RAYMOND W. HUGHES**, *Instructor in Military Science and Tactics (1946)*
Master Sergeant, Infantry.
- JOHN F. LINCKS**, *Assistant Instructor in Military Science and Tactics (1949)*
B.A., University of Akron, 1946. Sergeant First Class, Coast Artillery Corps.
- MICHAEL J. TROCH**, *Assistant Instructor in Military Science and Tactics (1947)*
Master Sergeant, Infantry.
- ROBERT H. HUGHES**, *Assistant Instructor in Military Science and Tactics (1948)*
Sergeant, Infantry.
- CHARLES H. LeROY**, *Instructor in Military Science and Tactics (1949)*
Sergeant, Field Artillery.

AIR

- ROBERT C. HILLIARD**, *Professor of Air Science and Tactics (1949)*
B.A., West Virginia University, 1932. Lieutenant Colonel, USAF.
- JOHN C. WRETSCHKO**, *Associate Professor of Air Science and Tactics (1948)*
Major, USAF.
- ***GEORGE J. BREINDEL**, *Associate Professor of Air Science and Tactics (1947)*
B.S., City College of New York, 1935. Captain, USAF.
- SIDNEY D. COX, JR.**, *Assistant Professor in Air Science and Tactics (1950)*
B.S., Mississippi State College, 1943. Captain, USAF.
- WILBUR W. WALTON**, *Assistant Professor of Air Science and Tactics (1949)*
Captain, USAF.
- ***GILBERT G. CANTER**, *Instructor in Air Science and Tactics (1946)*
Master Sergeant, USAF.
- DAVID T. KILEY**, *Instructor in Air Science and Tactics (1949)*
Master Sergeant, USAF.
- MORRIS E. TAYLOR**, *Administrative Assistant (1946)*
Master Sergeant, USAF.
- ***ROBERT D. TROUTMAN**, *Instructor in Air Science and Tactics (1946)*
Technical Sergeant, USAF.
- GEORGE F. HECKEL**, *Instructor in Air Science and Tactics (1950)*
Master Sergeant, USAF.
- ODES D. LOCKWOOD**, *Instructor in Air Science and Tactics (1950)*
Master Sergeant, USAF.
- ELLIS R. McDUFFEE**, *Instructor in Air Science and Tactics (1950)*
Master Sergeant, USAF.
- WILLIAM H. DENNINGTON**, *Assistant Instructor in Air Science and Tactics (1949)*
Staff Sergeant, USAF.

*Transferred 1950

COMMITTEES OF THE UNIVERSITY FACULTY

1950-1951

EXECUTIVE

Simmons, Cherrington, Evans, Hardy, Gardner, Landon, Gamble (Secretary).

COMMITTEE OF DEANS

Landon (Chairman), Evans, Gardner, Cherrington.

ADMISSION AND RETENTION

Schmidt, Gardner, Evans, Landon, Hardy, Cherrington, Simmons (ex officio).

LIBRARY

D. Hamlen, Cherrington, Bulger, Evans, Gardner, Landon.

DISCIPLINE

Simmons, Cherrington, Evans, Landon (Members ex officio: Gardner, President of the Student Council, and President of the Women's League).

EXTRA-CURRICULAR ACTIVITIES

Hagerman, Keating, Hardy, E. K. Hamlen, Distad, Lipscombe, Nelson, R. Berry, President of the Student Council, Treasurer of Student Council, President of the Women's League, President of the Evening Session Senate, one member appointed from Student Council, (Buchtelite Editor—member ex officio).

ASSEMBLY

Duffy (Chairman), Henderson, Sandefur, President of the Student Council, President of the Women's League, Student Building Manager.

CLASSIFICATION COMMITTEE

Schmidt, Gardner, Cherrington, Evans, Landon, Hardy, Griffin, Distad, Douth, Simmons (ex officio).

ADULT EDUCATION—ADVISORY

Hardy, Landon, Evans, Cherrington.

STUDENT LOANS AND GRANTS

Hardy, Hagerman, Keating.

PIXLEY SCHOLARSHIPS

Schmidt, Evans, Cherrington, Landon, Hagerman.

VISUAL AID

William Painter, E. W. Jones, Keister, Sibila, D. Hamlen, Roy Sherman, Meese.

ATHLETICS

Cochrane, Anderson, Alven, Griffin, Selby, Oldham, Jenkins, (President of Student Council—member ex officio).

FACULTY COMMITTEE ON UNIVERSITY IMPROVEMENT

Nelson (Chairman), Davidson, Glennen, E. W. Jones, Lipscombe, Roe, Weinberg.

GENERAL INFORMATION

HISTORICAL STATEMENT

The University of Akron was created as a municipal institution by an ordinance of the Akron City Council, passed on August 25, 1913. This ordinance accepted in behalf of the city the offer of the Trustees of Buchtel College to give to the city the entire plant and endowment of the college as the nucleus of a municipal university, the Council promising in behalf of the city to support properly the new institution thus created. After the transfer of property had been completed by President Kolbe and Secretary Olin for the Trustees of Buchtel College, Mayor Rockwell on December 15, 1913, together with City Solicitor Taylor accepted the deeds of transfer in behalf of the city and appointed nine citizens of Akron as members of the Board of Directors of the Municipal University of Akron.

Buchtel College, the institution thus turned over to the city of Akron, was founded in 1870 by the Ohio Universalist Convention and took its name from its most generous benefactor, Hon. John R. Buchtel, who consecrated his life and his wealth to its support. It was chartered by the Ohio Legislature in the same year as a College of Liberal Arts and first opened its doors for the admission of students in September, 1872.

By the terms of transfer to the City of Akron, provision was made that Buchtel College retain its name and identity as Buchtel College of Liberal Arts of the municipal university.

In September, 1926, by action of the Board of Directors, the name of the university was changed to The University of Akron.

The University of Akron, being supported in large part by public taxation, is entirely non-sectarian.

PRESIDENTS OF BUCHEL COLLEGE

*S. H. MCCOLLESTER, D.D., Litt.D.	1872-1878
*E. L. REXFORD, D.D.	1878-1880
*ORELLO CONE, D.D.	1880-1896
*CHARLES M. KNIGHT, Sc.D. (ad interim)	1896-1897
*IRA A. PRIEST, D.D.	1897-1901
*A. B. CHURCH, D.D., LL.D.	1901-1912
*PARKE R. KOLBE, Ph.D., LL.D.	1913-1914

PRESIDENTS OF THE UNIVERSITY OF AKRON

*PARKE R. KOLBE, Ph.D., LL.D.	1914-1925
GEORGE F. ZOOK, Ph.D., LL.D.	1925-1933
HEZZLETON E. SIMMONS, D.Sc., LL.D.	1933-

*Deceased.

ADMISSION TO THE UNIVERSITY

Students are admitted to the University by high school certificate and the placement examinations or by honorable dismissal from other colleges and universities, or if qualified by reason of maturity and experience and over 21 years of age, as adult students. See special section.

ADMISSION FROM OTHER COLLEGES

Candidates for admission with advanced standing should have transcripts (together with an honorable dismissal) sent directly from the institution last attended, to the University Registrar.

For admission, the student must be eligible to re-enter the institution from which he desires to transfer, and must have a satisfactory scholastic record.

In general, 16 credit hours a semester represent a full allowance of credit. Such evaluations and credit allowances are tentative, and depend upon a satisfactory quality of work at The University of Akron. Their validity also depends upon the completion of the course in the standard length of time.

A degree will not be granted a student entering with advanced standing from another college or university unless he spends a full year in residence and completes 32 credit hours of work, three-fourths of which must be done in the college granting the degree.

All candidates for the Baccalaureate degree must take their last year's work in The University except upon permission of their dean.

No transfer work will be accepted as credit toward the Baccalaureate degree which has been earned while the student was simultaneously enrolled in another institution as well as in The University of Akron except upon permission of the Dean of the College secured in advance of the enrolment at the other institution.

REQUIREMENTS FOR DEGREES

Students on the full-time basis must present 128 semester hours with necessary quality points. Engineering students must present 155 semester hours (142 during the accelerated program) with the necessary quality points.

Candidates for a degree are required to file an application with the Registrar by March 1 of their senior year, and are required to attend the baccalaureate and commencement exercises.

DEGREE WITH DISTINCTION

Students who have an average grade of 90 per cent, (or a quality point ratio of 3.25) or better over all work taken during the four undergraduate years shall be graduated with distinction. Students who transfer from another college must maintain a quality point ratio of 3.25 or better at The University of Akron. The words "with distinction" shall appear upon the diploma and the commencement program.

STANDARDS

The University of Akron maintains high academic standards and is accredited by the North Central Association of Colleges and the Ohio College Association. It is a member of the American Council on Education, the Association of American Colleges, the Association of Urban Uni-

versities, the American Association of Colleges for Teacher Education and the American Society for Engineering Education. It is included in the approved list of the Association of American Universities for admission of graduates to graduate and professional schools, and is approved for pre-medical work by the American Medical Association. The Committee on Professional Training of the American Chemical Society has approved the work of The University of Akron in the field of chemistry for the professional training of chemists. Curricula in Civil, Electrical, and Mechanical Engineering (including an Industrial option) are accredited by the Engineers' Council for Professional Development. Women graduates of the University with approved degrees (requiring at least two years or a minimum of 60 credit hours of non-professional, non-technical work which would be credited toward an A.B. degree) are eligible to membership in the American Association of University Women.

BUILDINGS AND EQUIPMENT

The University campus lies on Buchtel Avenue at the head of College Street, only a short distance from the city's business center.

Buildings on the campus include Buchtel Hall, in which are located the administration offices and eight classrooms; Carl F. Kolbe Hall, housing Bierce Library; Knight Chemical Laboratory; Crouse Gymnasium; R.O.T.C. Armory; Curtis Cottage, housing the department of home economics, including laboratories and the University Health Service; Olin Hall, occupied by the department of biology, with laboratories; Simmons Hall, housing the departments of commerce, secretarial science, political science and physics as well as some laboratories of the College of Engineering; and the central heating plant.

The University Student Building, first occupied in 1939, was constructed by means of a loan and grant from the Public Works Administration. It contains dining room facilities, a little theatre with lighting equipment, carpenter shop, and dressing rooms, offices of student publications, meeting and game rooms, and lounge.

The new Chemical Laboratory named Knight Hall in memory of Dr. Charles M. Knight is a brick faced reinforced concrete structure with full basement, three stories, containing a gross total floor area of approximately 43,600 square feet. It was completed in 1950 and includes six classrooms, eleven laboratories for student instruction, rubber mill, curing and physical testing rooms, plastics laboratory, chemical supplies storage rooms and combined office-private laboratories for the staff.

The new Engineering Building, completed in 1949 and named Ayer Hall in honor of Dean Emeritus Frederic E. Ayer, is a brick and stone faced reinforced concrete structure with full basement and three stories containing approximately 40,000 square feet. It provides all classroom, laboratory and office facilities for the College of Engineering except certain Mechanical Engineering laboratories located in Simmons Hall.

The Music Department is housed in a two-story building at 277 East Center Street. This building contains two large rooms for orchestra, band, and choral groups on the first floor, and a number of small rooms on the second floor for offices, studios, and practice rooms.

T-2 is a temporary building, a reconstructed army barracks which was moved here in 1947 from Wright Field, Dayton, under the Federal Program. The building contains faculty offices as well as the Office of the Dean of the College of Education and the Office of the Director of Alumni and Public Relations.

The Quonset Hut on the campus was erected in 1946 in order to accommodate the Bookstore, the Air ROTC, and some faculty offices.

The facilities of Bierce Library are open to the citizens of Akron.

The athletic field is situated about two blocks from the campus. The intercollegiate contests in football are held at the Akron Rubber Bowl or the athletic field, and basketball games are played at Goodyear Gymnasium. The new Athletic Service Building erected in 1949 at Buchtel Field is a modern facility for servicing the various athletic teams. This building is also used in conjunction with the physical education program.

BIERCE LIBRARY

The University Library, known as Bierce Library in recognition of a bequest received from General L. V. Bierce in 1874, occupies Carl F. Kolbe Hall. In 1949 an annex which doubled the floor and stack space was added. The total book collection is 85,684, and 602 periodicals are currently received. The Audio Visual Aids department offers complete service for films and records.

THE TESTING LABORATORY

The Testing Laboratory was created January 1, 1914, by a proposal made by the Board of Directors and accepted by the Akron City Council. Until November, 1930, it was known as the Bureau of City Tests. Much of the city's chemical and physical testing work is done in the laboratory.

GOVERNMENT LABORATORIES

Early in 1944, the University, at the request of the Rubber Director, assumed, under contract with Rubber Reserve Company, the management of a Government-owned pilot plant and evaluation laboratory on West Wilbeth Road. The institution was dedicated to the service of the nation on June 28, 1944. It now consists of seven buildings housing equipment for the production and testing of experimental rubbers in connection with research studies designed to increase the ease of fabricating rubber goods and improving their quality.

In the pilot plant are 16 five gallon, 12 twenty gallon, 2 eighty gallon and 2 five hundred gallon reactors in which batches of synthetic rubber latex may be made. In addition, there is a battery of 12 twenty gallon reactors for continuous production of latex. All auxiliary equipment necessary to convert the rubber into dry, solid material is also installed. Well equipped physical and chemical laboratories are provided for evaluating the quality of experimental rubbers and, through research studies, for perfecting better methods of determining their quality. Physical tests are conducted not only at room temperatures but at elevated and reduced temperatures.

For testing at low temperatures, there are two cold rooms: one of about 80 square feet for testing at or around minus 10 degrees F., another of about 200 square feet which can be cooled to minus 55 degrees F.

EXTRA-CURRICULAR AFFAIRS

The University of Akron offers a well-rounded student program of extra-curricular activities through such organizations as the Student Council, Women's League, Y.W.C.A., The Akron Buchtelite (student newspaper), athletics for men and women, departmental clubs, sororities and fraternities. The program is facilitated by the Student Building lounge, cafeteria, dining room, recreation rooms and publication offices.

INTRAMURAL SPORTS

All day students carrying eight credit hours or more may participate in intramural athletics. The sports are conducted for everyone with the aim of providing wholesome recreation and physical exercise. To attain this end the department makes an effort to have each student in the University enroll in one or more of the scheduled activities.

INTERCOLLEGIATE ATHLETICS

Intercollegiate sports are under the administration of a Faculty Committee appointed by the President.

ATHLETIC INJURIES

Students training for, or participating in, athletic competition, do so voluntarily and assume the risks incident thereto. The University assumes no legal responsibility or obligation to meet the expense of the treatment of injuries received by athletes while training for, or participating in, intramural or intercollegiate sports, unless the treatment is first authorized by the University medical officer for athletes.

STUDENT ACCIDENTS

The University of Akron assumes no responsibility for accidents to students which may occur incident to attendance at, or participation in, classroom, gymnasium, or laboratory work.

GYMNASIUM LOCKERS

Gymnasium lockers are obtained by depositing \$1 at the office of the Treasurer of the University.

THE UNIVERSITY HEALTH SERVICE

To provide for the student body necessary phases of health promotion not included in the field of physical education, the University Health Service has been established. Complete physical records and a follow-up system are maintained. The medical examinations by the Health Service and the posture and physical efficiency tests by the Department of Physical Education are combined. The University Physician is in his office in Curtis Cottage one hour each day. A registered nurse is on duty daily.

EMPLOYMENT FOR STUDENTS

The Office of the Dean of Students serves as a clearing center for employment opportunities which come to the University. Students who need some employment to meet expenses should make application at this office.

REGULATION OF STUDENT OUTSIDE WORK

It is the responsibility of the student to report to his Dean the number of hours he is employed and to report any significant changes in the number of hours of employment. A student may be subject to disciplinary action by his Dean for failure to comply with the above.

DISCIPLINE

The University reserves the right to penalize any student whose conduct at any time is in its judgment detrimental to the institution.

GENERAL OBJECTIVES OF THE UNIVERSITY OF AKRON

The University of Akron is a municipal university supported in large measure by city taxes. It, therefore, aims to devote its efforts to the work of higher education especially for the people of Akron.

The University of Akron has as its aims:

To give students a survey of the chief fields of knowledge and thus acquaint them with the world of nature and human life; to develop their ability to make sound judgments and to profit from experience; to arouse their intellectual curiosity and stimulate their scholarly growth; to aid them to develop their physical well-being; to help them to appreciate beauty in all its forms and thus to furnish them with resources for enjoying their leisure hours.

To develop and strengthen in students a sense of social responsibility so that they have a proper regard for the rights of others; to prepare them for a sane and loyal family life and an active and intelligent citizenship.

To prepare students for greater social and individual effectiveness in public service, commerce and industry, and the professions; for the professions of teaching and engineering; for entering the professional schools of law, medicine, and dentistry, and for advanced study in other fields; for careers in art, music, home economics, and secretarial science.

In the attainment of these objectives, the University of Akron proposes to utilize its available resources to the utmost. Students who are admitted will be expected to have a satisfactory degree of intellectual maturity, and adequate scholastic preparation along with the necessary aptitudes and interests. It is also expected that their educational objectives will harmonize with those of the University.

The University has further aims:

To provide expert advice for various civic and educational agencies; to furnish a scientific testing service for commerce and industry; to offer educational programs for the dissemination of culture and knowledge.

ORGANIZATION OF THE UNIVERSITY

I. THE GENERAL COLLEGE

The purpose of the General College is two-fold: (1) to furnish a general cultural education for (a) students who plan to enter an Upper College and secure an academic degree, and (b) students who desire approximately two years of general education, but who do not desire or are unable to enter an Upper College; (2) to furnish pre-professional courses or terminal courses of an occupational nature for students who do not desire or are unable to enter an Upper College.

II. THE UPPER COLLEGES

After completion of the work in the General College, the student may begin work in his field of concentration in one of the Upper Colleges.

BUCHTEL COLLEGE OF LIBERAL ARTS

The departments of the Liberal Arts College are grouped in four divisions as follows:

<i>Humanities</i>	<i>Social Sciences</i>	<i>Natural Sciences</i>	<i>Applied Arts</i>
Latin and Greek	Economics	Biology	Art
Literature	History	Chemistry	Commerce
Modern Languages	Political Science	Mathematics	Home Economics
Music	Sociology	Physics	Journalism
Philosophy			Secretarial Science
Speech			

THE COLLEGE OF ENGINEERING

The departments of the College of Engineering are:

Civil Engineering Electrical Engineering Mechanical Engineering

THE COLLEGE OF EDUCATION

There are no divisions in the College of Education, but preparatory courses are offered in a variety of teaching fields.

Art	Home Economics	Physical Education
Commerce	Kindergarten	Psychology
Elementary	Music	Nursing Education
High School	Primary	

GRADUATE STUDY

In certain colleges and departments—especially in the College of Education—opportunity is offered properly qualified persons to study for the Master's degree. In some of the departments graduate courses given in connection with the work in Adult Education have been arranged on a rotating plan to enable candidates to meet the requirements for a major or a minor.

For details as to the colleges and departments which offer courses of graduate rank see the catalog material under the various colleges and departments and also the section on graduate study.

DEGREES

For completion of his work in the Upper College a student is expected to have taken at least 50%—and it is desirable that he take not more than 75%—of his total work (outside the 36 to 42 hours of required work in general education) in the major division.

A statement of degrees conferred upon completion of courses of study is given under the descriptive matter of each college. To receive a second bachelor's degree in course from The University of Akron, the student must complete all requirements for the degree with a minimum of 32 semester hours of work not counted for the first degree.

DIVISION OF ADULT EDUCATION

THE EVENING SESSION

All colleges of the University offer courses in the evening. Credit is given toward a degree for regularly prescribed subjects. Full-time or part-time schedules are possible for new and former students in degree, diploma, and certificate courses. Candidates for a diploma or degree must satisfy the entrance requirements of the University.

THE SUMMER SESSION

A Summer Session of six weeks furnishes instruction to teachers and other persons who seek opportunities for training. Courses are offered to meet the needs of students in all colleges of the University. See section on Summer Session. In 1951, a summer session of eight weeks will also be offered.

COMMUNITY COLLEGE

Non-credit courses to meet the needs of many persons who already have a degree or desire practical training for a particular vocation or avocation are offered on a short-term basis. Institutes are held in cooperation with various departments. These programs provide specialized in-service training covering a wide range of community interests. For further information see section on Community Cooperation.

GENERAL REGULATIONS

THE SEMESTER HOUR—The unit of instruction is one hour per week for one semester. Three hours of laboratory work (including time for writing reports) shall be considered as equivalent to one recitation hour with preparation therefor. This unit is known as a “semester hour” or “credit.”

GRADING SYSTEM

93-100 inclusive	Excellent	A
85-92 inclusive	Good	B
77-84 inclusive	Fair	C
70-76 inclusive	Poor	D
Below 70	{ Conditioned	E
	{ Failed	F
Incomplete		I

The grade “*Conditioned*” may be given only for the first semester’s work in a subject continuing through two or more semesters, such as first-year chemistry or first-year foreign language.

“*Conditioned*” means that although the semester’s work is not of passing grade the deficiency may be made up without repeating the course in class. Failure to remove the deficiency satisfactorily by the close of the student’s next semester in the University converts the grade to “F.” No higher grade than “D” is given for the removal of a “*Condition*.”

“*Incomplete*” means that the student has done passing work in the course, but some part, for good reason, has not been completed. Failure to make up the omitted work satisfactorily within the first nine weeks of the following semester converts the grade to “F.”

QUALITY REQUIREMENTS

For graduation from the University, the student must present at least 128 credit hours with a quality point ratio of 2 for all work attempted. Quality points are given as follows:

- For each credit hour of A, 4 quality points.
- For each credit hour of B, 3 quality points.
- For each credit hour of C, 2 quality points.
- For each credit hour of D, 1 quality point.
- For each credit hour of F, 0 quality point.

No student is eligible for a degree unless he has the same ratio of quality points in his major subject as is required for graduation.

PROBATION AND FAILURE

In the General College a student who fails at any time to maintain a quality point ratio of 2 may be subject to change of courses, suspension, or some other form of academic discipline.

In an Upper College a student whose scholarship is unsatisfactory may be placed on probation, suspended for a definite period of time, or dropped from the University at any time by the Dean of the college in which the student is enrolled.

The load for every probationary student is determined by the Dean who has jurisdiction over him.

Students who have been dropped from the University are not eligible to register for any college courses in Day, Evening, or Summer Sessions. Such individuals may, however, enroll for non-credit work in the Community College. Reinstatement of dropped students is under the control of the Committee on Admissions and Retention, and is a prerequisite for enrolling in college work.

CHANGES IN STUDENTS' PROGRAMS

No Upper College student is allowed to drop a study after the opening of a semester, or in any way change his selection of studies for any semester, without permission of the Dean of the college in which he is registered.

For Upper College students, all changes from one field of concentration to another shall be subject to the approval of the Dean.

Students in the General College will secure the permission at the Office of the Dean of Students.

If a student withdraws from a course on the recommendation of the Dean, it shall not count as work attempted.

If a student leaves a course *without the recommendation of the Dean*, or is *dropped* from any course by the Dean, he is given a failing grade in the course and it is counted as work attempted.

All grades received by students whether passing or failing, or dropped, are used in the compilation of statistical averages for student groups.

No student is allowed to enter a course after the first week of the semester.

First-year students are not permitted to elect work above the freshman year except by special permission.

REPEATING COURSES

No student shall be allowed to repeat a course for credit for which he has a passing grade except with the permission of the Committee on Admission and Advanced Standing.

WITHDRAWAL

A student desiring to withdraw from the University is requested to notify the Dean of the college in which he is enrolled. Otherwise "F" grades may be received in all work carried.

STUDENT LOAD

Sixteen hours a semester are counted as full work for a student. No student is allowed to take more than 17 hours a semester without the consent of the Dean of the college in which he is enrolled. An excess load charge is made for work taken in excess of 18 hours, except in the case of certain definitely prescribed curricula.

ABSENCE

Students are expected to be present at all meetings of classes for which they are registered, and may be dropped by the Dean from a course at any time for absence on recommendation of the instructor.

In case of prolonged absence, students may be reinstated in classes only by the Dean on recommendation of the instructor, and are required to make up the omitted work at the discretion of the instructor.

PROMOTION TO AN UPPER COLLEGE

For promotion to an Upper College the student must make a quality point ratio of 2 for the work taken in the General College and must complete at least 64 hours of work including all the required general courses. At the discretion of the Division a point ratio higher than this may be required. (It is understood that certain exceptions may be made in the operation of this ruling in the College of Engineering and in the Division of Natural Science.)

The admission of students to the Upper College shall be a responsibility of the academic deans in consultation with administrative officers of the General College and the heads of the departments concerned.

LATE REGISTRATION

The late registration fee is to become effective on the first day of classes, and is to be charged to all students who have not completed all steps required in order to attend classes. This fee is \$5 for day session and \$1 for evening session.

SPECIAL EXAMINATIONS

Qualified students may ask approval for the taking of Special Examinations for subjects not taken in course. Prior approval should be obtained by filing an application at the office of the Registrar. Whatever grade is obtained goes on the student's permanent record. Fee for each such examination, \$5.

SYSTEM OF NUMBERING

1-99. Courses given in the General College. (Numbers 1-19 are reserved for required courses in General Education.)

100-199. Courses of Upper College rank.

200-299. Undergraduate courses for which graduate credit may be obtained for a greater amount and a higher quality of work than that required of undergraduates.

300-399. Graduate courses to which a few undergraduates who have shown unusual ability may be admitted.

400-499. Graduate courses for which the prerequisite is a bachelor's degree.

FEES AND EXPENSES

Payment of fees is a part of the registration procedure. All fees must be paid at the Treasurer's office at the time of enrolment.

The University reserves the right to change its fees or to establish additional fees, at any time, without notice. When such fees or additions are made, they shall become effective at a date determined by the Board of Directors.

Failure on the part of a student to meet his obligations in respect to fees or other expenses due the University, shall be cause for suspension from classes, refusal to permit registration, transfer of credits, or granting of a degree.

CLASSIFICATION OF CHARGES

TUITION is not charged to legal residents of Akron. Tuition charges for those not legal residents of Akron are shown below.

A MAINTENANCE FEE is paid by all students. The amount of the fee depends upon the number of credit hours taken.

A LIBRARY FEE is payable by all students enrolled for 6 or more credit hours.

STUDENT ACTIVITY FEE (*Day Session*) payable by all undergraduate students enrolled for 6 credit hours or more. Payment of this fee provides support for the extra-curricular activities program.

(*Evening Session*) payable by all evening session students. Payment of this fee aids in the support of activities of the evening students.

(*Summer Session*) payable by all summer session students. Payment of this fee aids in the support of activities of the summer students.

STUDENT BUILDING FEE, payable by all students in all sessions, makes available the facilities of the student building.

LABORATORY FEES AND BREAKAGE DEPOSITS are charged in some courses to cover the materials used. See listings on pages 36 and 37.

A GRADUATION FEE is payable in connection with the Bachelor's degree and Master's degree.

LATE REGISTRATION FEE.

COMMUNITY COLLEGE FEES.

EXCESS LOAD FEE.

REFUNDS.

SUMMARY STATEMENT

For ease in determining approximate costs for each semester, the following tabulation indicates a typical charge for a student enrolled in day classes for a normal full-time schedule of work of 16 hours each semester of the academic year.

	First Semester	Second Semester
Tuition Fee, for non-residents of Akron	\$ 90.00	\$ 90.00
Maintenance Fee, for all students	56.00	56.00
Student Activity Fee, for all students	10.00	4.00
Student Building Fee	3.00	3.00
Library Fee	1.50	1.50
	<hr/>	<hr/>
Total for non-residents of Akron	\$160.50	\$154.50
Total for residents of Akron	\$ 70.50	\$ 64.50

Laboratory fees, deposits and books are additional and vary with the courses taken.

FEES FOR ENGINEERING STUDENTS ENROLLED ON
COOPERATIVE BASIS

	First Semester	Second Semester	Summer
†Tuition Fee, for non-residents of Akron.....	\$60.00	\$60.00	\$60.00
Maintenance Fee	40.00	40.00	40.00
Student Activity Fee	10.00	4.00	2.00
Student Building Fee	3.00	3.00	1.50
Library	1.50	1.50	1.00
	<hr/>	<hr/>	<hr/>
Total—Non-residents	\$114.50	\$108.50	\$104.50
Total—Residents	54.50	48.50	44.50

VETERANS' EXPENSES

Students who are veterans of World War II, and who are eligible for admission to the University may, if certified by the Veterans Administration, register for courses of study without payment of fees. In this instance the educational cost or its equivalent* including necessary books and supplies will be paid by the Federal Government. This is done upon the basis of an agreement between the University and the Veterans Administration based upon the provisions of Public Law 16 (Veterans Rehabilitation) and Public Law 346 ("G. I. Bill") as amended.

If a veteran does not have his Certificate of Eligibility at the time of registration, full payment of fees is required. Upon subsequent presentation of his certificate, the cash payment is refunded in full.

†In the case of a student registered for less than nine credit hours, the tuition fee shall be pro-rated on the basis of the relation his enrolment bears to a normal load of nine credit hours.

*The educational cost or its equivalent shall be judged to be a sum equal to the tuition plus such other fees as are applicable to the curriculum in which the student is enrolled.

TUITION FEES

	Each Semester
Payable by non-resident students in the day session:	
For 1 to 5 credit hours inclusive, per credit hour.....	\$ 6.00
For 6 credit hours.....	35.00
For 7 credit hours.....	50.00
For 8 credit hours.....	60.00
For 9 credit hours.....	70.00
For 10 credit hours.....	80.00
For 11 credit hours.....	90.00

Payable by non-resident students in the evening session:

For less than 7 hours.....	no charge
For 7 to 10 credit hours inclusive, per credit hour in excess of 6.....	\$20.00
For 11 credit hours or more.....	90.00

Payable by non-resident students in the summer session:

Eight-week term

Day session, per credit hour.....\$6.00

Evening session

For less than 7 hours.....	no charge
For 7 or more hours, per credit hour in excess of 6.....	\$6.00

Six-week term

Day session

For less than 7 hours.....	no charge
For 7 or more hours, per credit hour in excess of 6.....	\$6.00

RULES GOVERNING TUITION

(Adopted March 14, 1941)

Legal residents of the City of Akron shall not be charged tuition in any College or Division of the University.

In applying this rule, the following persons, if citizens of the United States, shall be deemed to be legal residents of Akron unless the circumstances of any particular case may show the fact to be otherwise, viz.:

1. An unmarried person under 21 years of age living with parents who are legal residents of the City of Akron.

2. A person over 21 years of age who at the time of his enrolment is a legal resident of the City of Akron.

3. A husband living with his wife, or a wife living with her husband within the City of Akron when such husband and wife are legal residents of the City of Akron.

In every other case the responsibility of proving legal residence in the City of Akron shall rest with the person claiming exemption from tuition payment.

In order to be a legal resident within the purpose of these rules, a person shall be required to have resided continuously in the State of Ohio for at least one year and in the City of Akron forty days immediately prior to registering in the University for any semester.

Any person enjoying the right of exemption from the payment of tuition shall forfeit that right upon abandoning the City of Akron as his legal residence but may regain the right upon reestablishing his legal residence in the City of Akron.

No person shall be considered to have gained or lost legal residence status by virtue of any act of himself, his parents, or his guardian, within any semester he or she is enrolled in the University.

In case a legal resident of the City of Akron is appointed guardian of the person of a minor, the legal residence of such minor for the purpose of this rule shall not be considered to be established in the City of Akron until the expiration of one year after such appointment, but no legal residence may be acquired by a minor for whom a legal guardian of the person is appointed solely for the purpose of avoiding the payment of tuition to The University of Akron.

Any person living outside of Akron but owning property within the City of Akron which is taxed, may receive credit on tuition of his child or children during any semester to the extent of taxes actually paid by him for that half-year toward the University levy, upon presenting a certificate from the County Auditor or Treasurer, stating the amount so paid.

MAINTENANCE FEES

Payable by all students both resident and non-resident in the day and evening sessions:

- For 1 to 7 credit hours inclusive, per credit hour.....\$ 7.00
- For 8 credit hours or more..... 56.00

An advance deposit of \$10.00 is required of all freshmen and transfer students who have been accepted for admission to the University. This sum is credited on the maintenance fee at entrance and is not subject to refund. It cannot be transferred to another account but may be applied on a subsequent enrolment.

LIBRARY FEE

Payable by all day or evening students enrolled for 6 or more credit hours.....\$1.50
 (Not subject to change during a semester because of reduction in number of credits carried).

REGISTRATION FEE

Payable by students enrolled in the Division of Adult Education (evening classes). Per semester.....\$1.00

STUDENT ACTIVITY FEE

Payable by all undergraduate students in the day session taking six credit hours or more. (Not subject to change during a semester because of reduction in number of credits earned).

- First semester (including athletic and dramatic ticket).....\$10.00
- Second semester, students enrolled first semester..... 4.00
- Second semester, new entrants (including athletic and dramatic ticket)..... 7.00

Payable by all evening session students, per semester..... .50

STUDENT BUILDING FEE

Payable by all students in the day session enrolled for six credit hours or more, per semester. (Not subject to change during a semester because credit hours are reduced)\$3.00

Payable by all students enrolled in the day session taking less than six hours, per semester 1.50

Payable by all evening session students, per semester..... .50

FEES FOR 1951 SUMMER SESSION

SIX WEEK TERM

Non-resident Tuition Fee (in excess of 6 hours), per credit hour.....	\$6.00
Maintenance Fee:	
1 to 4 credit hours, per credit hour	7.00
5 to 6 credit hours	30.00
*Student Activity Fee	1.00
*Student Building Fee	1.00
*Library Fee	1.00
Excess Load Fee, in excess of 6 credit hours, per credit hour.....	7.00

EIGHT WEEK TERM

Non-resident Tuition Fee, per credit hour (Day Students only).....	6.00
Non-resident Tuition Fee, per credit hour in excess of 6 hours, (Evening Session Students)	6.00
Maintenance Fee:	
1 to 7 credit hours, per credit hour	7.00
8 or more credit hours	56.00
*Library Fee	1.00
*Student Activity Fee (6 or more credit hours)	2.00
Less than 6 credit hours.....	1.50
*Student Building Fee	1.50
Excess Load Fee, in excess of 9 hours, per credit hour.....	7.00
Registration Fee (Evening Session Students only).....	1.00

The Student Activity Fee charged at the time of registration will not be reduced should the student later elect to reduce his load.

Students who enroll for both a Six and an Eight Week schedule of work, will be charged on the basis of the schedule of charges that apply to enrolment for the Eight Week Term.

LATE REGISTRATION FEE

A fee of \$5 will be charged day students, and \$1 for evening students, who have not completed registration, classification, and payment of fees before the closing time of registration in the college in which they are registered.

The dates on which this fee will first be payable in 1951-52 are:

First Semester: Monday, September 17, for Day and September 24, for Evening Session.

Second Semester: Monday, February 4, for Day Session. Monday, February 11, for Evening Session.

1951 Summer Session: Day Session, June 18. Evening Session, June 19.

MUSIC

Two individual half-hour lessons per week, each semester, in Piano, Voice, Violin, Organ or Band Instruments.....	\$60.00
One individual half-hour lesson per week, each semester, in Piano, Voice, Violin, Organ or Band Instruments	30.00
Organ rental by special arrangement.	
Semi-private Voice Lesson (Small Group Instruction).....	20.00

*Not charged for registrations in which all of the enrolment is in summer workshops or classes scheduled to meet in the evening session.

GRADUATION FEE

(Payable at time of application for degree)

Bachelor's degree	\$ 5.00
Master's degree	10.00
Bachelor's degree in Nursing Education (5-Year).....	17.00

AUDITORS

The fees for an auditor in any course or group of courses are the same as if taken for credit.

COMMUNITY COLLEGE

A fee of \$7.00 is charged for Community College Courses unless otherwise noted in the circular printed each semester which describes the courses.

EXCESS LOAD FEE

A fee of \$7.00 per credit hour is charged for registrations in excess of 18 hours in the regular semester of the day session, and also in excess of 10½ hours in Cooperative Engineering courses. In the eight week summer term, this fee is applied to registration for more than 9 hours. In the six week summer term, this fee is applied to registration in excess of 6 hours. If in a regularly prescribed curriculum excess hours are required beyond the normal academic load, this fee will be waived only upon approval of the Dean of the College in which registration is made. No charge will be made for enrolments for credit in band, glee club, debate and orchestra taken in excess of a normal academic load. This fee is not subject to refund.

MISCELLANEOUS FEES

One free transcript of record is furnished a student. A fee of \$1 is charged for each additional copy.

A fee of \$2 is charged for each two-year or three-year certificate.

A fee of \$5 is charged for each examination in college work not taken in course.

LABORATORY FEES

	Each Semester
Art 59, 60 (Ceramics)	\$ 4.00
Art 70, 102 (Crafts)	1.00
Art 104, 105 (Graphic Arts), 175, 176 (Figure Drawing)	1.50
Biology 41, 42 (Geology)	2.50
Biology 47, 48 (Anatomy and Physiology)	3.00
Biology 51, 52 (Botany), 113, 114 (Field Botany)	4.00
Biology 61, 62 (Zoology)	5.00
Biology 91, 135, 136, 235, 236 (Physiology), 141 (Invertebrate Zoology).....	4.00
Biology 144 (Entomology), 217 (Plant Anatomy and Histology)	4.00
*Biology 107, 108 (Bacteriology)	7.50
*Biology 77, 78 (Bacteriology)	7.50
Biology 146, 148 (Genetics)	1.00
Biology 155 (Vertebrate Anatomy)	12.00
Biology 215, 216 (Plant Physiology), 154 (Histological Technique)	6.00
Biology 256 (Embryology)	7.50
Biology 267, 268 (Biological Problems), 367, 368 (Research) per credit hour	2.00
*Chemistry 21, 22, 43, 44, 55, 56, 105, 106, 107, 108, 309	10.00
*Chemistry 23, 24, 25, 45, 131, 132	5.00
*Chemistry 213, 214, 307, 308, 321, 322	8.00
*Chemistry 327, 328, 330	15.00
*Chemistry 365, 366, per credit hour.....	5.00
*Commerce 167 (Motion and Micromotion)	2.00
Education 41 (Handicrafts in Elementary School)	2.00
Education 105 (Tests and Measurements), 312 (Techniques of Evaluation)....	2.00
Education 313 (Diagnostic and Remedial Teaching)	2.00
Education 136, 235, 302, 335 (Workshop)	1.00
Engineering 21, 22 (Engineering Drawing)	1.00
Engineering 43 (Descriptive Geometry)	1.00
*Engineering 119 (Hydraulics Lab.)	2.00
*Engineering C.E.47 (Elementary Surveying)	5.00

*Requires a breakage deposit of \$5.00, the unused portion of which will be returned to the student.

LABORATORY FEES (Continued)	Each Semester
*Engineering C.E.101 (Strength of Materials)	4.00
*Engineering C.E.108 (Route Surveying)	5.00
*Engineering C.E.109 (Advanced Surveying)	5.00
*Engineering C.E.112 (Concrete Lab.)	3.50
*Engineering E.E.30 (D.C. and A.C. Principles)	3.00
*Engineering E.E.131 (A.C. Machines)	3.00
*Engineering E.E.135 (Illumination Engineering)	1.50
*Engineering E.E.145 (Electrical Measurements)	1.50
*Engineering E.E.147 (Electrical Measurements)	1.50
*Engineering E.E.148 (Electrical Measurements)	3.00
*Engineering E.E.149 (Industrial Instrumentation)	1.50
*Engineering E.E.153 (Engineering Electronics)	1.50
*Engineering E.E.154 (Engineering Electronics)	1.50
*Engineering E.E.155 (Engineering Electronics)	1.50
*Engineering E.E.156 (Engineering Electronics)	1.50
*Engineering E.E.157 (Ultra High Frequencies)	3.00
*Engineering E.E.160 (D.C. Machines)	1.50
*Engineering E.E.161 (A.C. Machines)	1.50
*Engineering E.E.162 (A.C. Machines)	3.00
*Engineering E.E.163 (A.C. Machines)	3.00
*Engineering E.E.164 (A.C. Machines)	1.50
*Engineering E.E.165 (Electrical Controls)	3.00
*Engineering E.E.166 (Advanced A.C. Machines)	3.00
*Engineering M.E.169, 170 (Shop Practice)	2.00
Engineering M.E.171 (Machine Drawing)	1.00
Engineering M.E.174 (Mechanism Drawing)	1.00
Engineering M.E.179 (Machine Design)	1.00
*Engineering M.E.182 (Mechanical Engineering Lab.)	4.00
*Engineering M.E.183 (Mechanical Engineering Lab.)	5.00
*Engineering M.E.188, 189 (Mechanical Engineering Lab.)	1.00
Home Economics 21 (Textiles), 22, 23 (Clothing), 62 (Home Management), 105, 106 (Advanced Clothing)	1.00
Home Economics 41, 42, 43, 45, 46 (Foods)	6.00
Home Economics 44 (Dietotherapy), 63 (Food Economics)	4.00
Home Economics 65 (Child Care), 107, 108 (Adv. Textiles), 119, 120 (Nutrition)	2.00
Home Economics 115, 116 (Advanced Foods)	7.50
Home Economics 215 (Household Equipment)	2.00
Home Economics 216 (Quantity Cookery)	5.00
Home Economics 122 (Home Management Residence)	50.00
Physical Education 3, 4, 114 (Swimming — Men)	2.50
Physical Education 3, 4, 114 (Swimming — Women)	7.00
Physics 24, 41, 42, 51, 52, 53, 201, 202, 304, 306, 314	2.00
Physics 61, 209, 210, 309, 310	4.00
Psychology 45	1.00
Psychology 110, 207, 208	2.00
**R.O.T.C. Basic Course	5.00
†*R.O.T.C. Advanced Course	10.00
Secretarial Science 27 (Filing Practices)	1.75
Secretarial Science 31, 51, 52, 56, 57, 58, 59 (Typewriting)	4.00
Secretarial Science 74 (Secretarial Training)	1.50
Secretarial Science 62, 63, 64, 83, 84, 85, 163, 164, 165, 166, 186, 187, 188.....	1.00
Secretarial Science 293, 294 (Office Practice)	2.50
Speech 161, 162 (Play Production)	2.00
Speech 181 (Radio Speaking)	1.00
Speech 287 (Radio Speaking)	1.00

*Requires a breakage deposit of \$5.00, the unused portion of which will be returned to the student.

**This deposit is returnable at the end of the semester less charges for lost or damaged articles.

†*This deposit is returnable only upon the completion of the course.

REFUNDS

Tuition and Fees are not returnable either by cash or by adjustment of an account except when withdrawal is caused by:

- (1) Serious illness as evidenced by a written statement of a physician.
- (2) Change in hours of employment as evidenced by a written statement of employer.
- (3) Other circumstances entirely beyond the control of the student.

Application for refund or adjustment of an account will not be considered after the close of the semester for which fees have been charged. The time of withdrawal is ordinarily taken as the date at which the student formally files his withdrawal request. The date of withdrawal is certified by the Dean or Director.

No refund will be made on the following fees:

- | | |
|------------------------|--|
| (1) Change of Course. | (5) Special Examination. |
| (2) Excess Load. | (6) Registration Fee—Evening College. |
| (3) Swimming Fee. | (7) Advanced Deposit. |
| (4) Late Registration. | (8) In case a student is dropped for failure or academic discipline. |

To be entitled to a refund, in any case, the student withdrawing must present to the Treasurer of the University in writing a "Withdrawal Request" setting forth the particulars properly supported as they apply to his case. Permission to withdraw does not imply that a refund or adjustment will be made, but serves only as a basis for application on the rules by the Treasurer's office.

1. A statement from the Dean of his college that the student is in good standing, is entitled to an honorable dismissal, and is withdrawing with the Dean's permission, from the school or courses designated.
2. A statement from the Military Department, if he is a student in R.O.T.C. that his uniform account is clear.
3. If dropping a laboratory subject, he shall return his deposit card certified by the proper person, showing the amount of the refund due him.
4. If dropping an Evening College or Summer Session subject, he shall present a statement from the Director stating that he is permitted to withdraw from the subject.

When above conditions have been complied with, the request will be ruled upon and refund, if due, will be made in accordance with the following plan:

Cooperative Engineering Fees: The refund schedule is the same as for the Eight-week Summer Term.

Evening and Summer Course Fees: In full for courses offered that may not actually be given due to insufficient enrolment.

Student Activity Fee: Upon return of the student athletic ticket, refund or adjustment will be made on the same basis as other regular fees.

Other Regular Fees: The amount actually charged will be refunded or adjusted less the proportion to be retained by the University as follows:

FIRST AND SECOND SEMESTER

<i>Time of Withdrawal</i>	<i>Amount Retained by the University</i>
After registration or	\$5.00 Day Session
During 1st week	\$1.00 Evening Classes
During 2nd week	20% of semester charge
During 3rd and 4th weeks	40% of semester charge
During 5th and 6th weeks	60% of semester charge
During 7th and 8th weeks	80% of semester charge
After 8th week	Full amount of semester charge

SUMMER SESSION

Six-week Term

After registration or	
During 1st week	\$2.00
During 2nd week	40% of term charge
During 3rd week	60% of term charge
After 3rd week	Full amount of term charge

Eight-week Term

After registration or	
During 1st week	\$5.00
During 2nd week	20% of term charge
During 3rd week	40% of term charge
During 4th week	60% of term charge
During 5th week	80% of term charge
After 5th week	Full amount of term charge

THE GENERAL COLLEGE

ENTRANCE REQUIREMENTS

Students are admitted to the Freshman class if graduated from accredited four-year high schools in Akron, and will be classified for courses for which they are qualified, as shown by the quality and kind of high school work shown on the high school transcript and by the counseling program of the University. Before actual enrolment, each applicant must file an application form, have his high school certificate sent in, and must present himself for the counseling program on one of the dates established by the University.

Applicants from outside of Akron will be accepted on the basis of their qualifications insofar as facilities permit.

For those majoring in science or engineering there are prerequisite subjects in mathematics and science. For engineering at least $1\frac{1}{2}$ units of high school algebra, 1 unit of plane geometry, and $\frac{1}{2}$ unit of solid geometry or $\frac{1}{2}$ unit of trigonometry, and 1 unit of physics or chemistry are required. Each candidate desiring chemistry, physics, pre-dental or pre-medical courses is required to take college mathematics for which $1\frac{1}{2}$ years of high school algebra and 1 year of plane geometry are prerequisite.

ADULT STUDENTS

Applicants over twenty-one years of age may be permitted to enroll for not over seven credit hours in any one semester in evening classes and may be permitted to take up to a total of fourteen credits. Such students will be designated as Adult Students. If adult students desire to take any additional work for credit, they must qualify for regular student status by meeting entrance requirements to the satisfaction of the Committee on Admissions. *The initiative for change of status rests with the adult student.*

SPECIAL STUDENTS

Special students are applicants who do not meet the requirements for admission, but may by special act of the Committee on Admissions, be permitted to take a limited amount of work for which they are qualified by experience. Special students will not receive credit and will be designated as auditors. It is understood that they will not displace any regular students.

AUDITORS

A student may apply to his respective Dean for permission to audit a course. Permission may be granted if (1) the student's scholarship is good, and (2) if the student has taken and passed the particular course, or if his life experience qualifies him to take the course.

An auditor is required to do all the work prescribed for students enrolled for credit except the taking of credit examinations. The fee is the same as for regular credit enrolment. Designation as an Auditor must be made at the time of registration.

ADMISSION FROM OTHER COLLEGES

The student who wishes to enter The University of Akron with advanced standing should ask the registrar of the institution from which he is transferring to send to the University Registrar a transcript of his record and an honorable dismissal.

No student will be received on transfer from another college or university who does not meet the scholastic requirements of The University of Akron, or who is ineligible to re-enter the institution from which he desires to transfer.

REGISTRATION AND CLASSIFICATION

A student who wishes to gain admission for the next semester should ask his high school principal to mail a statement of his high school record on a blank supplied by the University Registrar upon request. The applicant is expected to present himself in person to register at the specified time. Fees are due at time of registration.

ORIENTATION WEEK

To aid the freshman in adjusting himself to university life, the week preceding the opening of the regular session is devoted to a program consisting of a general assembly, tests, physical examination, lectures, and payment of fees.

All entering freshmen are *required* to report Monday, September 10, 1951, for the fall session, and attend all sessions, from 8 a. m. to 4 p. m., September 10 to 13 inclusive.

REGISTRATION DAYS

The registration days for students in both day and evening sessions will be found in the University Calendar in the opening pages of this catalog.

CURRICULUM OF THE GENERAL COLLEGE

Courses in the General College have been planned and organized in scope, content, method of approach, and method of presentation, to attain as fully as possible the general objectives of the University.

While there are no separate departmental divisions in the General College, the different divisions of the upper colleges, through their various departments, will offer, in addition to certain subjects required for students majoring in the department, other introductory courses, open to all students in the General College, but ordinarily not open to students of the upper colleges.

PRE-PROFESSIONAL AND TERMINAL COURSES

In addition to the work offered in general education, the General College offers certain pre-professional courses and terminal courses of an occupational nature for students who do not desire to remain longer at the University or who are unable to do so.

GENERAL EDUCATION

Ordinarily the work in the General College will cover two years; however, abler students may shorten the time by taking examinations for credit. The required courses in general education are:

1. English, Oral and Written.....6 hours, first year
2. Hygiene, Mental and Physical.....4 hours, first year
3. Introduction to the Social Sciences.....6 hours, first year
- *4. Introduction to the Natural Sciences.....6 hours, first or second year
5. Introduction to the Humanities.....6 hours, first or second year
- †6. Mathematics, Accounting, or Foreign Language.....6 or 8 hours, first or second year
7. Military Science and Tactics (for men).....6 hours
(One from 4 and 5, and one from 6 must be taken the first year)
8. Physical Education2 hours, first year

REQUIREMENTS FOR PROMOTION
TO UPPER COLLEGE WORK

For promotion to upper college standing, the student must complete the requirements in general education stated above, and, in addition, certain courses specified by the departments concerned. The departmental requirements, which are in addition to the general requirements, are listed in the following pages.

BUCHTEL COLLEGE OF LIBERAL ARTS

Students who are planning to meet the requirements for promotion to upper college standing in the College of Liberal Arts should consult the list of studies laid down by the department concerned as prerequisite to promotion. It will be seen that some departments lay down specifications which should be taken in the freshman year. This is particularly to be noted in the case of the departments in the Natural Science Division and in commerce, home economics, secretarial science and art.

In other cases, the choice of a department for a major need not be made until the beginning of the sophomore year because of a smaller amount of prescribed work. It will also be noted that there are some departments which do not specify any requirement until the beginning of the third year in college. Those desiring to major in these departments would not need to make the decision until the beginning of the third year.

THE HUMANITIES DIVISION

ENGLISH—*Required*: English 65-66. *Recommended*: French, German, or Latin.

LATIN AND GREEK—*Required*: Latin 43-44.

†MODERN LANGUAGES—*Required*: Modern foreign language, both years.

MUSIC—*Required*: Fundamentals of Music 23, Theory I, 41, Theory II, 42. *Recommended*: Psychology 41-43, Philosophy 55-56, Shakespeare 41.

PHILOSOPHY—*Required*: Philosophy 55-56. *Recommended*: Psychology 41, Sociology 41, Literature—especially Shakespeare 41.

*The Introduction to the Natural Sciences may be waived in whole or in part at the discretion of the proper academic officers in the case of certain science majors.

†Not required in Elementary Education Curriculum.

‡Second year of German is required for graduation from the Upper College in the case of Chemistry and Pre-Medical majors, the second year of either French or German in the case of Biology and Mathematics majors, and the second year of a foreign language in the case of Physics majors.

In the Humanities, Social Science, and Applied Arts Divisions (except Commerce, Secretarial Science and Industrial Management), the requirement is the second year of a foreign language on the college level, ordinarily taken in the General College.

SPEECH—*Required*: Speech 41. *Suggested Electives*: Reading Aloud 51 and any other General College speech courses, the basic courses in the social sciences and psychology, Shakespeare 41, Design 21.

Since Upper College work in speech embraces the fields of public speaking, debate, dramatics, speech correction, and interpretation, the student should elect a program in General College that will apply directly to the specific interests in the field of speech which he proposes to follow in Upper College.

THE SOCIAL SCIENCE DIVISION

ECONOMICS—*Required*: Economics 41, 48 and Mathematics 57 or equivalent. *Recommended*: Accounting 21-22, Business Organization and Management 61, Psychology 41, Mathematics 21-22, Sociology 41-42, Political Science 41-42.

HISTORY—*Required*: None. *Recommended*: Social Science.

POLITICAL SCIENCE—*Required*, one of the following: American National Government 41, American State and Local Government 42, Comparative Government 43 or American Diplomacy 44. *Recommended*: Social Science.

SOCIOLOGY—*Required*: Sociology 41-42. *Recommended*: Psychology 41-43, Speech 41, English.

THE NATURAL SCIENCE DIVISION

BIOLOGY—*Required*: Zoology 61-62, Botany 51-52, Inorganic Chemistry 21-22.

PRE-MEDICAL—*Required*: Zoology 61-62, Inorganic Chemistry 21-22, Qualitative Analysis 43, Elementary Organic Chemistry 44, Algebra 21, Trigonometry 22, German 21-22.

CHEMISTRY—*Required*: Inorganic Chemistry 21-22, Qualitative Analysis 43, Elementary Organic Chemistry 44, Algebra 21, Trigonometry 22, Analytics 43, Calculus 45-46.

MATHEMATICS—*Required*: Algebra 21, Trigonometry 22, Analytics 43, Calculus 45-46.

PHYSICS—*Required*: Physics 51, 52, Algebra 21, Trigonometry 22, Analytics 43, Calculus 45 or Chemistry 21-22. For alternative plan see departmental statement.

THE APPLIED ARTS DIVISION

ART—*Required*: Appreciation of Art 29-30, Design 21-22, Industrial Design 43, Drawing and Rendering 45-46, Ceramics 59-60, Crafts 70, and the second year of a foreign language. *Recommended*: Psychology 41-43, Sociology 41, Shakespeare 41.

COMMERCE—*Required*: Accounting 21, 22, 27 or 43 or 121, Business Organization 61, Production Management 62, Selling 81, Economics 41-48. *Recommended*: Economic Geography 54, Typewriting 31, Sociology 41-42, Psychology 41, 62.

HOME ECONOMICS—*Required*: Textiles 21, Clothing 22, General Foods 45-46, Home Economics Orientation 53, Consumer Economics 82. Foods and Nutrition majors take in addition Chemistry 23-24 and Chemistry 55-56.

INDUSTRIAL MANAGEMENT. For details concerning this curriculum see under Commerce in Liberal Arts section.

JOURNALISM—*Required*: News Writing 51 and 52. *Recommended*: History of Journalism 71, Contemporary Newspapers 72.

SECRETARIAL SCIENCE—*Required*: Shorthand 61, Shorthand and Transcription 62, Typewriting 51-52. *Recommended*: Accounting 21-22 or 41-42, Business Organization and Management 61, Secretarial Procedure 23, Machine and Slide Rule Calculation 25, Filing Practices 27, Secretarial Training 74.

THE COLLEGE OF ENGINEERING

Students who are definitely planning on taking a course in engineering have a somewhat different group of subjects arranged for them. The full curriculum is listed in the engineering section of the catalog, and should be consulted by all students enrolled in engineering.

THE COLLEGE OF EDUCATION

The curriculum plan for the first two years is given for those students desiring to go into the College of Education. It should be understood that this is suggestive and not rigid. Differences will occur, depending upon the teaching fields for which preparation is being made.

Freshman Year		Cr. Hrs.	
First Semester	Cr. Hrs.	Second Semester	Cr. Hrs.
English 1	3	English 2	3
Introduction to Social Science 5..	3	Introduction to Social Science 6..	3
Hygiene, Mental 15	2	Hygiene, Physical 16	2
Elective	6	Elective	6
Military Training (Men)	1½	Military Training (Men)	1½
Physical Education 3	1	Physical Education 4	1

Sophomore Year		Cr. Hrs.	
First Semester	Cr. Hrs.	Second Semester	Cr. Hrs.
Introduction to Humanities 7.....	3	Introduction to Humanities 8.....	3
Introduction to Natural Science 9	3	Introduction to Natural Science 10	3
General Psychology 41	3	Educational Psychology 52.....	3
Introduction to Education 55.....	3	Fundamentals of Speech 76.....	3
Literature	3	Literature	3
Military Training (Men)	1½	Military Training (Men)	1½

Further information concerning the requirements for promotion to upper college standing in various divisions of the University may be obtained from the Dean of Students, or from the deans of the several colleges.

BASIC COURSES

B-1. BASIC LANGUAGE SKILLS. 3 credits.*

This course includes training and exercises in English grammar, spelling, punctuation, vocabulary building, and in the writing of short expository themes. Its objective is to enable students whose preparation in English is limited to write clearly and simply, to analyse and correct such errors as they may make, and to read with understanding.

B-3. BASIC MATHEMATICS. 3 credits.*

A terminal course which attempts to develop the number concept as manifested in arithmetic, elementary algebra, quantitative measurement, geometry, graphing, and numerical right triangle trigonometry. Two one-hour lectures and one two-hour laboratory each week.

B-5. FAMILY LIVING. 3 credits.*

A course designed to help students recognize the economic problems which face young couples as they start their homes. It aims to furnish guideposts that will help to solve these problems. Important factors in establishing good family relationships are discussed and applied to budgeting the family income.

B-7. BUSINESS RECORDS. 3 credits.*

A course designed to give students sound training in modern business records. A complete overview of the flow of business transactions, starting with the journal and ledger and continuing through to the final summary of the financial reports, is represented.

B-9. SURVEY OF BUSINESS. 3 credits.*

An introductory course to the field of business. The nature of business organizations, operating methods, problems, career requirements and opportunities are stressed. Practical problems, particularly those of small business, are stressed throughout.

*Not accepted by the Colleges of Education, Engineering or Liberal Arts as constituting part of the minimum number of credits required for graduation.

REQUIRED COURSES IN GENERAL EDUCATION

1-2. FRESHMAN ENGLISH, ORAL AND WRITTEN. 3 credits each semester.

Instruction in reading, writing, and speaking the English language. Assigned readings, correlated with the general introductory courses, provide models for analysis and stimulate expression, both oral and written, on the part of the student. During the first semester, this material is primarily expository in character; during the second, the narrative and descriptive methods of reporting experiences are stressed. A review of the principles of English usage, and instruction in taking notes and using the library.

Students who demonstrate exceptionally good preparation in English may go directly into English 2 on the condition that they follow it, in the next semester, with another General College course in English. Students who make A in English 1 may substitute another General College course in English for English 2; students who make B may take another General College course in English as well as English 2 in their second semester.

15-16. HYGIENE, MENTAL AND PHYSICAL. 2 credits each semester.

This course has three major objectives. The first is to assist the student to master certain knowledges and to develop attitudes, habits, and skills which will be effective in enabling him to live at a high level of physical efficiency. The second is to enable him to explore, analyze, and evaluate his abilities, interests, and needs as a sound basis for personal and social adjustments. The third is to assist the student in his other school work. One lecture and one discussion group per week.

3-4. PHYSICAL EDUCATION. 1 credit each semester.

Required course in Physical Education activity. For description of sections see Physical Education Department section of this catalog.

5-6. INTRODUCTION TO THE SOCIAL SCIENCES. 3 credits each semester.

The purpose of this course is to give each student an appreciation of, an interest in, and a general comprehension of, the fundamental institutions of modern civilization. It is based upon the thesis of social change and organized primarily around the social, economic, and political problems of our time. It is intended to serve as a terminal course for students who concentrate in other fields, and as a foundation for social science study.

7-8. INTRODUCTION TO THE HUMANITIES. 3 credits each semester.

The chief aim of the course is to assist the beginning student to understand and appreciate the intellectual and cultural achievements and tendencies of his own civilization and of the past. Text, lecture, and discussion are combined to present a broad survey of western civilization.

9-10. INTRODUCTION TO THE NATURAL SCIENCES. 3 credits each semester.

A study of how the development of science has affected the course of human life and made modern civilization a possibility. The course begins with the study of man's placing himself in his universe. Many of the great discoveries in science are discussed. Illustrative material is drawn from the biological and physical sciences. The aims are: to encourage the use of objective methods of reasoning, and to develop an appreciation of the contributions made by the great scientists; to give the student a greater knowledge of the fundamental principles of science.

SPECIAL TWO-YEAR CERTIFICATE COURSE IN SECRETARIAL SCIENCE

A special two-year course (at least 64 semester hours) is offered for those who feel unable to spend more than two years in college.

This curriculum may be modified in the case of students who have had commercial courses prior to entering the University.

First Year

First Semester	Cr. Hrs.	Second Semester	Cr. Hrs.
Shorthand Theory 61	3	Shorthand and Transcription 62 ..	4
Typewriting 51	2	Advanced Typewriting 52	2
Filing Practices 27	2	Machine and Slide Rule Calc. 25	1
or Mach. and Slide Rule Calc. 25	1	or Filing Practices 27	2
English, Oral and Written 1	3	English, Oral and Written 2	3
Introduction to Social Sciences 5	3	Introduction to Social Sciences 6	3
Hygiene, Mental 15	2	Hygiene, Physical 16	2
Physical Education 3	1	Physical Education 4	1

Second Year

Advanced Shorthand and Transcription 63	4	Advanced Shorthand and Transcription 64	4
Secretarial Procedure 23	2	Secretarial Training 74	2
Business Letters 93	2	Accounting 22 or 42	3
Accounting 21 or 41	3	Introduction to Humanities 8	3
Introduction to Humanities 7	3	Introduction to Natural Science 10	3
Introduction to Natural Science 9	3		

NON-DEPARTMENTAL MAJORS

There are available certain courses of study which are non-departmental, including work taken from several departments or divisions. They are:

- A—Divisional majors in
- Natural Science
 - Social Science
 - Humanities

For further details consult the chairman of the appropriate division.

- B—The American Civilization major.

- C—The International Business major.

For information about these two majors, consult the dean of the College of Liberal Arts.

**MILITARY SCIENCE AND TACTICS
RESERVE OFFICERS' TRAINING CORPS**

MILITARY SCIENCE AND TACTICS

LIEUTENANT COLONEL JAMES E. MALONEY, JR., *Professor*

LIEUTENANT COLONEL LAWRENCE L. LARSEN, *Supply Officer;*
Associate Professor

CAPTAIN ROGER C. LOVING, *Assistant Professor*

1st LIEUTENANT EDWARD M. BROWN, JR., *Plans and Training Officer;*
Assistant Professor

WARRANT OFFICER WAYNE H. BURKE,
Administrative Officer; Military Instructor

MASTER SERGEANT JOHN A. DUNLEAVY, *Military Instructor*

SERGEANT FIRST CLASS JOHN F. LINCKS, *Military Instructor*

MASTER SERGEANT MICHAEL J. TROCH, *Military Instructor*
Automotive and Weapons Maintenance; Rifle Team Coach

SERGEANT ROBERT H. HUGHES, *Supply*

AIR SCIENCE AND TACTICS

LIEUTENANT COLONEL ROBERT C. HILLIARD, *Professor*

MAJOR JOHN C. WRETSCHKO, *Associate Professor*

CAPTAIN SIDNEY D. COX, JR., *Assistant Professor*

CAPTAIN WILBUR W. WALTON, *Assistant Professor*

MASTER SERGEANT MORRIS E. TAYLOR, *Administrative Assistant*

MASTER SERGEANT DAVID T. KILEY, *Instructor*

STAFF SERGEANT WILLIAM H. DENNINGTON, *Supply*

MASTER SERGEANT GEORGE F. HECKEL, *Instructor*

MASTER SERGEANT ODES D. LOCKWOOD, *Instructor*

MASTER SERGEANT ELLIS R. McDUFFEE, *Instructor*

In 1919 the United States Government established at the University of Akron a unit of the Reserve Officers' Training Corps. This unit is of the same type as those established at practically all of the large universities and colleges throughout the country, with the idea of producing trained men for the Officers' Reserve Corps. The instruction is divided into two parts: the basic course of the first two years, required of all freshman and sophomore men who are physically fit; and the advanced course of the last two years, elective for the men who have completed satisfactorily the basic course and the first two years of scholastic work, or have served a minimum of one year active service in the Army, Navy, Coast Guard or Marines, and who have been selected by the President of the University and the Professor of Military Science and Tactics, or the Professor of Air Science and Tactics.

In 1946 the United States Air Force established at the University of Akron a unit of the Air Force Reserve Officers' Training Corps. This unit is of the same type as was established at some 127 other leading universities and colleges throughout the country with the purpose of producing college trained officers primarily for the Air Reserve, and for the Regular Air Force, and for the Air Units of the National Guard.

THE BASIC COURSE

A basic course in Military Science and Tactics or Air Science and Tactics is required of all men during the freshman and sophomore years, with the following exceptions:

- a. Aliens.
- b. Men physically disqualified.
- c. Men who have been in the regular military or naval service more than one year.
- d. Men who are taking short professional or pre-professional courses not leading to degrees.
- e. Men carrying less than eight hours of work.
- f. Men who present a certificate of having completed forty-eight semester hours of work at another accredited college or university.
- g. Men above the age of twenty-three.
- h. Men who submit written declaration of valid religious or conscientious objections to military service similar to those in effect during the war entitling one to exemption from service.

The work is given three hours per week for the first two academic years. $1\frac{1}{2}$ hours of credit are given each semester.

During this basic course no compensation is paid the student by the government, but uniforms and equipment are issued for his use. Each student is held responsible for loss or damage to government property issued to him. Uniforms must be turned in at the completion of each year, or at the time of leaving. They are replaced at the beginning of the next academic year. A deposit of \$5 is required, which is returned when the uniform is turned in.

THE ADVANCED COURSE — INFANTRY

This course consists of five hours per week (three hours' credit per semester) during the junior and senior years. The advanced course is open to all students who have satisfactorily completed the basic course or veterans who have been honorably discharged, or transferred to the Enlisted Reserve Corps and relieved from active duty, provided they have been selected by the President of the University and either the Professor of Military Science and Tactics.

During this course the Government furnishes uniforms (officer type, complete with field overcoat and shoes) and equipment, and also pays a monetary allowance in lieu of subsistence to each student. The applicant must not yet have reached 27 years of age at the time of initial enrolment. Upon satisfactory completion of the advanced course and four years of education at college or university level, the student will receive an appointment as second lieutenant, Officers' Reserve Corps.

On the basis of scholastic attainment and demonstrated leadership ability, certain students will be designated distinguished military students, and will be offered commissions in the regular army or air force upon graduation.

The advanced course, once entered upon, must be completed as a prerequisite for graduation.

THE ADVANCED COURSE — AIR

This course consists of five hours per week (three hours' credit per semester) during the junior and senior years. The Advanced Course is open, within quota limitations, to all physically qualified students who have satisfactorily completed the basic course and veterans who have been honorably discharged, and are selected by the President of the University and the Professor of Air Science and Tactics. Members of a component of the Armed Forces may be conditionally enrolled pending discharge from such component after they have made a proper request for discharge. During this course the Government will equip each student with a complete Officer Type Air Force Blue uniform (including trench coat and shoes) which may be retained by the student upon successful completion of the course. The Government also pays a monetary allowance in lieu of subsistence (at present, 90c per day) to each student. The applicant must not have reached his 25th birthday at the time of initial enrolment and must complete all requirements for appointment as a second lieutenant in the Air Force Reserve prior to reaching his 28th birthday. Exceptions may be made in the case of veterans. Upon successful completion of one of the career training options in AF ROTC and upon receipt of a degree from the University, the student is eligible to receive an appointment as second lieutenant in the United States Air Force Reserve.

On the basis of scholastic attainment and demonstrated leadership ability, certain qualified students will be designated as Distinguished Military Students, and certain selected DMS's, upon graduation from the University and successful completion of the Advanced Course, AF ROTC,

will be designated as Distinguished Military Graduates. As such they will be eligible to apply for Regular Air Force Commissions.

The Advanced Course, AF ROTC, once entered upon, must be completed as a prerequisite for graduation.

Two career training options are taught in the AF ROTC Advanced Course. Administration and Logistics is open to students in all colleges except the College of Engineering. Students in the College of Engineering are eligible to pursue the Advanced Course in Aircraft Maintenance and Engineering, which is taught on the Cooperative schedule.

THE ADVANCED CAMP

Advanced R. O. T. C. camps of six weeks' duration are conducted annually at military reservations designated by the Department of the Army and Air Force. Students will be required to complete the camp program unless sooner discharged from the R. O. T. C. for the convenience of the Government, and will normally attend immediately after completing the first year advanced course. Attendance at summer camp for engineering cooperative students will be delayed until the summer immediately following graduation. The pay of the seventh enlisted grade while at advanced camp, and travel pay from the University to and from camp at the rate of 5 cents per mile will be paid each student.

MILITARY SCIENCE AND TACTICS

- 11-12. BASIC MILITARY SCIENCE. $1\frac{1}{2}$ credits each semester.
Three 1-hour classes each week. Required of freshmen men not taking 13-14.
- 43-44. SECOND YEAR BASIC MILITARY SCIENCE. $1\frac{1}{2}$ credits each semester.
Either 43-44 or 53-54 is required of second-year men.
- 101-102. ADVANCED MILITARY SCIENCE—INFANTRY. 3 credits each semester.
Prerequisite, 44 and approval.
- 111-112. ADVANCED MILITARY SCIENCE—INFANTRY. $1\frac{1}{2}$ credits each semester.
For Prejunior Cooperative Engineering Students. Prerequisite, 44 and approval.
113. ADVANCED MILITARY SCIENCE—INFANTRY. $1\frac{1}{2}$ credits. Summer term or fall.
For Cooperative Engineering Students. Prerequisite, 112.
- 121-122. ADVANCED MILITARY SCIENCE—INFANTRY. $1\frac{1}{2}$ credits each semester.
For Junior Cooperative Engineering Students. Prerequisite, 113.
141. ADVANCED MILITARY SCIENCE—INFANTRY. $1\frac{1}{2}$ credits.
For Senior Cooperative Engineering Students. Prerequisite, 122.
- *151-152. ADVANCED MILITARY SCIENCE—INFANTRY. 3 credits each semester.
For Seniors. Prerequisite, 102 or 141 for Engineering Students entering 152.

*Since Cooperative Plan students either work or attend school during the summer camp training periods following their pre-junior and junior years, all such students are required to attend ROTC summer camp immediately following graduation. University diplomas and Reserve Commissions are awarded to these students immediately following the summer camp period.

AIR SCIENCE AND TACTICS

- 13-14. BASIC AIR SCIENCE. $1\frac{1}{2}$ credits each semester. Three 1-hour classes each week. Required of freshmen not taking 11-12.
- 53-54. SECOND YEAR BASIC AIR SCIENCE. $1\frac{1}{2}$ credits each semester.
Prerequisite, 14. 43-44 or 53-54 is required of second-year men.
- 103-104. ADVANCED AIR SCIENCE. 3 credits each semester.
Prerequisite, 54 and approval.
- 115-116. ADVANCED AIR SCIENCE. $1\frac{1}{2}$ credits each semester.
Prerequisite, 54 and approval. For Prejunior Cooperative Engineering Students.
117. ADVANCED AIR SCIENCE. $1\frac{1}{2}$ credits. Summer term or fall.
Prerequisite, 116. For Cooperative Engineering Students.
- 125-126. ADVANCED AIR SCIENCE. $1\frac{1}{2}$ credits each semester.
Prerequisite, 117. For Junior Cooperative Engineering Students.
- 153-154. ADVANCED AIR SCIENCE. 3 credits each semester.
Prerequisite, 104. For full-time students.
155. ADVANCED AIR SCIENCE. $1\frac{1}{2}$ credits.
For first semester Senior Cooperative Engineering Students. Prerequisite, 126.
156. ADVANCED AIR SCIENCE. 3 credits.
For second semester Engineering Seniors. Prerequisite, 155.
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THE UPPER COLLEGES

BUCHTEL COLLEGE OF LIBERAL ARTS

ERNEST H. CHERRINGTON, JR., PH.D., *Dean*

Buchtel College was founded as a College of Liberal Arts in 1870 by the Ohio Universalist Convention in cooperation with the Honorable John R. Buchtel. It became a part of the Municipal University of Akron (now the University of Akron) December 15, 1913, and is known as Buchtel College of Liberal Arts.

OBJECTIVES OF THE COLLEGE
WITH REFERENCE TO ITS STUDENTS

1. To acquaint them with the world of nature and human life by giving them a survey of the chief fields of knowledge.
2. To train them in the scientific method, and help them form habits of clear thinking.
3. To arouse their intellectual curiosity and stimulate their scholarly growth.
4. To give them the necessary general preparation for post-graduate study; for entering schools of law, medicine, dentistry, and other professions; or for careers in art, music, and other cultural fields.
5. To help them appreciate beauty in all its forms, and thus furnish them with resources for enjoying their leisure hours.
6. To develop and strengthen in them a sense of social responsibility in order that they may have a proper regard for the rights of others, and to prepare them for an active and intelligent citizenship.
7. To help them acquire good manners and develop a moral strength adequate to cope with the various situations in which they find themselves.

DIVISIONS OF THE COLLEGE

Buchtel College of Liberal Arts includes four divisions: Humanities, Social Sciences, Natural Sciences, and Applied Arts.

The allocation of departments and particular fields of study to the several colleges does not mean that election of courses is restricted to students enrolled in a particular college. The student may cross college lines, under proper supervision, should this be necessary to enable him to select the courses best suited to his needs.

SUBJECTS OF INSTRUCTION IN THE DIVISIONS

The departments and subjects of instruction are grouped under the divisions as follows:

HUMANITIES	NATURAL SCIENCES	SOCIAL SCIENCES	APPLIED ARTS
Latin and Greek	Biology	Economics	Art
English	Chemistry	History	Commerce
Modern Languages	Mathematics	Political Science	Home Economics
Music	Physics	Sociology	Industrial Management
Philosophy			Journalism
Speech			Secretarial Science

A major is also offered in psychology.

OBJECTIVES OF THE HUMANITIES DIVISION

1. To develop in the student an awareness of, and appreciation for, man's cultural heritage in literature, art, music, and philosophy, together with an understanding of the necessity for its preservation and enrichment.
2. To send out into the world men and women who not only can do things but also can understand things; who view the present in its proper relation to the past; who remain hopeful because they have enjoyed an ennobling acquaintance with the aspirations and achievements of the world's great creative artists; who are better citizens because they are thoughtful citizens; who are happier human beings because they can enjoy the use of their own minds.
3. To aid the student in his efforts to express himself clearly and forcefully in his mother tongue.
4. To motivate the student toward independent study so that he may continue to pursue his aesthetic and philosophical interests after he has finished his college work.
5. To offer the student such training in the individual subject fields that he may be able to pursue his chosen study beyond his undergraduate work.
6. To encourage the student to develop latent creative ability.

OBJECTIVES OF THE NATURAL SCIENCE DIVISION

1. To acquaint the student with the various fields of science as an aspect of world culture.
2. To prepare the student for further training in the graduate, professional, and technical schools.
3. To provide that still larger group who either do not desire or are unable to continue their academic training, with such knowledge, techniques, and skills as will enable them to become competent citizens.
4. To make technical service and information available to the city and its industries through the libraries and laboratories of the division.

In order to accomplish these objectives, the division offers courses designed to prepare students for the following fields:

- Graduate study in biology, chemistry, mathematics, physics.
- The study of medicine.
- The teaching of science in high school.
- Technical laboratory work in rubber chemistry.
- Technical laboratory work in applied physics.
- Position as hospital technician.
- Expert technical service.

OBJECTIVES OF THE SOCIAL SCIENCE DIVISION

1. To give students cultural and useful information in the fields of economics, history, political science, and sociology.
 2. To prepare students for graduate study in the professions, in public service, and in business, and in so doing to emphasize sound methods of inquiry, fair criticism, and love of truth.
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3. To inculcate in students a sense of social responsibility, and a respect for the opinions and rights of others; to equip them with a knowledge of human relationships and with qualities of leadership so that they may function worthily in, and seek to improve, our social order; and to enable them to enjoy human fellowship and to maintain a saving sense of humor in the process of social adjustment.

4. To supply the local community with expert service in the field of social science.

OBJECTIVES OF THE DIVISION OF APPLIED ARTS

1. To give students the necessary preparation for vocations in the fields included in the Division; to encourage general education and an appreciation of cultural values; to provide undergraduate educational programs suitable as a basis for advanced study; to help students in personal development and growth.

2. To encourage the faculty to think in terms of broad educational policy and to provide a means for an understanding of basic problems.

3. To serve the community by providing trained personnel and by being alert to changing community needs.

4. To assist returning veterans in solving their vocational problems and in achieving their vocational objectives.

PROMOTION REQUIREMENTS

In order to be enrolled in a division, the student must have completed, with a quality point ratio of two, 64 semester hours in the General College, including the required courses in general education and such prerequisites as may be prescribed for his field of concentration.

The admission of students to the Upper College is a responsibility of the academic deans in consultation with the Dean of Students and the heads of the departments concerned.

FIELDS OF CONCENTRATION

Each student chooses some field of concentration within the division. These fields of concentration vary, depending upon the student's preparation, interests, and objectives. The chief aim is to have the student pursue, under the guidance of the department head and the divisional chairman, that program of studies which most adequately meets his individual needs. The emphasis is not on any prescribed and inflexible program which all students must take, but rather on the individual student himself and what will best prepare him for his future work.

DIVISIONAL MAJORS

For students who do not desire any narrower field of concentration than the division itself, the following divisional majors are provided:

In Humanities, each program must include:

- a. At least 48 hours in the division, at least 24 hours of which must be in courses of 100 level or above. The minimum of 48 hours must include:
- b. At least 6 hours in each of any five of the following in so far as these hours are applicable toward the B.A. degree: English, Philosophy, Speech, Music, French, German, Spanish, Latin and Greek. These hours must include courses beyond the requirements in Freshman English and Foreign Language for promotion to Upper College.
- c. In addition, at least 6 hours in the Department of History.

In Social Science, irrespective of the introductory courses in general education, each program must include:

- a. At least 54 semester hours in the division. Only courses which count toward the B.A. degree may be included.
- b. At least 18 hours and not more than 21 hours in each of two departments. No hours in excess of 21 in any one department will be accepted for credit unless the student meets requirements of such department for graduation.
- c. At least 9 hours in each of two other departments, or 18 hours in one other department.
- d. At least 24 hours of divisional courses on the upper college level.
- e. At least 24 hours outside the division.
- f. Mathematics 57, Social Statistics.

In Natural Science, in addition to the introductory and other required courses in general education each program must include:

- a. A minimum of 12 semester credit hours in each of the four departments, but not more than 24 credit hours in any one department.
- b. A minimum of five courses in the division on the upper college level, but to be taken in at least two departments.
- c. Only courses which count toward the B.S. degree may be included.
- d. Courses from any, or all of the other divisions are to be substituted for the Introduction to Natural Science.

Students choosing divisional majors in Social Science and Natural Science are required to pass a general final examination in the second semester of the senior year.

AMERICAN CIVILIZATION MAJOR

Students majoring in American Civilization are under the direct supervision of the Dean of the College of Liberal Arts. Those who are considering this major are urged to consult with the Dean of Students as early as possible in the second year. Printed instructions describing the requirements of this field of study are available in the Dean's office.

INTERNATIONAL BUSINESS MAJOR

For those interested in business with or in other countries, a special curriculum in International Business is provided, leading to a bachelor's degree. It includes fundamental business subjects as well as courses in Language, History, and Geography.

Students majoring in International Business are under the supervision of Professor H. M. Douth, chairman of the Applied Arts Division. An outline of this curriculum is available in his office.

DEGREES

The following degrees are granted in the divisions:

The Humanities: Bachelor of Arts.

The Social Sciences: Bachelor of Arts.

The Major in American Civilization: Bachelor of Arts.

The Natural Sciences: Bachelor of Science. (However, at the discretion of the divisional chairman, students majoring in mathematics may be granted the Bachelor of Arts degree if much of their work is in the humanities or social sciences.)

The Applied Arts: Bachelor of Arts; Bachelor of Science in Art; Bachelor of Science in Business Administration; Bachelor of Science in Secretarial Science; Bachelor of Science in Industrial Management.

REQUIREMENTS FOR GRADUATION

1. A minimum of 128 semester hours, including the work in the General College. Electives included in the 128 semester hours of work may consist of any courses offered for credit in the University provided that the prerequisites as set forth in the current Catalog are met and provided further that not more than 2 semester hours of physical education activities, 8 semester hours of applied music, 4 semester hours of music organizations, and 4 semester hours of typing are included.

2. A minimum quality point ratio of two in the major field and for all work attempted.

3. The recommendation of the student's major professor.

4. Except in commerce, secretarial science, and industrial management, completion of the second year of a foreign language on the university level.

5. Exclusive of the required courses in general education in the General College, students are expected to take at least fifty per cent—and it is desirable that they take not more than seventy-five per cent—of their total work for graduation in their major division.

6. Participation in Baccalaureate and Commencement exercises and discharge of all University obligations.

PREPARATION FOR HIGH SCHOOL TEACHING

All Liberal Arts students who wish to prepare for high school teaching must register with the Dean of the College of Education two years prior to the time at which they expect to begin teaching.

Each prospective high school teacher is expected to be prepared to teach in one major and two minor fields, according to the grouping of subjects by the State Department of Education.

For additional information concerning requirements see College of Education.

Professional requirements and their sequence:

Second Year General College

First Semester	Cr. Hrs.	Second Semester	Cr. Hrs.
General Psychology	3	Educational Psychology	3
Introduction to Education	3		
(first or second semester)			

First Year Upper College

Methods	3	Tests and Measurements	2
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Second Year Upper College

Principles of Education	3	Student Teaching	6
— or —		School Management	2
Student Teaching	6	— or —	
School Management	2	Principles of Education	3

SUBJECTS OF INSTRUCTION

ART

Professor Davis, Associate Professor Cable, Mrs. Packan, Mrs. Archer, Miss Moch, Mr. Protheroe, Mrs. Ruth, Mr. Bell

Prerequisites in the General College: To enter Art as a field of concentration students should have completed in the General College the following courses in addition to the required courses in general education: Design, 4 credits; Art Appreciation, 4 credits; Industrial Design, 2 credits; Drawing and Rendering, 4 credits; Ceramics, 4 credits; Crafts 70, 2 credits; and the second year of a foreign language.

<i>Required Courses in the Upper College:</i>	<i>Cr. Hrs.</i>
History of Art	9
Commercial Art	4
Graphic Arts	4
Crafts 102	2
Costume or Interior Decoration	6
Figure Drawing	4
Still Life Painting	4
Electives in Art	8

Students interested in entering the field of Occupational Therapy should consult the head of the department. Preliminary work may be planned, but a full curriculum is not offered.

Students taking laboratory courses are expected to rent lockers to adequately provide for the storage of their materials, the number of lockers to be determined by the type and number of courses.

21. DESIGN. *Either semester. 2 credits.*

Basic principles of design and color theory, with adaptation to specific problems.

22. DESIGN. *Either semester. 2 credits.*

Prerequisite, 21. Problems in commercial design, and designs suitable for adaptation to textiles, wood, metal, and plastics.

23-24. COSTUME—STYLES AND FASHION. *2 credits each semester.*

It would be desirable for Design 21-22 to precede this course. A study of costume design and influences contributing to styles and fashions. Attention is given to the full range of costume and accessories, stressing the relation to the human figure, the occasion and the specific individual. No credit toward major.

29-30. APPRECIATION OF ART. *2 credits each semester.*

Discussion of basic principles of design and color theory and their adaptation to our surroundings and the articles which we use. The development of graphic art and design through the ages.

33-34. HOUSE PLANNING AND DECORATION. *2 credits each semester.*

It would be desirable for Design 21-22 to precede this course. A study of various types of housing and interiors, together with a survey of furniture, textiles, etc., with emphasis on both historic and contemporary styles. The work will be carried on by means of lecture, discussion and demonstration, with some simple laboratory problems. Attention will be given to individual problems. No credit toward major.

37-38. DESIGN AND COMPOSITION IN COMMERCIAL ART. 2 credit hours each semester.

It would be desirable for Design 21-22 or Drawing and Rendering 45-46 to precede this course. The basic principles of design are stressed in their relation to the field of Commercial Art. Laboratory work includes lettering, color theory, layout, the use of commercial art techniques as applied to specific problems. No credit toward major.

43. INDUSTRIAL DESIGN. First semester. 2 credits.

Prerequisite, 22. Geometrical construction, lettering, orthographic, isometric and cabinet projection. Consideration of the requirements for Industrial Design, of materials and processes and the carrying out of the full procedure in design to meet these requirements.

45-46. DRAWING AND RENDERING. 2 credits each semester.

Basic course for training the eye in freehand perspective, composition and representation of still life, figures and landscape through the use of various mediums.

50-51. DRAWING AND PAINTING. 2 credits each semester.

It would be desirable for Drawing and Rendering 45-46 to precede this course. The aim is to develop an appreciation of color and composition through laboratory participation. Most of the problems will be in the nature of still life, every effort being made to offer the student as wide a range of painting experiences as possible. The first semester will be oil and the second, water color. No credit toward major.

59. CERAMICS. First semester. 2 credits.

Prerequisite, 22. Simple forming processes, hand built, wheel and mold, and decorating, glazing and firing procedures. Fee, \$4.

60. CERAMICS. Second semester. 2 credits.

Prerequisite, 59. More advanced work in the design of pottery forms, with considerable emphasis on small ceramic sculpture. Fee, \$4.

70. CRAFTS. 2 credits.

Prerequisite, 22. Simple crafts using a diversified assortment of materials, and stressing the design element. Fee, \$1.

75. HISTORY OF ART, CLASSICAL AND MEDIEVAL. 2 credits.

A consideration of the architecture, painting, sculpture, and the minor arts, from Prehistoric times to the close of the Middle Ages. No credit toward major.

76. HISTORY OF ART, RENAISSANCE. 2 credits.

It would be desirable for History of Art 75 to precede this course. A survey of the arts of Western Europe from 1500. Emphasis will be upon architecture, painting and sculpture. No credit toward major.

77. HISTORY OF ART, MODERN. 2 credits.

It would be desirable for History of Art 76 to precede this course. A consideration of the arts of France and the United States, with considerable emphasis upon contemporary art. No credit toward major.

UPPER COLLEGE

102. CRAFTS. 2 credits.

Prerequisite, 70. More advanced work in crafts with particular attention given to materials and their limitations. Fee, \$1.

104. GRAPHIC ARTS. First semester. 2 credits.

Prerequisite, 46. Block printing, single and multi color, stencil, etching. Fee, \$1.50.

105. GRAPHIC ARTS. *Second semester. 2 credits.*

Prerequisite, 104. Acid and dry point etching, screen printing, film and touche, wood cut. Fee, \$1.50.

106-107. WEAVING. *2 credits each semester.*

Prerequisite, 22. Warping and threading of looms; plain and pattern weaving on different types of looms.

108-109. METAL CRAFT. *2 credits each semester.*

Prerequisite, 22. Work in copper, brass, pewter, silver, using different methods: hammering, sawing, etching, stone setting and enameling. Making small objects and jewelry.

115-116. STILL LIFE PAINTING. *2 credits each semester.*

Prerequisite, 46. Oil paints and water colors are the mediums used. Skill in handling these materials and a feeling for color and composition.

131-132. COMMERCIAL ART. *2 credits each semester.*

Prerequisites, 22 and 45. A practical course in advertising art-layout, lettering, processes of reproduction, materials and mediums. 1950-51 and alternate years.

151-152. COSTUME. *3 credits each semester.*

Prerequisite, 22. History of costume and its influence on dress of the present day. 1949-50 and alternate years.

171-172. INTERIOR DECORATION. *3 credits each semester.*

Prerequisite, 43 and 45. History of traditional types of houses; house plans, elevations, and blue prints; study of interiors and furnishings. 1950-51 and alternate years.

175-176. FIGURE DRAWING. *2 credits each semester.*

Prerequisite, 46. Study of anatomy, action and proportion of the human figure. Fee, \$1.50 each semester.

179. ILLUSTRATION. *First semester. 2 credits.*

Prerequisite, 176. Psychology of art for children of different ages; illustration of children's books. 1949-50 and alternate years.

180. ILLUSTRATION. *Second semester. 2 credits.*

Prerequisite, 176. Techniques used in fashion, newspaper and other advertising. Story and book illustration for adults. 1949-50 and alternate years.

200. HISTORY OF ART, CLASSICAL AND MEDIEVAL. *First semester. 3 credits.*

A survey of architecture, sculpture, painting and the minor arts as they developed in Prehistoric, Egyptian, Mesopotamian, Aegean, Greek, Roman, Byzantine, Romanesque and Gothic civilizations.

201. HISTORY OF ART, RENAISSANCE. *Second semester. 3 credits.*

A survey of the arts in Italy, Spain, Flanders, Holland, Germany, and England with historical background.

202. HISTORY OF ART, MODERN. *First semester. 3 credits.*

A survey of the arts of France and America. Study of conditions leading to modern movements and reactions of the present day.

203-204. HISTORY OF ART SEMINAR. *3 credits each semester.*

Prerequisite, 202. A restricted field of study to be selected by the individual or group.

225-226. SPECIAL PROBLEMS IN ART. *3 credits each semester.*

Prerequisite, permission of head of department. Problems of an advanced nature in the field of special interest.

BIOLOGY

Professor Kraatz, Associate Professor Acquarone, Assistant Professor Cantor, Miss Park, Mrs. Katz, Miss Horning

Biology major students must secure 36 credits in the department; graduate schools require a larger number of credits.

Major students must include Zoology 61-62 and Botany 51-52, in the General College. Either can be taken in the freshman year, and the other in the sophomore year, or both in the sophomore year. If one of these is deferred until the junior year, it will be impossible to work in a sequence of advanced courses in that science in the remaining year.

Upper College courses may be: (1) General Biological, which may include any combination of Upper College biology courses, but including Biology Seminar; (2) Zoological, which must include Biology Seminar, General Genetics, and as many of the following as feasible: Organic Evolution, Invertebrate Zoology, Entomology, Vertebrate Zoology, Vertebrate Anatomy, Embryology, and Human Physiology. (3) Botanical, which must include Biology Seminar, Field Botany, Plant Physiology, and General Genetics or Plant Anatomy, or at least one semester of Bacteriology.

Biological Problems is open to seniors, and in exceptional cases to juniors, who desire to work on some definite problems, a type of minor research.

Geology and Conservation of Natural Resources do not count in the Biology Major. They are free electives.

Required work in other departments: Chemistry 21-22 and in some cases a second year, preferably either Organic Chemistry 44 and 107 or Organic Chemistry 55 and Physiological Chemistry 56, but for other biology majors, interested more in social sciences or in meeting teaching requirements, only Chemistry 21-22; German 43-44 or French 43-44; and Psychology 41. Recommended are Physics 51-52, Mathematics 21-22, and Sociology 41.

PRE-MEDICAL MAJOR COURSE

First Year

First Semester	Cr. Hrs.	Second Semester	Cr. Hrs.
English 1	3	English 2	3
Hygiene, Mental 15	2	Hygiene, Physical 16	2
Int. to Social Science 5	3	Int. to Social Science 6	3
Mathematics 21	3	Mathematics 22	3
Inorganic Chemistry 21	4	Inorganic Chemistry 22	4
Military Training 11	1½	Military Training 12	1½
Physical Education 3	1	Physical Education 4	1

Second Year

General Zoology 61	4	General Zoology 62	4
Qualitative Analysis 43	5	Organic Chemistry (El.) 44	4
Int. to Humanities 7	3	Int. to Humanities 8	3
German 21	4	German 22	4
Military Training 43	1½	Military Training 44	1½

Third Year

Vertebrate Anatomy 155	4	Embryology 256	4
Organic Chemistry (Int.) 107	4	Physics 52	4
Physics 51	4	German 44	3
German 43	3	Psychology 41	3

Fourth Year

General Physiology 235	3	General Physiology 236	3
Physics (Optics) 53	4	Human Genetics 148	2
Quantitative Analysis 105	4	Quantitative Analysis 106	4
Electives, Humanities or Social Science Division	4-6	Applied Psychology 43	3
		Electives, Humanities or Social Science Division	3-6

Women students must take six more hours elective in Humanities or Social Science divisions in place of the six credits of R. O. T. C.

Biological courses listed in third and fourth years may have to be reversed in the schedule because Biology 235, 236, and 148 are given in alternate years.

PRE-TECHNICIANS' COURSE

The registry of Medical Technologists requires a year of hospital laboratory training preceded by a minimum of two years of college. The two-year schedule comprises (1) Absolute requirements: biology, 8 semester credits; bacteriology, 3 semester credits; inorganic chemistry, 8 credits; quantitative analysis, 3 credits; (2) "Highly recommended" courses: physics, 8 credits; organic chemistry, 4 credits.

A three-year curriculum is arranged which includes: (1) the University required general college introductory courses; (2) the above minimum requirements; and (3) such other courses as are found in other pre-technician curricula and are deemed helpful by hospital technicians.

The student can complete four years with the B.S. degree by fulfilling the additional requirements of the biology major.

University courses included in the three-year curriculum are: English 1 and 2, 6 credits; Hygiene 15 and 16, 4 credits; Physical Education 3 and 4, 2 credits; Social Science 5 and 6, 6 credits; Humanities 7 and 8, 6 credits; Algebra 21, 3 credits; Chemistry 21 and 22, 8 credits; Chemistry 45, 3 credits; Chemistry 55 and 56, 8 credits; Physics 51 and 52, 8 credits; Zoology 61 and 62, 8 credits; Bacteriology 107 and 108, 8 credits; Histological Technique 154, 3 credits; Physiology 135 and 136, 6 credits, or Physiology 91, 4 credits.

GENERAL COLLEGE

No credit is given toward graduation for less than a full year's work in 51-52 and 61-62.

33. MICROBIOLOGY. 3 credits.

A survey of the bacteria and other micro-organisms in their relation to mankind. Two lectures and one 2-hour laboratory period a week. Required in the nurses' training curriculum.

35. NATURE STUDY. 3 credits.

Common plants and animals of this region, their life, habits and interrelations. Adapted to use of teachers of nature study. Some field trips will be made.

41-42. GENERAL GEOLOGY. 4 credits each semester.

Study of the earth, its materials, its surface features, and its changes during the ages. Three lectures and one 3-hour laboratory period a week. Lab. fee, \$2.50 each semester.

47-48. ANATOMY AND PHYSIOLOGY. 3 credits each semester.

The anatomy of the human body, chiefly gross anatomy of all organ systems, and the functions or processes of the organ systems. Two lectures and one 3-hour laboratory and demonstration period a week. Required in the nurses' training curriculum. Not open to biology and pre-medical majors. Lab. fee, \$3 a semester.

51-52. GENERAL BOTANY. 4 credits each semester.

The study of plants, their anatomy, physiology, and a survey of plant groups and evolution in the plant kingdom. Required of biology majors. Two lectures and three 2-hour laboratory periods a week. Lab. fee, \$4 each semester.

61-62. GENERAL ZOOLOGY. 4 credits each semester.

The study of animals, their general characteristics and functions. Required of biology, pre-dental, and pre-medical majors. Two lectures and three 2-hour laboratory periods a week. A survey of all the animal phyla. In the laboratory representative animals of the phyla are studied. An explanation of animal evolution and genetics. Lab. fee, \$5 a semester.

71. SANITATION. First semester. 3 credits.

Principles of public health, communicable disease control, and sanitation. Three lectures a week.

77-78. INTRODUCTORY BACTERIOLOGY. 4 credits each semester, or lecture separately, 2 credits each semester.

The role of microorganisms in nature, industry and disease. Morphology, physiology, and cultural and serological techniques. Two lecture hours and two 3-hour laboratories a week, on two evenings. Students getting credit for 77-78 cannot take 107-108. Lab. fee, \$7.50 each semester; breakage fee, \$5 each semester.

82. CONSERVATION OF NATURAL RESOURCES. *Second semester. 3 credits.*

Survey of the principles and practice of conservation of mineral, plant and animal resources. Three class periods a week. 1949-50 and alternate years.

91. INTRODUCTORY HUMAN PHYSIOLOGY. *Either semester. 4 credits.*

A briefer study of modern human physiology than course 135-136. Adapted especially to the needs of students in Home Economics. Not open to biology and pre-medical majors. No prerequisites in biology. Two lectures and two 2-hour laboratory and demonstration periods a week. Lab. fee, \$4.

UPPER COLLEGE

107-108. BACTERIOLOGY. *4 credits each semester.*

The role of micro-organisms in nature, industry, and disease. Morphology, physiology, and cultural and serological techniques. Required in pre-technicians' course. Two lecture hours and three 2-hour laboratory periods a week. Prerequisite, 51-52, 61-62, or General Chemistry. Lab. fee, \$7.50 each semester; breakage fee, \$5 each semester.

113-114. FIELD BOTANY. *3 credits each semester.*

The classification and recognition of plants, principally seed plants of the region. Two lectures and three hours of laboratory a week. Course 51-52 is desirable as background. 1949-50 and alternate years. Lab. fee, \$4 each semester.

135-136. HUMAN PHYSIOLOGY. *3 credits each semester.*

The physiology or functioning of the human body. The processes going on in all organ systems, including considerable emphasis on metabolism and blood. For biology majors. Not open to pre-medical majors. Two lectures and one 3-hour laboratory period a week. Prerequisite, General Zoology 61-62 or equivalent and some beginning chemistry. 1950-51 and alternate years. Lab. fee, \$4 each semester.

141. INVERTEBRATE ZOOLOGY. *First semester. 4 credits.*

A study of all invertebrate groups, their classification and anatomy and life history of representative types. Two lectures and two 3-hour laboratory periods a week. 1948-49 and alternate years. Prerequisite, 61-62. Lab. fee, \$4.

144. GENERAL ENTOMOLOGY. *Second semester. 4 credits.*

Insects, their nature, structure, life history, and economic importance. Most of the time is devoted to a study of insect orders, with reference to representative families and types. An insect collection is made. Two lectures and two 3-hour laboratory periods a week. 1948-49 and alternate years. Prerequisite, 61-62. Lab. fee, \$4.

146. GENERAL GENETICS. *First or second semester. 3 credits.*

Study of the principles of heredity illustrated by plant and animal organisms. Three class periods a week. 61-62 or 51-52 or equivalent desirable as background. 1948-49 and alternate years. Lab. fee, \$1.

148. HUMAN GENETICS. *First or second semester. 2 credits.*

Study of the principles of heredity as illustrated by the human species, and with attention to eugenics problems. Required of pre-medical majors. Prerequisite, 61-62, but for advanced sociology students without this prerequisite. 1949-50 and alternate years. Fee, \$1.

151. ORGANIC EVOLUTION. *First semester. 3 credits.*

History of the evolution concept. A study of all the fields of evidence for evolution. Trends of animal evolution through the ages. Theories of methods of evolution. Three lectures a week. Prerequisite, 61-62. 1949-50 and alternate years.

154. HISTOLOGICAL TECHNIQUE. *Either Semester. 3 credits.*

A course in the methods of preparation of tissues and other specimen materials for microscopical study. No lectures. Nine hours of laboratory work a week. Required in pre-technicians' course. Suitable for biology majors. Prerequisite, 61-62. Lab. fee, \$6.

155. VERTEBRATE ANATOMY. *First semester. 4 credits.*

The vertebrate animals, and the related protochordates. A comparative study of all organ systems from fishes to mammals included. Laboratory work on shark, *Necturus*, and cat. Required of pre-medical majors. Prerequisite, 61-62. Two lectures and two 3-hour laboratory periods a week. Lab. fee, \$12.

215-216. PLANT PHYSIOLOGY. *4 credits each semester.*

Water, soil and mineral requirements of plants, and their metabolism, growth and response to stimuli. Two lectures and six hours of laboratory a week. Prerequisite, 51-52 and some knowledge of chemistry. 1948-49 and alternate years. Lab. fee, \$6 each semester.

217. PLANT ANATOMY. *First semester. 4 credits.*

Structure of cells, tissues and organs of land plants; relation of structure to utilization of plants. Two lectures and six hours of laboratory a week. Prerequisite, 51-52. 1949-50 and alternate years. Lab. fee, \$4.

235-236. GENERAL PHYSIOLOGY. *3 credits each semester.*

A study of all physiological principles. Fundamental life processes as exhibited in all organisms, especially in the complicated organ systems of the higher vertebrates. Required of pre-medical students. Prerequisites, Inorganic and Organic Chemistry. Two lectures and one 3-hour laboratory period a week. 1949-50 and alternate years. Lab. fee, \$4 each semester.

256. EMBRYOLOGY OF VERTEBRATES. *Second semester. 4 credits.*

General early embryonic development of vertebrates and relatives, and, chiefly, the more detailed embryology of frog and chick. Two class periods and two 3-hour laboratory periods a week. Required of pre-medical majors. Prerequisite, 155. Lab. fee, \$7.50.

258. VERTEBRATE ZOOLOGY. *Second semester. 3 credits.*

The classification of vertebrates and related protochordates. From primitive fishes through mammals, orders, classes, and some families and representative types are studied as to their significant characteristics. All available types are examined in the laboratory. Two lecture hours and one 3-hour laboratory period a week. Prerequisite 61-62. 1951-52 and alternate years. Lab. fee, \$4.00.

265. BIOLOGY SEMINAR. *First semester. 2 credits.*

Discussions and written reports on biological books and papers from current biological literature. One class period a week. Required of biology major seniors.

267-268. BIOLOGICAL PROBLEMS. *1 to 3 credits each semester.*

Individual problem work of laboratory type. Open to seniors and, in exceptional cases, to juniors. Two continuous semesters are advisable. Lab. fee, \$2 per credit.

367-368. RESEARCH. *3 or more credits each semester.*

Individual problem work of a more advanced nature. May include thesis work for the master's degree. Open to graduate students. Lab. fee, \$2 per credit.

CHEMISTRY

*Professors Cook, Whitby and Schmidt, Associate Professor Floutz,
Assistant Professors Anderson, Corsaro and Wolfe,
Mr. Sumner, Mr. Morton*

To be properly qualified for admission to the prescribed work (listed below) in the Upper College, the student must have completed in the General College the required courses in general education and in addition the following or their equivalent: Algebra and Trigonometry, 6 hours; Analytics and Calculus, 9 hours; Chemistry 21-22, 8 hours; Chemistry 43, 5 hours; Chemistry 44, 4 hours.

Fees: In addition to laboratory fees, a deposit of \$5 for breakage is required in each course.

GENERAL COLLEGE

**21-22. GENERAL INORGANIC CHEMISTRY. 2 credits recitation,
2 credits laboratory each semester.**

A study of the basic facts and principles of chemistry, the occurrence, preparation, and properties of the elements. Production and properties of the more important compounds with emphasis on inorganic chemistry. Laboratory experiments illustrate the principles studied. No credit is given toward graduation for less than the full year's work. Lab. fee, \$10 each semester.

23-24. INORGANIC CHEMISTRY. 2 credits recitation, 1 credit laboratory each semester.

Designed primarily for students in home economics. The course presents the fundamental laws and theories of chemistry together with a study of the more important elements and their compounds. 1949-50 and alternate years. Lab. fee, \$5 each semester.

25. CHEMISTRY FOR NURSES. 3 credits recitation, 1 credit laboratory.

Planned especially for women taking nurses' training course in hospitals. The course covers the necessary fundamentals in inorganic, organic and physiological chemistry. Lab. fee, \$5.

**43. QUALITATIVE ANALYSIS. First semester. 3 credits recitation,
2 credits laboratory.**

Prerequisite, 22. The classwork emphasizes the mathematical aspects of chemical equilibrium. The semimicro method is employed in the laboratory for separation and identification of ions. Lab. fee, \$10.

**44. ELEMENTARY ORGANIC CHEMISTRY. Second semester. 2 credits
recitation, 2 credits laboratory.**

Prerequisite, 22. A general survey of the field of organic chemistry with particular emphasis on fundamentals. Lab. fee, \$10.

**45. ELEMENTARY QUANTITATIVE ANALYSIS. Second semester.
1 credit recitation, 2 credits laboratory.**

Prerequisite, 22. A course intended primarily for students preparing to become laboratory or hospital technicians. Elementary theory and calculations in quantitative analysis will be studied, and fundamental operations in volumetric, gravimetric, and colorimetric analysis will be performed in the laboratory. One class period and two 3-hour lab periods per week. 1950-51 and alternate years. Lab. fee, \$5.

**55. ORGANIC CHEMISTRY. First semester. 2 credits recitation,
2 credits laboratory.**

Prerequisite, 24. A course designed especially for students in home economics whose needs are given especial attention. 1950-51 and alternate years. Lab. fee, \$10.

**56. PHYSIOLOGICAL CHEMISTRY. Second semester. 2 credits recitation,
2 credits laboratory.**

Prerequisite, 55. Planned as a continuation of 55 for students in home economics. Particular attention is given to the chemistry involved in digestion, absorption, and metabolism. 1950-51 and alternate years. Lab. fee, \$10.

UPPER COLLEGE

Third Year	Cr. Hrs.	Fourth Year	Cr. Hrs.
Introductory Physics 51-52	8	Advanced Physics 53	4
Intermediate Organic 107	4	Physical Chemistry 213-214	10
Advanced Organic 108	4	German 43-44	6
Quantitative Analysis 105-106	8		
Chemical Calculations 118	2		
German 21-22	8		

**105-106. QUANTITATIVE ANALYSIS. 2 credits recitation,
2 credits laboratory each semester.**

Prerequisite, 43. The theory, laboratory technique and calculations of quantitative analysis. Acidimetry and alkalimetry, oxidation and reduction, volumetric precipitation, and gravimetric methods, systematic analysis. The analysis of common ores, minerals and alloys. Lab. fee, \$10 each semester.

107. INTERMEDIATE ORGANIC CHEMISTRY. *First semester. 2 credits recitation, 2 credits laboratory.*
Prerequisite, 44. An intensive study of aliphatic and alicyclic compounds. Lab. fee, \$10.
108. ADVANCED ORGANIC CHEMISTRY. *Second semester. 2 credits recitation, 2 credits laboratory.*
Prerequisite, 107. A thorough study of aromatics, heterocyclics, and certain special topics as time permits. Lab. fee, \$10.
118. CHEMICAL CALCULATIONS. *Second semester. 2 credits recitation.*
Prerequisites, 43, 44, 105. A course designed primarily for department majors for the purpose of correlating the mathematics of undergraduate chemistry and giving further practice in the solving of typical problems.
- 131-132. ENGINEERING CHEMISTRY. *See College of Engineering.*
3 credits recitation, 1 credit laboratory each semester.
- 133-134. METALLURGY. *See College of Engineering.*
- 213-214. PHYSICAL CHEMISTRY. *3 credits recitation, 2 credits laboratory each semester.*
Prerequisites, 106, 107, Physics 52, Mathematics 46. The physical states of matter, thermodynamics, solutions, colloids, equilibrium, the phase rule, thermochemistry, chemical kinetics, electrochemistry, atomic and molecular structure, special topics, problems. Laboratory experiments carried on concurrently with the study of principles. Lab. fee, \$8 each semester.
- 227-228. INTRODUCTION TO RUBBER CHEMISTRY. *Evening session.*
2 credits each semester.
Prerequisite, 106, 107. A study of crude rubber, latex, vulcanization, physical testing, compounding, accelerators, synthetic rubber, reclaimed rubber. A somewhat briefer treatment of the topics listed under course 327-328. No laboratory work. Credit not given for this course and for 327-328.
229. POLYMERS AND POLYMERIZATION. *2 credits recitation.*
Prerequisites, 106, 108, and permission. The principles of addition and of condensation, polymerization, and of copolymerization in bulk, solution and emulsion; influence of chemical constitution and of molecular weight on the properties of high polymers; the study of specific polymers of importance.
250. INDUSTRIAL CHEMISTRY. *Second semester. 2 credits recitation.*
Prerequisites, 106-107. A lecture course designed to cover unit operations for industrial processes in chemical industries and the type of equipment and instruments used, together with their construction and operation.
- 307-308. ORGANIC ANALYSIS, QUALITATIVE OR QUANTITATIVE.
2 credits laboratory each semester.
Prerequisites, 106, 108. A course of laboratory instruction intended to familiarize the student with the methods of separation of the components of organic mixtures, the characterization and identification of the individual components. Quantitative analytical methods for carbon, hydrogen, nitrogen, sulfur, and the halogens are employed in the determination of the composition of pure substances. Lab. fee, \$8 each semester.
309. SPECIAL TOPICS IN ORGANIC CHEMISTRY. *First semester.*
2 credits recitation, 1 credit laboratory.
Prerequisite, 108. A study of special topics in advanced organic chemistry, such as terpenes, dyestuffs, medicinals, alkaloids, heterocyclic compounds, carbohydrates, etc. Lab. fee, \$10.
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Courses 313-314, 321-322, 323-324, and 325 are offered only when the demand warrants.

313-314. CHEMICAL THERMODYNAMICS. 2 credits recitation each semester.

Prerequisites, 214 and Calculus. The fundamental theories of thermodynamics and their applications in the chemical problems of equilibrium and stability.

321-322. ADVANCED INORGANIC PREPARATIONS. 2 credits laboratory each semester.

Prerequisites, 106, 214. Methods for preparing and purifying unusual compounds. Such operations as crystallization, distillation, sublimation, precipitation, and liquefaction will be performed. Lab. fee, \$8 each semester.

323-324. SPECIAL TOPICS IN PHYSICAL CHEMISTRY. 2 credits recitation each semester.

Prerequisites, 108 and 213. The periodic arrangement and properties of the elements; molecular and constitutive properties and instruments for their measurement; valence and chemical bond; reaction mechanisms and chemical kinetics; adsorption, catalysis; modern electrolytic theories and applications.

325. COLLOID CHEMISTRY. First semester. 2 credits recitation.

Prerequisites, 106, 107. A study of the principles of colloid chemistry. Methods of preparation. A study of the properties and stability of colloids, dialysis, coagulation, aerosols, hydrosols, gels, emulsions, and foams, with emphasis on applications.

326. CHEMISTRY OF LATEX TECHNOLOGY. 2 credits recitation.

Physical and chemical properties of latex. Concentration, testing, compounding. Dipped goods. Vulcanization. Electrodeposition. Cord and fabric impregnation. Sponge and porous products. Molded goods from latex. Adhesives. Synthetic rubber latices.

327-328. CHEMISTRY OF RUBBER TECHNOLOGY. 2 credits recitation. 2 credits laboratory each semester.

Prerequisites, 106, 107. Topics considered include those given under 227-228 with additional material and laboratory requirements. Credit is not given for this course and for 227-228. Lab. fee, \$15 each semester.

329. CHEMISTRY OF PLASTICS. 2 credits recitation.

Prerequisite, 107. The production, chemistry and applications of phenolic, urea and other thermosetting resins; cellulose derivatives, vinyl resins, polyamides, and other thermoplastic resins. Permission required to take this course.

330. CHEMISTRY OF PLASTICS LABORATORY. 1 credit laboratory.

Preparation of typical synthetic resins and plastics in illustration of the subject matter of course 329. Open only to students enrolled for 329. Lab. fee, \$15.

331-332. PHYSICAL CHEMISTRY OF HIGH POLYMERS. 2 credits recitation each semester.

Prerequisite, 214. First semester: definitions and classification of polymeric substances; kinetics of condensation and addition polymerization including molecular weight distribution and copolymerization; three dimensional polymers and gelation; the thermodynamics of polymer solution and fractionation of polymeric substances.

Second semester: physical properties of dilute solutions including sedimentation, viscosity and light scattering; theory of rubber-like elasticity; crystallization phenomena; the physical properties of bulk polymers including the melt viscosity and the critical temperature; plasticizer action and the constitution and properties of some naturally occurring polymeric substances.

The classroom work in each semester will be supplemented by student seminar reports on related papers from the literature.

365-366. RESEARCH. 1 to 3 credits each semester.

Open to properly qualified students. Supervised original research in the fields of inorganic, analytical, physical and organic chemistry, and in the chemistry and technology of rubber and plastics. Lab. fee, \$5 per credit.

COMMERCE

Professor Leigh, Associate Professor Gordon, Assistant Professors Simonetti, Tompkins, Frahm, Bray and McKinnon; Mr. Anderson, Mr. Davidson, Mr. Gruber, Mr. Ziegler, Miss Clark, Mr. Dewey, Mr. Riddle, Mr. Powers, Mr. Reed, Mr. Daverio, Mr. Lantz, Mr. Vobbe, Mr. Gilleland, Mr. Reynolds, Mr. Smith, Mr. Kidney, Mr. Murphy, Mr. Hancock, Mr. McKee, Mr. Smucker, Mr. Herberich, Mr. Farmer, Mr. Subrin, Mr. Beasley, Mr. Farwell.

The Department of Commerce offers professional training to men and women who plan to enter or advance themselves in the fields of business and industrial management. The curriculums aim to develop and apply those principles and techniques of economics, administration, and operation which are common to business and industrial organizations.

The University of Akron, situated in an active trade and industrial center, is particularly qualified to offer training in the areas specified. Lectures, problems, inspection trips, integrate theory and practice, and keep the student in touch with the actual developments in the various phases of Commerce.

The new Sales and Merchandising Laboratory offers a vehicle to bring the latest developments and practices in the marketing field into the classroom. The problems presented are utilized as problem material in the marketing, retailing, advertising, accounting and selling classes.

Through its evening courses, institutes, and special lectures, the department also is especially adapted to give specialized and upgrading training to men and women in Akron industry and business.

BUSINESS ADMINISTRATION

This program is adapted to students desiring to prepare for careers in the fields of business management, accounting, marketing and merchandising, advertising, sales, finance, or transportation. The various programs of study offered are presented on the following pages.

The degree of Bachelor of Science in Business Administration will be granted to those students who complete the prescribed work, including a problems course in the major area, or seminar.

BASIC CURRICULUM IN BUSINESS ADMINISTRATION

First Semester		Second Semester	
	Cr. Hrs.		Cr. Hrs.
English 1	3	English 2	3
Hygiene 15	2	Hygiene 16	2
Int. to Soc. Science 5	3	Int. to Soc. Science 6	3
Int. to Nat. Science 9	3	Int. to Nat. Science 10	3
R. O. T. C. 11	1½	R. O. T. C. 12	1½
Accounting 21	3	Accounting 22	3
Physical Education 3	1	Physical Education 4	1
<i>Second Year</i>			
Selling 81 or Typewriting 31	2	Typewriting 31 or Selling 81	2
Economics 41	3	Money and Banking 48	3
Int. to Humanities 7	3	Int. to Humanities 8	3
Bus. Org. and Mgt. 61	3	Econ. Geog. 54	3
R. O. T. C. 43	1½	R. O. T. C. 44	1½
*Accounting 27, 43, or 124	3	Production Mgt. 62	3
(Accounting majors take Accounting 44 here)			
<i>Third Year</i>			
Business Law 141	3	Business Law 142	3
Marketing 183	3	Advertising 185	3
Business Finance 171	3	(Accounting majors take Production Mgt. 62 here)	
Elective	3	Elective	4-7
Statistics 148	4	"Major" course	3-6

The courses specified above are common to all curriculums in the Business Administration field. During his Junior year, the student will elect a "major" or field in which he desires to specialize. He must complete a minimum of 15 hours of work in his "major", including two 3-hour courses on the 200 level.

*Non-accounting majors should take 27 or wait to take 124 in the junior year.

Fourth Year

First Semester		Cr. Hrs.	Second Semester		Cr. Hrs.
Major		6-9	Major		3-6
Elective		9-12	Business Policy 268		3
			Elective		6-9

Four fields of specialization are available: Accounting; Finance; Marketing, Merchandising and Advertising; and General Business.

The courses designated under each major with an asterisk (*) are required, while the others are applicable toward that major. The aim is to permit the major to be shaped to the student's individual needs. The student should select his major courses, discuss them and have them approved by his adviser.

ACCOUNTING

Courses	Cr. Hrs.	Courses	Cr. Hrs.
*Accounting 44	3	Advanced Accounting 231-232	6
*Cost Accounting 27	3	Federal Taxation 233-234	6
Advanced Cost Accounting 228	3	Accounting Systems 230	3
*Auditing 229	3	Budgeting 123	3
Accounting Problems 236	3		

FINANCE

Economics 208	3	*Investments 272	3
Insurance and Security 158	3	Economics 204	3
Banking Practice and Management 176	3	Security Analysis and Markets 277	3
		*Problems in Finance 279	3

MARKETING, MERCHANDISING AND ADVERTISING

Sales Promotion 287	2	Retailing 192	3
Retail Advertising 187	3	Art 131-132	4
*Sales Administration 291	3	Economics 268	3
Market Analysis 296	3		
*Problems in Marketing 293	3		

GENERAL BUSINESS

*Production Management 62	3	Purchasing 189	2
Cost Accounting 27	3	Problems in Finance 279	3
Transportation 151	3	*Sales Administration 291 or Retailing 192	3
Personnel Management and Relations 163-164	4	Economics 291	2
		Advanced Statistics 248	3

GENERAL COLLEGE

21-22. ACCOUNTING. 3 credits each semester.

This course provides the elementary financial and technical background essential to the study of business. It covers journalizing, posting, preparation of working papers, and construction and analysis of financial statements. Assets, liabilities, net worth, income, expenses, books of entry, controlling accounts, voucher system, and partnership and corporation problems are studied. Required of all commerce freshmen.

27. COST ACCOUNTING. 3 credits.

Prerequisite, Accounting 22 or 121. Required of all accounting majors. Theory and practice of accounting for material, labor, and overhead expenses with particular reference to manufacturing. Practice sets for job order and process cost industries.

41. SECRETARIAL ACCOUNTING. 3 credits.

This course is identical with Accounting 21, except that the approach and materials are directed more specifically toward the needs of the secretarial student.

42. SECRETARIAL ACCOUNTING. 3 credits.

An elementary course in accounting especially designed to meet the needs of secretarial science students. However, such students may take either this course or Accounting 22.

43-44. INTERMEDIATE ACCOUNTING. 3 credits each semester.

Prerequisite, Accounting 22. Required of accounting majors. Working papers, financial statements, advanced corporation and partnership problems, basic accounting theory, intensive analysis of balance sheet accounts, financial statement analysis.

51. BUSINESS LAW. 3 credits.

For students in secretarial science. No credit given toward B.S. in Business Administration. Covers the elements of contracts, sales, and negotiable instruments.

54. ECONOMIC GEOGRAPHY. 3 credits.

Climate, land forms, soils, mineral resources, and vegetation and their influence upon economic activity. Required of all commerce students.

61. BUSINESS ORGANIZATION AND MANAGEMENT. 3 credits.

A survey of modern business procedures, including kinds of business organizations, production systems, personnel problems, wage payment plans, product design, purchasing, marketing, and advertising.

62. PRODUCTION MANAGEMENT. 3 credits.

Prerequisite, 61. Divisions of the course will include the place of management in business; economics of industrial production; factors of production; and control of the production processes.

81. SELLING. 2 credits.

Examines the characteristics of effective salesmen, types of selling activities, the human relation factors in selling, and the creation and presentation of sales appeals.

82. CONSUMER ECONOMICS. 3 credits.**84. PUBLIC RELATIONS. 2 credits.**

General course in Public Relations covering newspaper publicity, industrial publications, and other types of organizational publicity and public activities.

94. MERCHANDISING. Evening session. 2 credits.

This basic course covers the subjects of merchandise buying, inventory and merchandise control, pricing, store layout, merchandise display, etc.

121. ACCOUNTING SURVEY. 3 credits.

Organized for engineers and other non-commerce majors who wish to gain an understanding of the uses of accounting. Clerical work is minimized. Students in industrial management may meet the full accounting requirements in commerce by registering for Accounting 121 and 123.

123. BUDGETING. 3 credits.

Prerequisite, Accounting 27 or 121. Covers the sales, production, and distribution budgets; comparison of budget with financial statements; and accounting problems involved.

124. MANAGERIAL ACCOUNTING. 3 credits.

Prerequisite, Accounting 22. Emphasis is laid on the interpretation of accounting data as a tool in effecting the necessary control of costs and operations of business and as a guide in formulation of business policy.

141-142. BUSINESS LAW. 3 credits each semester.

Origin of commercial law, operation and discharge of contracts, law of sales, agency, and negotiable instruments, partnerships and corporations, together with selected recent court cases integrated with the text material to demonstrate how principles apply to concrete cases.

144. LAW OF CREDIT AND COLLECTIONS. 2 credits.

Emphasizes types and characteristics of sales contracts, the law of collection procedure, liens, and other legal recourses of creditors.

146. REAL ESTATE LAW. 2 credits.

Directs attention to the legal problems connected with property transfer and acquisition, landlord and tenant relationships, trusts, etc.

148. ECONOMIC STATISTICS. 4 credits.

Prerequisite, 6 credits in Economics. Discusses the nature and uses of statistical data, ratio analyses, distribution curves, central tendencies, index numbers, and correlation.

151. TRANSPORTATION. 3 credits.

Prerequisite, Economics 41 and 183. A basic course in the economics of transportation, the requirements of an effective transportation system, rate-setting, etc.

152. TRAFFIC MANAGEMENT. 2 credits.

Prerequisite, 151. The classification of commodities, setting tariffs, routing, traffic claims, etc.

153-154. INTERNATIONAL COMMERCE. 2 credits each semester.

Covers the principles of international trade, balances, distribution machinery, and examines the characteristics and potentials of various foreign markets. Credit will not be given for both Foreign Trade and International Commerce.

156. FOREIGN TRADE. 3 credits.

Prerequisite, Economics 41 and 48. Discusses the economics and practices of foreign trade with particular emphasis on world trade from the standpoint of the United States.

158. INSURANCE AND SECURITY. 3 credits.

Prerequisite, 171. Presents the underlying principles upon which all forms of insurance are based. Beginning with the theory of probabilities, the principles are developed as they apply to the divisions of insurance—life, fire, marine, casualty and security bonds.

163. PERSONNEL MANAGEMENT. 2 credits.

Prerequisite, 61. Includes a review of the organization and function of a typical personnel department; consideration of the problems and technique in the selection and placement of employees by interviewing and psychological tests; evaluation of the need for and use of training in industry and concern with the many employee services necessary to a sound and comprehensive personnel program.

164. PERSONNEL RELATIONS. 2 credits.

Prerequisite, 163 or equivalent. Includes relation with one's immediate superior, securing approval of one's idea in an organization, introducing changes with minimum of friction, selecting subordinates, maintaining morale and interest, importance of recognition, problems of discipline, and adjusting individual and group grievances.

171. BUSINESS FINANCE. 3 credits.

Prerequisite, Accounting 22 and Economics 48. Principles and practices used in financing large and small organizations. Forms of organization, raising of capital by means of stocks and bonds, investing the capital in fixed and working assets, conservation of capital, failures and reorganization are studied.

174. CREDITS AND COLLECTIONS. 2 credits.

Prerequisite, 61 and Economics 48, or experience. The nature and fundamentals of credit, credit investigation and analysis, credit and collection operations, collection aids and problems.

176. BANKING PRACTICE AND MANAGEMENT. 3 credits.

Prerequisite, 171. This course surveys the work of the more important credit institutions, including commercial banks, finance companies, savings banks and consumer credit, and government credit agencies. Emphasis is given to the role of each type of institution in the economic system. The function of bank reserves; bank portfolio policy; capitalization and earning power; the impact of public policy upon the organization, structure and operation of the credit system, are studied.

183. MARKETING. 3 credits.

Prerequisite, Economics 41 and 48. Topics to be considered will include: taking goods to market; through what channels they flow; what makes them sell; how their distribution costs can be reduced; what price and brand problems they encounter in the process; marketing legislation; cooperative marketing.

185. PRINCIPLES OF ADVERTISING. 3 credits.

Designed to give a basic understanding of the place, objectives, and tools of modern advertising. The creation and development of a campaign based upon research and trade requirements is a fundamental part of the course.

186. ADVANCED ADVERTISING. 3 credits.

Prerequisite, 185. Emphasis is placed upon advertising problem analysis and the creation of layouts and copy.

187. RETAIL ADVERTISING. Evening session. 2 credits.

A course for the student who has had Advertising 185 or some store experience. Newspaper, radio and other media for retail stores will be studied. Advertising budgets, planning and writing of copy, and layouts for newspaper, direct-mail pieces, and other promotional media.

189. PURCHASING. 2 credits.

This course covers the industrial phase of purchasing, its significance, scope, procedure, and such topics as buying the right quality, inspection, quantity control, sources and assurance of supply, together with recent government priority regulations.

192. RETAILING. 3 credits.

Prerequisite, junior standing or consent of instructor. The management of retail operations, determination of merchandising requirements, buying, display, advertising, selling, store housekeeping, and operations control.

228. ADVANCED COST ACCOUNTING. 3 credits.

Prerequisite, 27. Emphasis is given to standard cost procedure and the application of cost accounting to complex factory and field problems.

229. AUDITING. 3 credits.

Prerequisite, 44. Required of accounting majors. Theory and practice of auditing, the working papers and the report.

230. ACCOUNTING SYSTEMS. 3 credits.

Prerequisite, permission of instructor. This course concerns itself with systematizing order, billing, accounts receivable, accounts payable, payrolls, and various distribution procedures. Field trips and term project.

231-232. ADVANCED ACCOUNTING. 3 credits each semester.

Prerequisite, Accounting 44. The first semester deals with the correction of statements and books, partnerships, consignments, installment sales, insurance, estates and trusts, and receiverships. The second semester deals with branch accounting and consolidated statements. Accounting 232 may be taken before Accounting 231.

233-234. FEDERAL TAXATION. 3 credits each semester.

Prerequisite, Accounting 44. A study of the current federal income tax law as it applies to the individual and to the proprietorship, partnership, and corporate business enterprise. The second semester includes a survey of state and local taxes.

236. ACCOUNTING PROBLEMS. 3 credits.**248. ADVANCED STATISTICS. 3 credits.**

Prerequisite, 148. Emphasis is placed upon the analysis of time series, digressions, correlations and projections. Application of statistics to such fields as quality control is also emphasized.

268. BUSINESS POLICY. 3 credits.

Prerequisite, final semester senior standing. Required of all commerce majors. Discussion of the philosophy of scientific management; evaluation of objectives and aims of management; policy requirements in terms of the external and internal factors of business; and the use of statistical, cost, and other tools in the determination of sales, financial, personnel, expansion, and control problems.

272. INVESTMENTS. 3 credits.

Prerequisite, 171. The course is devoted to the formulation of investment policies suited to the requirements of various types of individual and institutional investors, a consideration of the principles and techniques applicable to the analysis of securities of industrial corporations, railroad utilities and municipalities, and to the development of workable criteria for the selection or rejection of issues.

277. SECURITY ANALYSIS AND MARKETS. 3 credits.

Prerequisite, 272. This course is a comparative study of organized security markets. Special consideration is given to the principles and practices of organized stock exchanges and over-the-counter markets. Protecting the public interest through regulation and control of promotions, the issue of securities, underwriting practices, and stock-trading practices are studied.

279. PROBLEMS IN FINANCE. 3 credits.

Prerequisite, 171. This course deals primarily with the financing of large corporations. Among the topics studied are: the use of different types of securities as instruments of finance; internal financing by reserve accruals and by retention of net income; mergers, consolidation; and holding syndicates; the influence of taxation on corporate policy; and reorganization under the Federal Bankruptcy Act.

287. SALES PROMOTION. 2 credits.

Prerequisite, 185. Sales promotion programs will be formulated and executed, and the student will be expected to create and set up folders, booklets, catalogs, merchandise displays, etc.

291. SALES ADMINISTRATION. 3 credits.

Prerequisite, 183. The place of distribution in the marketing scheme, the determination of marketing objectives and policies and their implementation and control.

293. PROBLEMS IN MARKETING. 3 credits.

Prerequisite, 183. The various problems involved in determining marketing channels, methods and sales are applied to specific situations.

296. MARKET ANALYSIS. 3 credits.

Prerequisite, 183 or 185 plus a minimum of three hours in other advanced courses in commerce.

297-298. SEMINAR. 1 credit each semester.

Required of all senior commerce majors.

299. CPA PROBLEMS. 4 credits.

Prerequisites, 229, 231, 232, 233 and approval of instructor. The study and solution of carefully selected problems provide a thorough application of accounting and auditing theory in the light of current tax laws. CPA examination techniques and procedures are studied.

INDUSTRIAL MANAGEMENT

The purpose of this curriculum is to give those persons with the ability and desire to advance to managerial positions in industry, training in basic management skills and knowledge. The content of the courses will center on fundamental principles with application to practical problems. Satisfactory completion of the 128 hours of required course work leads to a degree of Bachelor of Science in Industrial Management.

The following outline of the Industrial Management program is for your guidance. It should be followed as nearly as possible in order that a proper sequence of courses will be secured.

First Year

First Semester	Cr. Hrs.	Second Semester	Cr. Hrs.
English 1	3	English 2	3
Hygiene 15	2	Hygiene 16	2
Intr. to Social Science 5	3	Intr. to Social Science 6	3
Intr. to Natural Science 9	3	Intr. to Natural Science 10	3
R. O. T. C. 11	1½	R. O. T. C. 12	1½
*Accounting 21	3	Accounting 22	3
Physical Education 3	1	Physical Education 4	1

Second Year

Drawing Interpretation and Sketching 20	1	Cost Accounting 27	3
Intr. to Humanities 7	3	Intr. to Humanities 8	3
Economics 41	3	R. O. T. C. 44	1½
Business Org. & Mgt. 61	3	Production Management 62	3
R. O. T. C. 43	1½	Economics 48	3
Psychology 41	3	Psychology 62	3

Third Year

Business Law 141	3	Business Law 142	3
Marketing 183	3	Production Planning and Control 103	3
Industrial Plants 101	3	Time Study 168	2
Motion Study and Micromotion Study 167	2	Statistics 148	4
Personnel Management 163	2	Personnel Relations 164	2
Elective	3	Elective	2

Fourth Year

Quality Control 105	2	Industrial Safety 107	2
Maintenance of Plants & Equipment 109	2	Purchasing 189	2
Economics 206	3	Ind. Mgt. Problems 256 or Business Policy 268	3
Business Finance 171	3	Elective	9
Elective	6		

101. INDUSTRIAL PLANTS. *First semester. 3 credits.*

Prerequisite, 62. Principles, practices, and economics in plant location, building, layout, physical conditions, and materials handling.

103. PRODUCTION PLANNING AND CONTROL. *Second semester. 3 credits.*

Prerequisite, 101. Principles and practices in process and product design, production planning and control, inventory control, warehousing, stores and salvage functions.

105. QUALITY CONTROL. *2 credits.*

Prerequisite, 101 and 148. Principles and practices in inspecting, testing, correcting and controlling quality of product or service.

107. INDUSTRIAL SAFETY. *2 credits.*

Prerequisite, 62. Principles and practices in industrial safety as effected by engineering, education, equipment, and enforcement.

109. MAINTENANCE OF PLANTS AND EQUIPMENT. *2 credits.*

Prerequisite, 101. Organization and administration of maintenance, selection and procurement; stores; power metering; inspection, cleaning, lubrication, and repair; supervision; planning and scheduling; recording analysis, estimating, and control of maintenance costs.

167. MOTION STUDY AND MICRO-MOTION STUDY. *Either semester. 2 credits.*

Prerequisite, 62. One recitation alternating with laboratory period. Lab. fee, \$2. Principles and practices applied to reducing time and effort waste.

*Industrial Management majors may meet full accounting requirements in Commerce by registering for Accounting 121 and 123 in place of 21, 22, and 27.

168. TIME STUDY. *Either semester. 2 credits.*

Prerequisite, 62. Principles and practices in analyzing, timing, and setting standards for job performance and wage payment.

256. INDUSTRIAL MANAGEMENT PROBLEMS. *Either semester. 3 credits.*

Prerequisite, 103 and senior standing. Modern practices and principles applied to an actual problem from industry.

ECONOMICS

Professor O'Hara, Assistant Professors Olivo and Brown, Mr. McLain

Students emphasizing economics in their field of concentration are expected to take at least 24 hours of work in the field of economics. The courses included in this requirement are determined by the needs and interests of the individual student. In order to insure the best possible sequence of courses to meet the objectives of the student, it is important: (1) that the student select his field of concentration as early as possible in his course, and (2) that he consult the head of his department promptly and arrange his tentative program for the remaining years of his course.

The following courses are accepted in meeting the requirements for a degree in economics. Except as indicated, all have as prerequisites Economics 41 and 48, (offered in the General College). In special cases, these prerequisites may be modified.

For General College courses suggested but not required, see General College section.

GENERAL COLLEGE

41. PRODUCTION, PRICES AND INCOME. *Either semester. 3 credits.*

The principles of production, the pricing process (or value theory), the distribution of income, and related topics. Prerequisite to all other economics courses.

42. CURRENT ECONOMIC PROBLEMS. *Either semester. 3 credits.*

The problems of employment and wages, monetary and fiscal problems, foreign trade and exchanges, etc. Designed as a survey of the field of economics for those who do not intend to take courses at the upper college level.

44. DEVELOPMENT OF ECONOMIC INSTITUTIONS. *3 credits.*

A study of medieval and modern economic history. The origins and growth of the significant institutions of modern economic life are traced. Offered as demanded.

48. MONEY AND BANKING. *Either semester. 3 credits.*

The development of money, credit and banking, and the place of each in the modern economy.

82. CONSUMER ECONOMICS. *Second semester. 3 credits.*

UPPER COLLEGE

151. TRANSPORTATION. *First semester. 3 credits.*171. BUSINESS FINANCE. *First semester. 3 credits.*

Prerequisite, 48.

183. MARKETING. *First semester. 3 credits.*

(Courses 151, 171 and 183 are given in the Commerce Department. See Commerce Department for course descriptions.)

204. MONETARY AND BANKING POLICY. *Second semester. 3 credits.*

Prerequisite, 48. The exercise of control over currency and credit; policies of control by central banks and governments, with special emphasis upon the U. S. Treasury and the Federal Reserve System.

206. LABOR PROBLEMS. *Either semester. 3 credits.*

The position of labor in modern industrial society; problems of the wage system, trade unionism and labor law.

208. PUBLIC FINANCE. *Second semester. 3 credits.*

The facts, principles and theories of public expenditures, taxation, and debt.

210. COMPARATIVE ECONOMICS. *Second semester. 3 credits.*

A comparative study of the advantages and limitations of Capitalism, Socialism, Communism, Fascism, and Co-operation.

215. MONOPOLY IN INDUSTRY. *Either semester. 2 credits.*

Nature and history of monopoly. Forms of monopoly—public utilities, monopoly of resources, trade associations, etc. The economics of monopoly and monopolistic competition. Solutions of the monopoly problem.

241. ANALYTICAL ECONOMICS. *First semester. 3 credits.*

An advanced course in the principles of economics. Emphasis is placed upon the exercise of discrimination in the evaluation of theories and systems.

250. ECONOMICS OF PUBLIC UTILITIES. *3 credits.*

Characteristics of Public Utilities. Valuation for rate purposes; fair value and fair rates of return; local, state and federal regulations.

268. INTERNATIONAL ECONOMIC RELATIONS. *Second semester. 3 credits.*

An analysis of the theory of international trade and the foreign exchanges. Policies of free and controlled trade. Trade monopoly. International monetary problems. World economic planning.

270. PRINCIPLES OF SOCIAL ECONOMY. *3 credits.*

Meaning and criteria of the ideal (or optimum) economy from the viewpoint of human values. Relation of means to ends and the principles of economy of means. Income and the equitable distribution of opportunity. Conflict between efficiency, liberty and the optimal use of resources. Prerequisites, Economics 41 and 15 hours from among the following: History, Political Science, Sociology, Philosophy and Psychology.

291. ECONOMIC CYCLES. *First semester. 2 credits.*

Types of business fluctuation; methods of measurement and correction; comparative study of theories of the cycle and proposals for correction or elimination. Prerequisite, Math. 57 or equivalent.

292. THE ECONOMICS OF JOHN MAYNARD KEYNES. *Second semester. 3 credits.*

Based upon Lord Keynes' GENERAL THEORY, this course compares earlier equilibrium theories with contemporary views and develops the modern views with respect to such relationships as the following: saving and investment; investment and income; income, consumption and saving, etc. In general, dynamic, process analysis is employed instead of the conventional static, partial analysis of older economics. Prerequisite, 241 or permission.

293. DEVELOPMENT OF ECONOMIC THOUGHT. *First semester. 3 credits.*

The evolution of theory. Relation of the ideas of economists to the contemporary conditions of their times. Special emphasis upon the period from 1776 to 1890.

297. METHODS OF ECONOMIC RESEARCH. *Second semester. 3 credits.*

Testing of theories by reference to factual data. Types of index numbers and time series in use; statistical methods of correction and adjustment of data. Typical problems will be investigated. Prerequisites, 48; Mathematics 57 or equivalent. This course may be taken in place of 298. SEMINAR IN ECONOMICS by students who do not intend to enter graduate school.

298. SEMINAR IN ECONOMICS. *Second semester. 2 credits.*

Each senior major is expected to select a field of intensive study and research, and to submit his results in a well-organized and documented report or thesis. Seniors only.

ENGLISH

Professors Duffy and Keister, Associate Professor R. Thackaberry, Assistant Professors Putman, Raw, Roberts, H. Thackaberry, and Whitney; Miss Anich, Mr. Hull, Mr. Paul, Mr. Tyler, Mr. Stevens, Miss Zervos

Students majoring in English must complete twenty-six hours in the department. The following courses are required: English 65-66 and English 46. The remainder must include: six hours from English 41, 112, 113, 201, 203, 209, 212, 219, 220, and six hours from English 202, 213, 214, 215, 216, 218, 221, 222. English and American history and three or four years of a foreign language are strongly recommended—in order of preference: French, German, Latin, Greek.

GENERAL COLLEGE

1-2. ENGLISH, ORAL AND WRITTEN. *3 credits each semester.*

Described in the General College section.

41. SHAKESPEARE. *3 credits.*

Reading of fifteen or more plays, with explanatory lectures and discussions. Recommended to students who take only one course in literature.

42. THE MAKING OF MODERN ENGLISH. *Second semester. 3 credits.*

A study of modern English usage, with attention to historical backgrounds and the principles of descriptive grammar.

43. ADVANCED WRITING—IMAGINATIVE. *First semester. 2 credits.*

A continuation of the composition part of Freshman English, for those who need or desire further training, especially in description and narration. Guided analysis of good models for their techniques; practice; and individual help in classes limited to 20 students.

44. ADVANCED WRITING—FACTUAL. *Second semester. 2 credits.*

Similar to English 43, except that the writing is factual, ranging from simple exposition to the familiar essay, the character sketch, and the book review. Recommended for those who will have to write term papers or reports later. Classes limited to 20 students.

45. APPRECIATION OF PROSE. *Either semester. 3 credits.*46. APPRECIATION OF POETRY. *Either semester. 3 credits.*47-48. AMERICAN LITERATURE. *3 credits each semester.*

American literature from its colonial beginnings to the present. First semester: Captain John Smith to Melville; second semester: Whitman to the present.

50. APPRECIATION OF THE DRAMA. *Either semester. 3 credits.*

Courses 45, 46, and 50 constitute the General College program in appreciation of literature. They may be taken in any order. Prerequisite for any of these courses is normally English 2.

Each unit of the work offers a critical approach to specific literary forms, and the three units combine to provide an introduction to general reading and to an understanding of the contribution made by literature to a well-rounded life. Required readings include both standard literary works and contemporary writings.

65-66. ENGLISH LITERATURE. *3 credits each semester.*

A survey of literature in English from Anglo-Saxon to modern times. Assigned readings in masterpieces of all periods; explanatory lectures; class discussions. Required of English majors. Preferably taken in the sophomore year.

UPPER COLLEGE

112. MODERN EUROPEAN LITERATURE. *3 credits.*

Readings and discussion of representative European writers from about 1850 to the present.

113-114. THE ENGLISH BIBLE AS LITERATURE. *3 credits each semester.*

Extensive readings in the Bible with reference to literary values. First semester: the Old Testament, exclusive of the Wisdom Books. Second semester: the Wisdom Books and the New Testament.

143. ADVANCED WRITING WORKSHOP—FACTUAL. *First semester.*

2 credits.

Prerequisite, 43 or 44, or permission. The writing of articles, essays, and other factual compositions at a level above that of English 44, but otherwise similar to that course. The class meets once weekly for two hours, and is limited to 15 students.

144. ADVANCED WRITING WORKSHOP—IMAGINATIVE. *Second semester.*

2 credits.

Prerequisite, 43, 44, or permission. Similar to English 143, except that students write stories, plays, poetry, according to their needs and desires. The class meets once weekly for two hours, and is limited to 15 students.

201. CHAUCER. *First semester. 3 credits.*

A study of The Canterbury Tales as one of the masterpieces of English poetry and as a reflection of medieval life.

202. SIXTEENTH CENTURY LITERATURE. *Second semester. 3 credits.*

A study of the non-dramatic literature of the Tudor period.

203-204. WORLD DRAMA. *3 credits each semester.*

The story of the drama from Ancient Athens to modern Broadway in plays of masters from Aeschylus to Shaw and Sherwood. Through the reading of a number of the world's enduring plays, the course aims at a knowledge of the development of the English and American drama, and its enrichment through classical and continental influences.

205. ANGLO-SAXON. *3 credits.*

Anglo-Saxon language and literature; linguistic studies of Old English as a predecessor of Modern English; readings in Beowulf and in Anglo-Saxon prose.

207. MIDDLE ENGLISH. *3 credits.*

A study of the language and literature of the eleventh to the fifteenth centuries, exclusive of Chaucer.

209. SHAKESPEARE. *3 credits.*

Concentrated study of a few plays, with lectures and discussions.

212. MILTON. *2 credits.*

Concentrated study of selected prose and the major poems.

213. SEVENTEENTH CENTURY LITERATURE. *First semester. 3 credits.*

A survey of important tendencies and achievements in English prose and poetry from Bacon to Dryden, exclusive of the drama.

214. EIGHTEENTH CENTURY LITERATURE. *Second semester. 3 credits.*

A survey of the literature of the century with emphasis upon the work of Pope and Johnson.

215-216. NINETEENTH CENTURY LITERATURE. *3 credits each semester.*

In the first semester, a study of the English Romantic Movement; in the second, the Victorian era.

218. ENGLISH LITERATURE, 1890 TO THE PRESENT. *3 credits.*

A consideration of recent English prose, poetry, and drama.

219-220. MAJOR AMERICAN WRITERS. *3 credits each semester.*

An intensified study of a selected group of authors.

221-222. ENGLISH FICTION: DEVELOPMENT OF THE NOVEL. *3 credits each semester.*

Reading and discussion of the chief English novels, principally from the points of view of technique and aesthetics, but with due attention to psychological, historical, and sociological values. First semester: Defoe to Dickens; second semester, Eliot to Huxley.

- 231-232. SEMINAR. *Either or both semesters, with a total of 2 credits.*
Special studies, with instruction in the methods of literary research.
262. HISTORY OF THE ENGLISH LANGUAGE. *Second semester. 3 credits.*
A study of the development of the English language from the Anglo-Saxon period to the present, with emphasis on its history in America.
401. RESEARCH. *1 to 3 credits.*
Writing of a thesis for the Master of Arts degree.

HISTORY

*Professors Baldwin and Gardner, Associate Professor Roe,
Assistant Professor Logan*

General Final Examination: In order to be recommended for a degree, a major in history will be required to pass a general final examination covering Historiography, the United States, Modern Europe, and two other fields approved by the department. In lieu of this requirement, a satisfactory grade in the Graduate Record Examination will be accepted.

GENERAL COLLEGE

41. THE UNITED STATES TO 1865. *First semester. 3 credits.*
A general course in American history beginning with the period of Exploration and Discovery and continuing through the Civil War.
42. THE UNITED STATES SINCE 1865. *Second semester. 3 credits.*
A continuation of 41. The Reconstruction period following the Civil War to the present.
43. ORIENTAL AND GREEK CIVILIZATIONS. *First semester. 3 credits.*
A study of the development of Oriental and Greek civilizations, and especially of the significant developments of Greek political and historical thought, art and ideals.
44. ROMAN CIVILIZATION. *Second semester. 3 credits.*
A study of Roman experience, historical, political, and cultural, from the rise of Rome to early Christian times.
- 45-46. MODERN EUROPE. *3 credits each semester.*
Europe from the Protestant Reformation to the present. The course is divided at 1815. An introductory course.
49. MEDIEVAL EUROPE. *3 credits.*
The age of the beginning of West-European history. Some consideration is given to the inheritance from Judaeo-Christian and Classical civilizations.

UPPER COLLEGE

118. THE RENAISSANCE. *3 credits.*
The cultural and institutional history of Europe in the fourteenth and the fifteenth centuries. The birth of the lay spirit. The rise of plural sovereignties.
151. ENGLAND TO 1689. *First semester. 3 credits.*
Emphasis on the development of the parliamentary constitution and the common law.
152. ENGLAND AND THE EMPIRE. *Second semester. 3 credits.*
Emphasis on imperial expansion, imperial policies, the growth of the Dominions, relations with India, and the Commonwealth since 1689.
161. THE WESTERN HEMISPHERE. *3 credits.*
Latin America, Canada, and other European possessions in the New World from the era of discoveries to the present. The history of these countries will be correlated with that of the United States, and an attempt will be made to show the essential unity of the Americas.

171. THE BYZANTINE EMPIRE AND THE MOHAMMEDAN WORLD. *3 credits.*

The Byzantine Empire from Justinian: its rise and fall. The origin and spread of Islamic civilization; the rise of the Ottoman Empire; the economic and political factors explaining the growth and persistence of Mohammedanism.

219. THE OLD REGIME, 1648-1789. *First semester. 3 credits.*

Europe from the Treaties of Westphalia to the calling of the French Estates General. Special attention will be paid to German affairs in the period of the Enlightened Despots.

222. THE AMERICAN REVOLUTION AND THE CONSTITUTION. *First semester. 3 credits.*

This course covers in considerable detail the formative period in American history, 1763-1790.

223. THE CIVIL WAR. *First semester. 3 credits.*

A study of the slavery controversy, the Civil War, and Reconstruction.

224. THE UNITED STATES AS A WORLD POWER. *Second semester. 3 credits.*

Beginning with the Spanish-American War, the development of the nation will be followed to the present, with primary emphasis on its rise to a dominant position in the world of nations.

225. THE OLD NORTHWEST. *3 credits.*

The French and British occupation of the Ohio Valley and the Great Lakes region; the Northwest Territory and the states made from it, with special emphasis on the history of Ohio and the Western Reserve to 1860. Prerequisite, History 41 and 42.

241. THE REVOLUTIONARY PERIOD IN EUROPE. *First semester. 3 credits.*

Background, causes, and results of the French Revolution and subsequent wars for European independence; the development of nationalism, 1789-1848; the congress of Vienna, and the legacy of Bonaparte.

242. HISTORIOGRAPHY AND HISTORICAL METHODOLOGY. *3 credits.*

This course aims to provide the student with a knowledge of the history of historical writing, especially in Western Europe and in the 19th and 20th centuries, and to give some practical experience in the use of the various arts and auxiliary sciences used by historians. Prerequisite, 12 credit hours in history.

245. NATIONALISM AND DEMOCRACY IN EUROPE. *First semester. 3 credits.*

The ascendancy of Prussia after 1848; the unification of Germany and Italy; Bismarck's domestic policy; the growth of German militarism and Pan-Germanism.

246. THE AGE OF CONFLICT, 1900-1950. *Second semester. 3 credits.*

The causes, grand strategy, and results of two world wars; experiments in revolution, recovery, and international organization.

251. THE DEVELOPMENT OF MODERN RUSSIA. *3 credits.*

Factors shaping present society in the Soviet Union. Political, economic, and social changes, particularly since the Revolution, contrasted with developments in other countries. The emergence of a new civilization and a world power.

261. CHINA AND THE FAR EAST. *3 credits.*

After sketching the history of Classical China, this course surveys the history of China from the acceptance of Buddhism to the present. Manchu and Japanese imperialism, as well as China's relations with the western world, will receive special attention.

412. INDIVIDUAL READING AND RESEARCH.

Open only to those who have completed an undergraduate major, or at least 24 hours in history, and have received permission from the head of the department. Not more than 3 credits will be given in any one semester.

HOME ECONOMICS

Professor Bear, Assistant Professors Wilson, Wood, Counts, and Laubacher, Mrs. Hostetler

Home Economics offers a program of education for personal and family life as a part of general education for non-majors. For the major student with professional interests, courses offered are based on fundamental training in the physical, biological and social sciences.

Three majors in Home Economics are offered.

FOODS AND NUTRITION MAJOR, planned for those students whose professional interest may point to such work as that of food analyst, nutritionist, dietitian, institutional manager, or food demonstrator. This field offers rich opportunities to men as well as to women.

CLOTHING AND TEXTILES MAJOR, for students who wish to prepare themselves to follow some line of clothing work in the commercial field. Students may begin to work on this major in the freshman year.

GENERAL HOME ECONOMICS MAJOR, a non-professional major planned for students who wish a broad cultural background with the emphasis on effective living.

In addition, a B.S. degree in Education with a major in Home Economics may be secured. See College of Education section for requirements.

For subjects that Home Economics majors are required to take in the General College, see General College section.

Students planning to major in any one of the professional fields should consult the head of the department early in the first year.

FOODS AND NUTRITION

Third Year

First Semester	Cr. Hrs.	Second Semester	Cr. Hrs.
Institutional Management 212.....	3	Quantity Cookery 216.....	3
Experimental Foods 115.....	3	Child Development 65.....	3
Bacteriology 107.....	4		

Fourth Year

Nutrition in Health 119.....	3	Nutrition in Disease 120.....	3
Education.....	3	Field Work.....	3

TEXTILES AND CLOTHING

Third Year

Tailoring 105.....	3	Advanced Clothing 106.....	3
Home Management 62.....	3		

Fourth Year

Advanced Textiles 107.....	3	Selection of House Furnishings 58.....	3
Historic Costume 117.....	3	Child Development 65.....	3

GENERAL COURSE

Third Year

Nutrition 119.....	3	Child Development 65.....	3
Home Management 62.....	3	Demonstration Regional and Foreign Foods 116.....	3

Fourth Year

Household Equipment 215.....	3	Selection of House Furnishings 58.....	3
Tailoring 105.....	3	Advanced Clothing 106.....	3

GENERAL COLLEGE

21. TEXTILES. *First semester. 3 credits.*

A study of natural and synthetic fibers, their color, design, the various finishes and wearing quality with reference to selection, use and care. Includes a study of the regulations governing the standardization and labeling of textiles and clothing. Class limited to twenty. Fee, \$1.

22. BEGINNING CLOTHING CONSTRUCTION. *First semester. 3 credits.*

For students with no previous experience in clothing construction. Fundamental problems in machine and hand sewing. Includes the study of commercial patterns. A dress of cotton, linen, or rayon and one other garment will be made. One hour lecture and four hours laboratory. Class limited to twenty. Fee, \$1.

23. CLOTHING CONSTRUCTION AND SELECTION. *Second semester. 3 credits.*

Prerequisite, 22 or its equivalent. Construction of garments requiring the more difficult techniques. A study of line, design, color and type of fabrics suitable to various types of individuals and occasions. Includes wardrobe planning, care and repair of clothing. One hour lecture and four hours laboratory. Class limited to twenty. Fee, \$1.

41. ELEMENTARY FOODS AND NUTRITION. *Evening session. 3 credits.*

This is a basic course in foods for those persons, not majors, who want a fundamental understanding of the preparation of foods for family use. One hour lecture, three hours laboratory. Fee, \$6.

42. ELEMENTARY FOODS AND NUTRITION. *3 credits.*

This course covers the essentials of an adequate diet with emphasis on the selection of the right food in sufficient amounts to meet the requirements of the family group. Two hours lecture, two hours laboratory. Fee, \$6.

43. FOODS AND NUTRITION. *3 credits.*

For student nurses. A practical course designed to give a knowledge of the basic principles of nutrition and cookery; hygiene of food, selection and care, study of dietary requirements on various age levels, analysis of student's own diet, study of racial differences in dietary habits. Individual practice in food preparation, with special emphasis on cookery for the invalid and on tray service. Two hours lecture, two hours laboratory. Fee, \$6.

45. GENERAL FOODS. *3 credits.*

Composition, selection and preparation of food, with a study of the scientific principles, especially chemical and nutritive. Involves analysis of recipes and study of standard products. Problems of home food preservation; food buying and labor, and time saving methods in preparation. One hour lecture, four hours laboratory. Lab. fee, \$6.

46. GENERAL FOODS. *Second semester. 3 credits.*

Prerequisite, 45. Problems in time, labor, money and equipment in relation to planning, marketing, care of food, preparation, and service of meals for the family group, considering dietary standards and foods habits; appropriate forms of service for various types of meals; table etiquette. An opportunity for individual experience in various types of meal service and simple entertaining is afforded. One hour lecture, four hours laboratory. Fee, \$6.

53. HOME ECONOMICS ORIENTATION. *First semester. 2 credits.*

History and development of home economics in the field of women's education; study of the different fields of home economics.

58. SELECTION OF HOUSE FURNISHINGS. *Second semester. 3 credits.*

A study of the fundamental principles which contribute to a satisfactory selection and arrangement of home furnishings. Problems in the selection of floor coverings, wall and window treatments, lighting, furniture, household textiles, china, glassware, silver and accessories for the home will be considered in relation to styles of decoration, color, design and cost. Class limited to twenty.

62. HOME MANAGEMENT. *Second semester. 3 credits.*

Consideration of the management of time, energy, and money in the home; purchase and use of equipment; modern housing problems. Two hours lecture, two hours laboratory. Fee, \$1.

65. CHILD DEVELOPMENT. *First semester. 3 credits.*

Care and feeding of infants and pre-school children. A study of the physical, social, mental and emotional development of the child from infancy through adolescence. Child psychology is desirable as a prerequisite. Two hours lecture, two hours laboratory. Fee, \$2.

UPPER COLLEGE

105. TAILORING. *First semester. 3 credits.*

Prerequisite, 23. This course provides an opportunity to develop some of the professional skill that goes into the making of a custom-made garment, through the construction of a wool suit, coat or ensemble with lining. The remodeling of one wool garment may be included as an extra problem. One hour lecture, four hours laboratory. Class limited to twelve. Fee, \$1.

106. ADVANCED CLOTHING. *Second semester. 3 credits.*

Prerequisite, 23. Advanced problems in clothing design and construction. Creating new designs by use of basic patterns or draping on a dress form. Using paper and muslin for experimental work. The application of one new design in the construction of a spring dress is required. One hour lecture, four hours laboratory. Class limited to twelve. Fee, \$1.

107. ADVANCED TEXTILES. *First semester. 3 credits.*

Prerequisite, 21. Planned primarily for students majoring in Clothing and Textiles or in Merchandising. A study in the economic, social, and health aspects of buying and caring for the family wardrobe, with emphasis on selecting ready-to-wear garments. Fee, \$2.

108. ADVANCED TEXTILES. *3 credits.*

A study of the construction, color and design of such materials as furs, laces, Oriental rugs, tapestries, brocades, India prints, etc. Fee, \$2.

115. EXPERIMENTAL COOKERY. *First semester. 3 credits.*

Introduction to techniques and methods used in experimental study of cooking. Group and individual experiments are used. One hour lecture, four hours laboratory. Fee, \$7.50.

116. DEMONSTRATION REGIONAL AND FOREIGN FOODS. *Second semester. 3 credits.*

A study of the nations with preparation and serving of regional and foreign foods. Demonstrations are given by the students. One hour lecture, four hours laboratory. Fee, \$7.50.

117. HISTORIC COSTUME. *First semester. 3 credits.*

Prerequisite, Art 21. A study of costume from ancient times to the present day with emphasis on the influence of our present day styles, and the use of this information as a source of inspiration for creative designers today.

119. NUTRITION IN HEALTH. *First semester. 3 credits.*

Prerequisite, 45-46 and Chemistry 55. Chemical composition, metabolism and physiological functions of the food stuffs. Energy, protein, mineral, water metabolism, vitamins, and dietaries are covered. Nutritive requirements for individuals in different stages of development, and on various economic levels, social backgrounds and occupations, and results of dietary deficiencies are studied. Two hours lecture, two hours laboratory. Fee, \$2. 1950-51 and alternate years.

120. NUTRITION IN DISEASE. *Second semester. 3 credits.*

Prerequisite, 119. A study of the application of principles of normal nutrition to diet in disease. Practice is given in construction of diets for specific disease conditions. Two hours lecture, two hours laboratory. Fee, \$2. 1950-51 and alternate years.

121. FIELD WORK IN HOME ECONOMICS. 3 credits.

A course providing for additional laboratory or apprentice experience in a specialized field of home economics. Open to seniors in home economics. One hour conference, six hours practice.

122. HOME MANAGEMENT RESIDENCE. 3 credits.

Six weeks residence in the home management house. Practical problems in management of time, energy, and money; experience in group living. Group limited to four each six weeks. Board and room minimum \$50.

212. INSTITUTIONAL MANAGEMENT. *Second semester. 3 credits.*

A discussion course in the standards for good food service and the facts to be considered in food service; food purchasing, time, labor, materials, cost, equipment, and goodwill.

215. HOUSEHOLD EQUIPMENT. *First semester. 3 credits.*

A lecture and laboratory course in the study, selection, care, and use of hand, gas, kerosene, and electrical household equipment. Two hours lecture, two hours laboratory. Fee, \$2.

216. QUANTITY COOKERY. *Second semester. 3 credits.*

A laboratory course in the preparation of all types of food, the care of equipment and utensils, the layout of different types of food preparation and service centers. Six hours laboratory and conference. Fee, \$5.

JOURNALISM

*Associate Professor Vance, Mr. Jackson, Mr. John, Mr. Dietrich,
Mr. Batdorff, Mr. Cole*

Required for major in Journalism: 24 credit hours, including:

News Writing 51 and 52
Editing 153 and 154, or Newspaper Management 155 and 156, or one semester of each
Feature Writing 59 or Sports Writing 61
Principles of News Photography 131
(But not including News Writing and Editing 53, a special Evening Session course.)

Students majoring in Journalism must complete all required courses in general education as prescribed in the General College, including the requirement of the second year of a foreign language on the college level.

Students graduating with a major in Journalism receive the degree Bachelor of Arts.

Freshman English, Oral and Written, is prerequisite to all Journalism courses.

Concurrent work on student or other publications is expected in most of the courses.

The normal sequence of courses for Journalism majors is:

Second year:

News Writing 51 and 52
History of Journalism 71
Contemporary Newspapers 72

Third Year:

Editing 153 and 154
Feature Writing 59
Special Feature Articles 60
Sports Writing 61
Public Relations (Commerce 84)

Fourth Year:

Newspaper Management 155 and 156
Principles of News Photography 131
Advanced Photography 132
Editorial Writing 157

In addition to sufficient Journalism courses to provide basic training in all fields of publication work, students are urged to take general courses in several other departments, and to pursue more advanced study in one particular field of interest.

GENERAL COLLEGE

51. NEWS WRITING. *First semester. 3 credits.*

Class meets two regular periods each week. Concurrent reporting on The Akron Buchtelite or other publications is required, supplemented by extensive exercise work, class discussions, and illustrative materials. Textbook is used.

52. NEWS WRITING. *Second semester. 3 credits.*

Similar to 51, but with more advanced and specialized work for students in their second semester. May be taken either before or after 51.

53. NEWS WRITING AND EDITING. *Evening session. 2 credits.*

A comprehensive course covering all phases of newspaper work.

59. FEATURE WRITING. *First semester. 2 credits.*

Short newspaper feature articles. Members of the class write for The Akron Buchtelite or other publications. Recognition of human interest situations and facility in portraying them. Extensive writing and class discussions.

60. SPECIAL FEATURE ARTICLES. *Second semester. 2 credits.*

Writing and discussion of longer features and magazine articles, and actual preparation and submission of manuscripts, with illustrations, for publication.

61. SPORTS WRITING. *First semester. 2 credits.*

A specialized writing course considering articles for the sports pages. Concurrent work on The Akron Buchtelite or other publications is required. Emphasis on writing and on complete understanding of various types of athletic events.

71. HISTORY OF JOURNALISM. *First semester. 2 credits.*

Study of newspapers from the earliest beginnings to the present, with emphasis on developments since World War I. Textbook is used, supplemented by lectures and outside readings.

72. CONTEMPORARY NEWSPAPERS. *Second semester. 2 credits.*

A study of today's leading newspapers and newspapermen. Current issues of the papers are used as a textbook, each member of the class reporting on a particular newspaper.

84. PUBLIC RELATIONS. *2 credits.*

Given in the Commerce department. This course may be counted toward a major in Journalism.

UPPER COLLEGE

131. PRINCIPLES OF NEWS PHOTOGRAPHY. *First semester. 2 credits.*

Prerequisite, two semesters of Editing or Newspaper Management. This course is intended primarily for majors in Journalism. Principles of photography for the editor or publisher. How to plan photographs. How to order and use photographs. Arrangement of subjects. The use of color. The course explains possible uses of the camera, composition of photographs, lighting, grouping, modern trends and developments, etc., and demonstrates but does not furnish practice in actual use of the camera.

132. ADVANCED NEWS PHOTOGRAPHY. *Second semester. 2 credits.*

Laboratory work with the camera, and in processing films and making prints for publication use. Use of various cameras and auxiliary equipment. Designed for the student who wishes to acquire a working proficiency in publication photography.

153. EDITING. *First semester. 3 credits.*

Copyreading, headline writing, proofreading, makeup, etc. Actual practice on newspapers is required to supplement exercises. A study of type and typography, printing machines and processes, and newspaper systems and methods. Prerequisite, 51 or 52 or the equivalent.

154. EDITING. *Second semester. 3 credits.*

Similar to 153, but may be taken either before or after it. Advanced work in editing processes. Prerequisite, 51 or 52 or the equivalent.

155. NEWSPAPER MANAGEMENT. *First semester. 2 credits.*

Permission of instructor required for enrolment. The course is limited to students actively engaged in publication work, or preparing to edit or supervise periodicals. Critical discussion and study of current issues of University student publications, stressing editorial policies and responsibilities, editing techniques, ethics of journalism, staff organization and management, finances and budgets, advertising, printing, and other problems.

156. NEWSPAPER MANAGEMENT. *Second semester. 2 credits.*

Similar to 155, but may be taken either before or after it.

157. EDITORIAL WRITING. *Second semester. 2 credits.*

Editorials are considered as a special type of essay. Considerable writing is required, and logical reasoning is stressed. Some attention to column writing.

LATIN AND GREEK

Associate Professor Duke

Some knowledge of classical life and thought is indispensable for any comprehension of Western culture as an entirety. Any of the courses in this curriculum may be pursued with profit by students of the liberal arts and social sciences inasmuch as the comparative aspects of human culture and activity are heavily stressed. The student who elects to concentrate in the field will gain considerable knowledge of the ancient literature, arts and technologies and of their commanding influence in later times.

Required courses for majors: Latin 43-44, Comparative Literature 61-62, and Archaeology 113-114.

Major: Twenty-four hours.

GENERAL COLLEGE

21-22. ELEMENTARY LATIN. *4 credits each semester.*

No prerequisite. Grammar and reading.

43-44. SECOND YEAR LATIN. *3 credits each semester.*

Prerequisite, 21-22, or two years of high school Latin. Inscriptions, Letters of Pliny, Selections from Vergil, or other material suited to needs or interests of students.

Note: In allowing credit to students who have had high school Latin, the practice of the Modern Language Department will be followed.

21-22. ELEMENTARY GREEK. *4 credits each semester.*

No prerequisite. Grammar and reading.

Note: Second Year Greek, given on demand, may be taken as Individual Reading or Research 131-132.

61-62. COMPARATIVE LITERATURE. *3 credits each semester.*

No prerequisite, and either course may be taken without the other. First semester: study of the major Greek writers in translation, together with a consideration of their influence on later European literature. Second semester: study of the major Roman writers. No knowledge of Latin or Greek required.

99. CLASSICAL MYTHOLOGY. *Second semester. 3 credits.*

No prerequisite. The legends and folklore of Greece and Rome; their rebirth in later literature and art. No knowledge of Latin or Greek required.

UPPER COLLEGE

Note: Some of the following courses will be given each year, according to demand. Courses 103-111 require Latin 43-44 or equivalent as prerequisite.

103. ROMAN SATIRISTS. *3 credits.*

Selections from Horace, Persius, Juvenal and Martial; lectures on the history of satire, both ancient and modern.

104. ROMAN DRAMATISTS. *3 credits.*

Selected plays of Plautus, Terence and Seneca; lectures on the history of comedy and tragedy, with especial attention to stage antiquities.

105. ROMAN HISTORIANS. *3 credits.*

Selections from Sallust, Livy and Tacitus; lectures on historiography and the philosophy of history.

106. ROMAN PHILOSOPHICAL AND RELIGIOUS WRITERS. *3 credits.*

Selections from Lucretius, Cicero, Seneca and Boethius; lectures on the pagan syncretism and mystery religions.

107. MEDIAEVAL LATIN WRITERS. *3 credits.*

Selections from St. Augustine or the other Fathers; the Goliards or other secular literature. Special attention to Church Latin. Letters of famous Humanists may be included.

108. ROMAN LYRIC AND ELEGIAC POETS. *3 credits.*

Selections from Catullus, Horace, Ovid, Propertius and Tibullus.

111. ROMAN NOVELISTS. *3 credits.*

Selections from Petronius and Apuleius; lectures on the Milesian tale and Alexandrian romance.

113. GREEK ARCHAEOLOGY. *3 credits.*

No prerequisite. The daily life of the Greeks; their achievements in the arts and sciences. Archaeological aims and methods. No knowledge of Latin or Greek required.

114. ROMAN ARCHAEOLOGY. *3 credits.*

No prerequisite. The daily life of the Romans; their achievements in the arts and sciences. Archaeological aims and methods. No knowledge of Latin or Greek required.

131-132. INDIVIDUAL READING OR RESEARCH. *1 to 3 credits each semester.*

Prerequisites depend upon subject, which may be either in the languages or in archaeology.

MATHEMATICS

Professor Selby, Associate Professors Lipscombe and Mauch, Assistant Professors Tabler and Ross, Mr. Davis

All students whose work of concentration lies in the Division of Natural Science, except those in the Biological Sciences, must have taken in the General College Mathematics 21, 22, 43, 45-46. Pre-medical students, however, must take 21, 22, and students taking the Pre-technicians' course must take 21.

Students preparing to teach Mathematics, or who expect to take some engineering courses, must take Physics.

Students majoring in Mathematics must take at least 24 hours of Mathematics. Included in these hours must be course 204, and at least two other 3-hour upper college courses. Algebra 17 and Basic Mathematics B-3 cannot be counted toward the major.

GENERAL COLLEGE

17. ALGEBRA. *1 credit.*

Open only to students who have had one year or less of high school algebra or to persons who have been out of school for some time. If taken prior to Algebra 21, credit will be allowed only to those students whose high school transcripts show at most one year of high school algebra.

21. COLLEGE ALGEBRA. *3 credits.*

A review of algebra through quadratics, and a study of progressions, variation, binomial theorem, theory of equations, permutations, combinations, determinants, and inequalities.

22. TRIGONOMETRY. *3 credits.*

It is recommended that this course be taken following or simultaneously with 21. It begins with the definitions of the trigonometric functions and follows through such topics as the solution of right triangles, trigonometric identities (with special stress on those pertaining to the half angle, double angle, and sum and difference of angles), logarithms, and their application to the solution of right and oblique triangles.

23. SPHERICAL TRIGONOMETRY. *2 credits.*

Prerequisite, 22. Study of right and oblique spherical triangles, and numerous applications to aviation and astronomy.

31. MATHEMATICS OF NAVIGATION AND AVIATION. *2 credits.*

Prerequisite, 22. Solution of problems in navigation and aviation which require the use of mathematics; study of maps, charts, tables, and use of computers.

43. ANALYTIC GEOMETRY. *3 credits.*

Prerequisite, 21, 22. This course shows how geometrical properties of curves and surfaces may be studied by the aid of algebra and various kinds of coordinate systems.

45. DIFFERENTIAL CALCULUS. *3 credits.*

Prerequisite, 43, or concurrently with 43. Theory of limits; development and use of differentiation formulas; use of derivative and differential in problems of maxima and minima, time rates, curvature, motion, approximate error; expansion of functions in Maclaurin's series and Taylor's series; differentiation of functions of two or more variables.

46. INTEGRAL CALCULUS. *3 credits.*

Prerequisite, 45. Formal integration; definite integral and its use in finding areas, volumes, moments of inertia, centroids; methods of approximating a definite integral; use of multiple integral.

57. SOCIAL STATISTICS. *3 credits.*

This course combines a review of basic mathematics with the fundamentals of statistics, including averages, measures of dispersion, the normal curve, index numbers, simple correlation and time series. Specially planned for students in the Social Science Division. Credit will not be given for both this course and for Statistics 148.

60. MATHEMATICS OF FINANCE. *3 credits.*

Prerequisite, 21. Simple interest, simple discount, compound interest and compound discount, annuities, amortization and sinking funds, building and loan associations, valuation of bonds, stocks, depreciation, straight line method, constant percentage method, sinking fund method, and unit cost method.

UPPER COLLEGE

Courses 104, 121, 125, and 126 are offered only when the demand warrants.

104. HISTORY OF MATHEMATICS. *3 credits.*

Prerequisite, 21-22. The origin and development of the elementary mathematical ideas and processes.

112. ENGINEERING MATHEMATICS. *3 credits.*

This course is designed specifically for Engineering students. For description see College of Engineering section.

121. MATHEMATICS OF INSURANCE. *2 credits.*

Prerequisites, 21, 58. This course develops formulas for finding the premiums of the most important policies of life insurance, the valuation of these policies, the construction and use of the mortality tables.

125-126. ASTRONOMY. *2 credits each semester.*

A study of the most important of the celestial phenomena and the instruments by which this study is accomplished.

130. EMPIRICAL EQUATIONS AND NOMOGRAPHY. *3 credits.*

Prerequisite, 43. Correlation of data involving either two or three variables by empirical methods is discussed. Nomographic methods for evaluation of these empirical formulas are then considered.

201. ADVANCED CALCULUS. *3 credits.*

Prerequisite, 46. A more rigorous treatment of the material covered in 45 and 46 and material on infinite series; infinite, multiple, line and surface integrals; maxima and minima of functions of several variables; partial differentiation, etc.; with applications to geometry and mechanics.

204. DIFFERENTIAL EQUATIONS. *3 credits.*

Prerequisite, 46. A study of the methods of forming and solving some important types of ordinary and partial differential equations, and their numerous applications in the fields of science.

205. THEORY OF EQUATIONS. *3 credits.*

This course includes the study of complex numbers, solution of cubic and quartic equations, numerical approximation to the roots, theorems of Sturm, Budan, and Descartes, determinants and matrices, simultaneous linear equations, symmetric functions, resultants, discriminants.

206. HIGHER GEOMETRY. *3 credits.*

Prerequisite, 45. A continuation of 43; analytic geometry of space; topics in non-Euclidean, projective and metric geometry.

207. HIGHER ALGEBRA. *3 credits.*

Prerequisite, 45. Special topics in algebra are stressed, such as mathematical induction, partial fractions, complex number system, binomial theorem, multinomial theorem, summation of series, limits, infinitesimals, convergency and divergency of series, power series, inequalities, continued fractions and their applications to indeterminate equations, theory of numbers, method of least squares.

208. VECTOR ANALYSIS. *3 credits.*

Prerequisite 46. A study of vector algebra, differential vector calculus and integration with simple applications to problems in elementary geometry of two and three dimensions, differential geometry, mechanics, hydrodynamics and electrostatics.

MODERN LANGUAGES

Professor Bulger, Associate Professors Internoscia, Glennen and Ittner, Assistant Professor Chalfant, Mr. Perez, Mr. Kurth, Miss Hoffmaster, Mrs. Thornhill

Major: At least 24 hours in one language.

Credit for college work in Modern Languages is indicated by the following table:

<i>High School Credits</i>	<i>Course Entered in College</i>	<i>Credit Given</i>
1 unit	First year	Full credit
	Second year	Full credit
2 units	Second year	Full credit
	First year	Half credit
	Third year	Full credit
3 units	Second year	Half credit
	First year	No credit
4 units	Third year	Full credit
	Second year	No credit

GENERAL COLLEGE

21-22. FIRST YEAR FRENCH. *4 credits each semester.*

Reading, speaking, writing and understanding French, with intensive drill in pronunciation. Short stories and simple plays are read. Outside reading begun in second semester.

43-44. SECOND YEAR FRENCH. *3 credits each semester.*

Prerequisite, 21-22. Grammar review. Practice in reading, writing, speaking, and understanding French. Short stories, plays, novels on intermediate level. Outside readings.

21-22. FIRST YEAR GERMAN. *4 credits each semester.*

Reading, speaking, and writing German.

43-44. SECOND YEAR GERMAN. *3 credits each semester.*

Prerequisite, 21-22. Review of grammar; practice in reading, speaking, and writing German.

21-22. FIRST YEAR SPANISH. *4 credits each semester.*

Pronunciation, dictation, elements of grammar, translation into English and into Spanish, and simple conversation. In the second semester comprehension and conversation are intensified and outside reading is begun.

43-44. SECOND YEAR SPANISH. *3 credits each semester.*

Prerequisite, 21-22. Review of grammar, gradually intensified reading, translation and conversation. Independent reading of one novel each semester. In the second semester fluency in conversation is stressed.

UPPER COLLEGE

101-102. THIRD YEAR FRENCH: THE FRENCH NOVEL. *2 credits each semester.*

Prerequisite, 44. A study of the French novel of the 19th Century with reading and class discussion in French of representative works.

103-104. FRENCH COMPOSITION AND CONVERSATION. *2 credits each semester.*

Prerequisite, 44. Advanced composition based on French models with special attention to word and idiom study. Development of oral expression and conversational ability stressed.

105. FRENCH PHONETICS. *First semester. 1 credit.*

Prerequisite, 44. Intensive drill in pronunciation with correction and improvement of student's accent. Emphasis on articulation and intonation by use of phonograph records and individual recordings made by student.

209 to 216. ADVANCED FRENCH. *3 credits each semester.*

Prerequisite, 102 or 104.

One of the following French courses is given each year:

- 209-210. NINETEENTH CENTURY DRAMA.
A study of the development and tendencies of the French drama during the 19th century and contemporary period.
- 211-212. SURVEY OF FRENCH LITERATURE.
A survey of French literature from the Middle Ages through the contemporary period. Reading and discussion of the most important works of major writers.
- 213-214. FRENCH LITERATURE OF THE EIGHTEENTH CENTURY.
A study of the literature of the 18th century with reading and discussion of the works of major writers.
- 215-216. HISTORY OF THE FRENCH NOVEL TO THE NINETEENTH CENTURY.
A study of the development and tendencies of the French novel during the 17th and 18th centuries.
- 101-102. GERMAN DAILY LIFE AND COMPOSITION. *3 credits each semester.*
Prerequisite, 44.
- 207 to 218. ADVANCED GERMAN. *3 credits each semester.*
Prerequisite, 44.

One of the following German courses is offered each year:

- 207-208. SCHILLER.
- 209-210. GOETHE.
- 211-212. SURVEY OF GERMAN LITERATURE.
- 213-214. MODERN GERMAN DRAMA.
- 215-216. FAUST.
- 217-218. SHORT STORY.

One of the following Spanish courses is offered each year:

- 103-104. APPLIED SPANISH. *3 credits each semester.*
Prerequisite, 44. Intensive reading of Spanish and Spanish-American stories, with class discussion in Spanish. Independent reading of several Spanish-American novels.
106. COMMERCIAL CORRESPONDENCE. *3 credits.*
Prerequisite, 103. Translation of business letters from Spanish into English and from English into Spanish, with some attention to advertising, and some emphasis on the rubber industry.
- 207-208. MODERN SPANISH LITERATURE. *3 credits each semester.*
Prerequisite, 44.
- 209-210. SPANISH LITERATURE OF THE GOLDEN AGE AND EIGHTEENTH CENTURY (1550-1800). *3 credits each semester.*
Prerequisite, 44.
- 211-212. SURVEY OF SPANISH LITERATURE. *3 credits each semester.*
Prerequisite, 44. Study of representative Spanish authors and their contributions to literature. Much class discussion in Spanish.
- 231-232. INDIVIDUAL READING IN FRENCH, GERMAN, OR SPANISH.
1 to 3 credits each semester.

MUSIC

Professor Parman, Associate Professor Ende, Assistant Professors Smith and Witters, Mr. Stein, Mr. Lightfritz, Miss Whittaker, Mr. Ferguson

Departmental requirements for the B.A. degree with a major in music:

The plan below shows the recommended sequence of music courses. Other courses must be in line with University requirements.

First Year	Cr. Hrs.	Second Year	Cr. Hrs.
Fundamentals of Music 23	2	Theory 41-42	10
Art of Music 22	2	String Class 55-56	2
Applied Music	2	Applied Music	2
Music Organization	2	Music Organization	2
Third Year		Fourth Year	
Woodwind Class 57	1	Music Composition 111	2
Brass Class 58	1	Conducting 110	2
History of Music 101-102	4	Orchestration 114	2
Theory 103-104	6	Music Criticism 201	2
Music Organization	(2)	Music Research 202	2
		Applied Music	2
		Music Organization	(2)

Additional Requirements for Majors in Music: (1) All music majors will be required to pass a general final examination in the Theory and History of Music in the second semester of the senior year, (2) Presentation of both Junior and Senior recitals is recommended.

Music Organizations: Enrolment in University Chorus, University Band, and University Symphony Orchestra is open to all students of the University. Membership in the University Singers is by audition and appointment. Not more than 4 credits for music organizations can apply toward graduation.

Applied Music: Not more than 8 credits in individual instruction may apply toward graduation for Liberal Arts students. All registration in individual instruction requires the payment of additional fees. Two half-hour lessons a week (2 credits each semester), \$60. One half-hour lesson a week (1 credit each semester), \$30.

Day students who enrol for private lessons must carry at least 9 credits of academic work including private lessons; evening students must carry not less than a 3-credit load including private lessons.

Theoretical Music: All Theory courses may be taken for credit in sequence.

ORGANIZATIONS

UNIVERSITY CHORUS. 2 hours a week. 1 credit per semester.

A mixed chorus open to all students of the University. No auditions required. This group will be combined with the University Singers for special performances.

UNIVERSITY SINGERS. 2 hours a week. 1 credit per semester.

A mixed chorus, membership in which is by appointment through audition to the Head of the Department of Music. Numerous public performances are made throughout the year at various civic organizations, churches, broadcasting stations, and social groups, as well as public concerts.

UNIVERSITY SYMPHONY ORCHESTRA. 2 hours a week. 1 credit per semester.

An organization devoted to the advanced study of orchestral literature. This organization gives a fall and spring concert and performs special programs such as Christmas, Easter, and Commencement.

UNIVERSITY BAND. 1 credit per semester.

The University Football Band is organized in the first semester and plays for all games. Rehearsals are on Monday, Wednesday, and Friday, from 4 to 6 p. m. at Buchtel Field. The University Concert Band functions only during the second semester and summer terms. Study and performance of advanced literature for the band. Membership in the concert band granted only by permission of the band director.

THEORETICAL MUSIC

*GENERAL COLLEGE

22. THE ART OF MUSIC. *2 credits.*

An introduction to the literature of music using recordings as illustrative material.

23. FUNDAMENTALS OF MUSIC. *2 credits.*

A functional introduction to music, embracing notation, terminology, scale construction, simple melodic dictation and sight-singing, familiarity with the piano keyboard, and experience in singing part songs.

41. THEORY I. *5 credits.*

Prerequisite, 23. A detailed study of scales, intervals, triads and chord formations through ear, eye, and keyboard. Advanced melodic dictation.

42. THEORY II. *5 credits.*

Prerequisite, 41. A continuation of Theory I. Harmonic dictation.

*UPPER COLLEGE

101-102. HISTORY OF MUSIC. *2 credits each semester.*

Prerequisite, 22. An historical resumé of the development of music from ancient to modern times, using recordings as illustrative material.

103. THEORY III. *3 credits.*

Prerequisite, 42. Simple two- and three-part modal and tonal counterpoint in the five species.

104. THEORY IV. *3 credits.*

Prerequisite, 103. An analytical study of the forms employed in music, covering both the homophonic and polyphonic devices.

110. CONDUCTING. *2 credits.*

Prerequisite, 23. The fundamentals of conducting technique and individual practice in conducting.

111. COMPOSITION. *2 credits.*

Prerequisite, 104. Creative work based on the simpler homophonic and polyphonic forms. Invention of melodies, their transformation and development with suitable accompaniment.

114. ORCHESTRATION. *2 credits.*

Prerequisites, 55, 56, 57, 58, 103. A study of the theory of instrumentation for various ensembles from the small ensemble to the full band and orchestra arrangements. Reduction of an orchestra score to piano.

116. ADVANCED CONDUCTING. *2 credits.*

Prerequisites, 110, 114. Baton technique; practice in reading and interpretation of scores. Organization of the orchestra and band. Problems in programming. Actual practice conducting university ensembles.

201. MUSIC CRITICISM. *2 credits.*

Prerequisites, 101-102 and Philosophy 110. An introduction to musicology, stressing a study of comparative values. To be taken in senior year.

202. RESEARCH. *2 credits.*

Prerequisite, 201. A study of special problems in the theory and history of music; open only to advanced undergraduates.

*Other music courses are listed in the College of Education.

PHILOSOPHY

Professor Nelson, Mr. Kaminsky

Students selecting Philosophy as a field of concentration are required to take Philosophy 55, 56, 103, 104 and enough other work in Philosophy to total at least 24 hours.

GENERAL COLLEGE

55. INTRODUCTION TO PHILOSOPHY. *Either semester. 3 credits.*

A survey of the fields of philosophy—logic, metaphysics and ethics—and of their relations to problems in science, religion and everyday life. Prerequisite to all Upper College courses except Aesthetics 110.

56. INTRODUCTION TO LOGIC AND SCIENTIFIC METHOD. *Second semester. 3 credits.*

A systematic study of the rules of correct reasoning and of their applications to scientific inquiry and to common sense problems of everyday life. Includes investigation of deductive and inductive inference, problems of meaning, definition and fallacies.

57. ETHICS. *First semester. 3 credits.*

Examination of the problems of moral conduct beginning with an historical survey of theories of value and moral obligation and ending with a systematic inquiry into the contemporary ethical crisis and its relation to a democratic way of life.

58. PHILOSOPHY OF RELIGION. *Second semester. 3 credits.*

Critical analysis of the basic assumptions of philosophies of religion in the Christian tradition. The philosophies studied are the following: Catholicism, Protestantism, Religion of Science, Agnosticism, Ethical Idealism, Modernism and Humanism.

61. HISTORY OF RELIGION. *First semester. 3 credits.*

An examination of the basic beliefs and practices of primitive religion, and of Christianity, Hinduism, Mohammedanism, Buddhism, etc. Not open to students who have had Comparative Religion 59.

UPPER COLLEGE

103-104. HISTORY OF PHILOSOPHY. *3 credits each semester.*

The history of western thought including its connections with scientific, religious, social and political circumstances from ancient Greece to contemporary times. First semester: Pre-Platonic philosophers, Plato, Aristotle, Epicureans, Stoics and the Scholastics. Second semester: English Empiricists, Continental Rationalists, Kant, Hegel, Mill and Spencer.

110. AESTHETICS. *Second semester. 3 credits.*

A study of aesthetic theory. Course begins with an historical survey of theories of beauty and ends with a systematic analysis of current problems.

129. INTERMEDIATE DEDUCTIVE LOGIC. *First semester. 3 credits.*

An introduction to mathematical logic. Study of propositional and class logic and also of elementary logico-mathematical problems. Prerequisite 56 or permission.

221-222. PROBLEMS OF PHILOSOPHY. *3 credits each semester.*

Class discussion of basic problems in logic, metaphysics and ethics. Intended to help the student to attain some ability in independent philosophical analysis. Extensive reading with verbal and written reports. Prerequisites, 56 and 104.

224. CONTEMPORARY PHILOSOPHY. *Either semester. 3 credits.*

Survey of contemporary realism, idealism, pragmatism and positivism and of their development out of the tradition of Kant, Hegel, Darwin and 19th century mathematics. Prerequisites, 103-104 or permission. 1949-50 and alternate years.

PHYSICS

Associate Professors Thackeray and Fouts, Mr. DeVore, Mrs. Lindsey

The work in the Physics department is planned to give those students in the Arts College who wish to major in the subject a general knowledge of the fundamentals in Physics 51, 52, 53 with a series of more advanced courses to follow, such as 201, 202, 204, 205, 209-210. Courses 51, 52, 53 will supply the information needed for a minor for students in other fields, such as Chemistry, Mathematics and Education. These courses require no mathematics beyond the Freshman year. Courses 24, 41, 42 are designed for Engineering students or others who are interested primarily in the applications of Physics. Majors may take these courses but it will increase the total hours required for a major.

The major requirements are a minimum of 28 credits in Physics, Mathematics through calculus and at least three semesters of Chemistry, in addition to the general requirements of all students who plan to take the Bachelor's degree. Those students who do not plan to go beyond the Bachelor's degree but do plan to prepare for laboratory work in Industry may on consultation with the Dean and the Head of the Department substitute Engineering courses for the foreign language. All majors will be required to elect one course in Organic Chemistry if the schedule permits.

GENERAL COLLEGE

24. MECHANICS. *4 credits.*

The first course in physics for all engineering students is regularly given in the second semester of the Freshman year but will be offered also in the first semester of the sophomore year. The course covers the principles of mechanics from a strictly engineering point of view. The engineering units will be emphasized and the problem work will be such as to emphasize the engineering applications. No student will be admitted to the course who has not completed the algebra and trigonometry. Three lectures or recitations and one laboratory period per week. Lab. fee, \$2.

41. MECHANICS AND HEAT. *4 credits.*

This is a continuation of Physics 24 and will complete such parts of mechanics as were not covered in 24 and heat. Again the engineering phase will be emphasized and the calculus is required, or at least it must be taken simultaneously. Three lectures or recitations and one laboratory period per week. Lab. fee, \$2.

42. SOUND, ELECTRICITY AND MAGNETISM. *4 credits.*

This course follows 41 and covers the chief principles of magnetism and electricity and sound with the same emphasis. Three lectures or recitations and one laboratory period per week. Lab. fee, \$2.

51-52. GENERAL PHYSICS. *4 credits each semester.*

An introductory lecture course planned to give a general survey of the mechanics, sound, heat, electricity and magnetism. No mathematics beyond that taken in the high school is required. While the course does not presume to prepare the student for work in applied physics, it is sufficient for the general arts students and for pre-medical students and is a prerequisite for all later courses in physics. Three lectures and one laboratory period per week. Lab. fee, \$2 per semester.

53. OPTICS. *4 credits.*

Optics is that branch of physics which is concerned with the phenomena of radiation but the major part of this course is concerned with visible light. The principles of geometrical optics and their applications in optical instruments and optical measurements absorb about three-fourths of the semester. The elementary principles of physical optics complete the course. Students will need sophomore mathematics, and Physics 52. Three lectures and one laboratory period per week. Lab. fee, \$2.

The Laboratory work in these courses is very closely integrated with the classroom work. No separate credit for the class work or the laboratory work is possible. The two parts must be taken simultaneously. Students who are repeating the course may be excused from the laboratory work by permission of the Dean and Head of the Department.

61. LABORATORY ARTS. 2 credits.

This course is planned for majors in the Natural Science Division and is open to all persons planning to teach the sciences in high school and to those preparing for the position of laboratory assistant in industrial work. The purpose of this course is to teach the student how to use simple power tools needed in every physics shop, to make and repair such glass joints, valves, and devices as are needed, to prepare scales, to make lantern slides and use projection devices and how to keep in operation the chief instruments used in the physics laboratory. It is an elective course. Lab. fee, \$4.

UPPER COLLEGE

201. ELECTRICITY AND MAGNETISM. 4 credits.

Magnetostatics, electrostatics, dielectrics, electrical images, atmospheric electricity, the electric circuit, the effects, measurement and production of the steady unidirectional electric currents, and the measurement of electrical quantities, particularly the quantity of electricity itself. The laboratory work is primarily concerned with the theory and use of electrical measuring instruments and may be taken either with the classroom work concurrently or later by special arrangements with the department. Three recitations and one laboratory period per week. Lab. fee, \$2.

202. ELECTRICITY AND MAGNETISM. 4 credits.

A continuation of 201, beginning with currents in inductive circuits. The facts of inductance and capacitance and their effect on alternating and intermittent currents, transmission of power, generators, transformers, motors form the principal part of the semester's work. Electro-magnetic waves and thermoelectric phenomena complete the course. Prerequisite, Physics 201 and some knowledge of differential equations. Three recitations and one laboratory period per week. Fee, \$2.

204. INTRODUCTION TO ATOMIC PHYSICS. 3 credits.

A review of the revolutionary discoveries in physics made since 1890 and the part they have had in establishing the electrical nature of matter. The structure of the atom, the transmutations of matter, and an elementary introduction to the quantum mechanics complete the course. Prerequisites, calculus and optics. Three lectures per week.

205. MECHANICS AND SOUND. 3 credits.

An intermediate course in mechanics and sound with special emphasis on the theory of elasticity and acoustics. Prerequisites, calculus and Physics 52. Three lectures per week.

209-210. PHYSICS MEASUREMENTS. 2 credits each semester.

A laboratory course in advanced physics measurements involving advanced laboratory technics. Some of the more advanced classical experiments will be repeated and certain experimental projects growing out of Physics 204 and 205. A thesis course. Lab. fee, \$4 each semester.

221-222. COLLOQUIUM. 1 credit each semester.

251. ATOMIC SPECTRA. 3 credits.

An introduction to atomic spectra and their relation to the structure of matter. The first part of the course will be a study of simple line spectra and the development of theory. This is followed by complex spectra dealing with the fine structure of lines. The principles involved in atom building and the periodic system of the elements will be studied. Prerequisites, Physics 53 and 204.

252. MOLECULAR SPECTRA. 3 credits.

This course will deal with the experimental evidence from molecular bands and the development of theory based on this evidence. In particular, it will examine rotational, vibrational and electronic bands. The Raman effect, the Isotopic effect and the question of intensity will be fully discussed. The methods of determining the molecular constants from wave number measurements will be studied. Prerequisite, Physics 251.

GRADUATE COURSES

(Courses on the 300 level are offered according to demand.)

302. QUANTUM MECHANICS. 3 credits.

An introductory course in quantum mechanics planned to give the student a thorough knowledge of the failure of the classical mechanics in the domain of atomic physics and a familiarity with some of the more fundamental physical ideas and mathematical methods of the subject. The chief objectives of the course are to prepare the student for an intensive study of the subject and for a study of its applications. Open only to students who have majored in physics and are familiar with the calculus. A knowledge of the matrices is not necessary. Three lectures per week.

304. ELECTRIC CURRENTS THROUGH GASES. 3 credits.

The theory and practice of electric currents in gases and vacuum tubes. The relation of current intensity to gaseous pressure and the characteristics of the more important vacuum tube circuits. A foundation course for future work in electronics. Three lectures per week.

304. LABORATORY. 1 credit.

A series of experiments involving the use of electron tubes and electric circuits to accompany or follow 304. Lab. fee, \$2.

306. PHYSICAL OPTICS. 3 credits.

An advanced course in the physical theory of light including the development of the wave theory and the wave mechanics. The elements of spectroscopy and spectroscopic analysis will be emphasized. Three lectures per week.

306. LABORATORY. 1 credit.

Laboratory exercises in interference, diffraction, and polarization to accompany or follow 306. Lab. fee, \$2.

307. ELECTRODYNAMICS. 3 credits.

The mathematical theory of the electric field based on Maxwell's equations. The application of these principles, and the more recent findings of the wave mechanics, to electric communication problems will form the nucleus of the course. Three lectures per week.

308. NUCLEAR PHYSICS. 3 credits.

A study of the structure of the nucleus and modern methods of transmutation, with their application to biophysics and chemical physics. Three lectures per week.

309-310. ADVANCED PHYSICAL MEASUREMENTS.

A graduate thesis course. Credit according to work done. Usually about 2 credits per semester. Lab. fee, \$4 each semester.

311-312. THERMODYNAMICS. 3 credits each semester.

A mathematical course covering the fundamental principles of thermodynamics and their physical applications. Simple engineering applications will not be included. Three lectures per week.

314. X-RAYS. 3 credits.

A first course in the theory and applications of X-rays to physical and chemical problems. Extensive use of X-ray camera and interpretation of X-ray photographs. Three lectures per week.

314. LABORATORY. 1 credit.

Laboratory practice in X-ray work to accompany or follow 314. Lab. fee, \$2.

POLITICAL SCIENCE

Professor Sherman, Associate Professor King, Assistant Professor Lawrence, Mr. Parkins, Miss Daneman

Students emphasizing political science in their field of concentration are expected to have at least 24 hours in the field of political science. Students preparing to teach will find that the State Department of Education considers political science and history as one subject major or minor.

Prerequisites: At least three hours of political science in the General College are required. These three hours may be selected from four courses, any one of which will satisfy the requirement: American National Government 41, American State and Local Government 42, Comparative Government 43, and American Diplomacy 44.

GENERAL COLLEGE

41. AMERICAN NATIONAL GOVERNMENT. *Either semester. 3 credits.*

A study of the Constitution, its distribution of powers, the President, the Congress, the courts and the great administrative organization in its contacts with the citizen.

42. AMERICAN STATE AND LOCAL GOVERNMENT. *Either semester. 3 credits.*

A study of the forty-eight states and many county governments, with particular emphasis on Ohio government.

43. COMPARATIVE GOVERNMENT. *Either semester. 3 credits.*

Emphasis is placed on the government of England. Other governmental systems are compared with England and with each other.

44. AMERICAN DIPLOMACY. *Either semester. 3 credits.*

This course analyzes the machinery by which the United States conducts its foreign relations and the varying policies adopted toward different major areas of the world.

UPPER COLLEGE

Courses Offered Each Year

103. POLITICAL PARTIES. *First semester. 3 credits.*

The development, organization, functions, and machinery of American political parties.

108. PARLIAMENTARY LAW AND LEGISLATIVE PROCEDURE. *Second semester. 3 credits.*

A drill course in parliamentary procedure. About one-third of the course is devoted to modern legislative procedure.

109. GOVERNMENT AND SOCIAL WELFARE. *First semester. 3 credits.*

A study of the part government has come to play in the social welfare field.

110. GOVERNMENT AND BUSINESS. *Second semester. 3 credits.*

The relationships of government with business in the nature of prohibitions, regulations, supervision, and assistance.

117-118. POLITICAL THEORY. *3 credits each semester.*

The first semester begins with the political thinking at the time of Plato and ends with the seventeenth century; the second semester continues to the present day with emphasis on American political thought.

205. CONSTITUTIONAL LAW. *First semester. 3 credits.*

A study of the Constitution and the American system of government in terms of Supreme Court decisions.

211. INTERNATIONAL RELATIONS. *First semester. 3 credits.*

A study of the basic realities of nation-wide relationships; power politics; the balancing of power; specific foreign policies; economic, cultural, and geographical factors which exert influence.

212. INTERNATIONAL LAW. *Second semester. 3 credits.*

A study of the established rules, practices, and conventions governing the relations of the several national states of the world and their citizens in their relationship with one another.

216. WORLD POLITICS. *Second semester. 3 credits.*

A study of politics among nations, analyzing its elements and general nature, and appraising the fateful struggle of sovereign states for power and peace in our time.

217-218. FIELD WORK IN PUBLIC ADMINISTRATION. *3 credits each semester.*

Open only to senior majors with six hours of public administration. This course is for the student who desires a career in public service.

220. ADMINISTRATIVE LAW. *Second semester. 3 credits.*

A study of the rights of a citizen before government agencies and the rights and duties of the public official; the customary procedures of government agencies and the legal recourse of both agency and citizen in accomplishing the objectives of each.

298. SEMINAR IN POLITICAL SCIENCE. *Second semester. 2 credits.*

Required for senior majors. Seniors taking 217-218 may be excused from seminar.

301. READINGS IN WORLD AFFAIRS. *1 to 3 credits.***302. READINGS IN PUBLIC ADMINISTRATION. *1 to 3 credits.******303. READINGS IN POLITICS AND PUBLIC AFFAIRS. *1 to 3 credits.***

Not more than 6 credits may be earned in reading courses.

401. RESEARCH AND THESIS IN POLITICAL SCIENCE. *1 to 3 credits.

Courses Offered 1951-52 and Alternate Years

207. MUNICIPAL FINANCE. *Second semester. 2 credits.*

Municipal budgets, purchasing of materials, sources of municipal revenue, and problems of real estate tax.

213-214. PUBLIC ADMINISTRATION. *3 credits each semester.*

A study of the principles of administrative organization; personnel recruitment; sound budget organization and procedure; public reporting and public relations.

Courses Offered 1952-53 and Alternate Years

101. MUNICIPAL GOVERNMENT. *First semester. 3 credits.*

The development, composition, and governmental organization of American city life.

102. MUNICIPAL ADMINISTRATION. *Second semester. 3 credits.*

The organization of city government for the performance of services to the public, such as police protection, supervised playgrounds, parks, etc.

206. MUNICIPAL CORPORATIONS. *Second semester. 3 credits.*

The American city from the legal point of view as established by the many court decisions.

*These courses are offered whenever a demand for them exists. They are usually on an individual basis.

PSYCHOLOGY

Professor Twining, Assistant Professors Alven and Henderson, Mrs. Clayton, Mr. Thompson, Mr. Grotz, Mr. Ireland, Mr. Hartz

The courses are described under Psychology in the College of Education section of the catalog. Students emphasizing Psychology in the field of concentration are expected to take at least 24 credits in Psychology. The courses included in the requirement are determined by the needs and interests of the student. Psychology 41 is required in the General College. Psychology 45 is required of Majors and should be taken shortly after 41, and before the required course in Social Statistics 57. Senior Majors must take Psychology 216. Recommended courses in the General College are Psychology 42, 43, Social Science, Biology, Business Organization and Management 61, Philosophy, English and Speech.

All courses in the department except 51 are acceptable in the major. No student, major or otherwise, may present more than two of the courses numbered 43, 52, and 62. All Liberal Arts College requirements for graduation apply to students who major in Psychology, including the requirement of the second year of a foreign language on the college level.

SECRETARIAL SCIENCE

Professor Doult, Associate Professors Flint and Tucker, Assistant Professor Self, Mrs. Konstand, Mrs. Handwerk, Miss Anna Mae Flint, Miss Sterley, Mrs. Wettstyne, Mrs. Oblisk

Students interested in preparing themselves for the higher grade secretarial and office positions may choose between two programs offered in Secretarial Science: a two-year certificate course, listed in the General College, and a degree course which is essentially a combination of the technical work required in business and the broad cultural education needed for effective living. By proper planning, it is possible to complete the 4-year curriculum in three years, including summer sessions. Considerable latitude is allowed for the planning of programs to meet particular needs.

Admission: Admission to the department is open to all who have satisfactorily met the requirements of the General College and who have completed one year of shorthand and typewriting (61-62 and 51-52 or equivalent). However, it is advisable to elect the other General College courses listed below.

Combination Courses: Two special five-year programs are available, each leading to two degrees: (1) Secretarial Science—Liberal Arts, and (2) Secretarial Science—Education. Those interested should confer with the head of the department.

Special Fields: For those interested in preparing for such specialties as that of medical secretary, chemical secretary, engineering secretary, political secretary, social secretary, or legal secretary, special programs may be arranged, containing courses applicable to the particular field of interest.

Graduation: (1) In addition to the regular requirements of the University for graduation, students must pass a general final examination (field of specialization only) in the senior year. (2) At least 60 semester hours of the total program must be in academic subjects. (3) Graduates receive the degree of B.S. in Secretarial Science.

Shorthand and Typewriting: Those who have had shorthand and typewriting before entrance will begin these courses in college at such point as their degree of proficiency permits as indicated by placement tests. Approved electives, preferably academic subjects, will be taken in place of the work omitted. Full credit will not be granted where undue repetition exists.

Curriculum: In addition to the introductory courses in the General College, the following subjects are required, although the arrangement may be varied:

First Year	Cr. Hrs.	Second Year	Cr. Hrs.
Typewriting 51-52	4	Shorthand 61-62	7
Filing Practices 27	2	Accounting 41-42 or 21-22	6
Machine & Slide Rule Calculation 25.....	1	Secretarial Training 74	2
Secretarial Procedure 23	2	Bus. Org. and Mgt. 61	3
Third Year	Cr. Hrs.	Fourth Year	Cr. Hrs.
Intermediate Dictation 163-164	8	Advanced Dictation 165-166	8
Business Law 51 or 141	3	Office Practice 293-294	6
Business Correspondence 133	3	Office Org. and Mgt. 296	3
Economics	6		

**ONE-YEAR SECRETARIAL CERTIFICATE
PROGRAM FOR COLLEGE GRADUATES**

For young men and women who already hold baccalaureate degrees, especially the A.B., the following program has been designed to supply the technical training and background needed for secretarial and office positions.

While there is not sufficient time to develop maximum skill in dictation and transcription and still include other necessary subjects, it is also true that in some positions the mental development which results from a comprehensive general education is more important than the skill.

The program can be adjusted to meet the needs of individuals who wish to attend on a part-time basis in either the day or the evening session.

Summer	Semester Hours		
Shorthand 61-62	7		
Typewriting 52 or 31	2		
		Fall Semester	Spring Semester
		Hours	Hours
Advanced Shorthand and Transcription 63.....	4	Advanced Shorthand and Transcription 64.....	4
Secretarial Procedure 23	2	Filing Practices 27	2
Business Org. and Mgt. 61	3	Office Org. and Mgt. 296	3
Accounting 41 or 21	3	Accounting 42 or 22	3
Business Correspondence 133	3	Machine and Slide Rule Cal. 25	1
		Secretarial Training 74	2

GENERAL COLLEGE

23. SECRETARIAL PROCEDURE. *Either semester. 2 credits.*

The fundamental principles and procedures which relate to the secretarial position.

25. MACHINE AND SLIDE RULE CALCULATION. *Either semester. 1 credit.*

Techniques of machine and slide rule calculation as applied to business. Credit is not allowed for this course and also for Filing and Machine Calculation 26.

27. FILING PRACTICES. *Either semester. 2 credits.*

Thorough treatment of all basic filing systems. Fee, \$1.75.

31. TYPEWRITING (Non-Secretarial). *Either semester. 2 credits.*

A basic course intended primarily for those who can devote only one semester to this subject. Credit not allowed for this course and also for 51. Fee, \$4.

35. BUSINESS ENGLISH. *Either semester. 2 credits.*

Fundamentals of English, with stress on areas in which business men have found college graduates to be weak.

41-42. SHORTHAND THEORY. *Evening session. 3 credits each semester.*

Gregg shorthand theory is completed, transcription introduced, and general dictation given. Speed attainment: 60-70 words per minute. No credit given for the first semester only.

46. SHORTHAND REVIEW. *Second semester. 3 credits.*

A thorough review of Gregg shorthand theory, covering one year's work. Credit is not allowed for this course and also for 41-42.

51-52. TYPEWRITING. *2 credits each semester.*

Fundamentals of typewriting, including drill, placement, letters, tabulations, preparation of reports, etc. Fee, \$4 each semester.

56. TYPEWRITING REVIEW. *Second semester. 2 credits.*

A thorough review of typewriting, covering one year's work. Credit not allowed for this course and also for 51-52. Fee, \$4.

57. TYPEWRITING. *First semester. Evening session. 1 credit.*

A beginning course which lays the foundation for advanced work in typewriting through fundamental drills covering the keyboard and paragraph writing. Speed attainment: 20-25 words per minute. Fee, \$4.

58. **TYPEWRITING. *Second semester. Evening session. 1 credit.***

Prerequisite, 57 or equivalent. Continuation of Typewriting 57, emphasizing letter and manuscript writing. Speed attainment: 35-40 words per minute. Fee, \$4.

59. **TYPEWRITING. *First semester. Evening session. 1 credit.***

Prerequisite, 58, or equivalent. Continuation of Typewriting 58, emphasizing tabulation, legal and business forms. Speed attainment: 45-50 words per minute. Fee, \$4.

61. **SHORTHAND THEORY. *First semester. 3 credits.***

Prerequisite, Typewriting (unless it is taken concurrently). Completion of Gregg shorthand principles. No credit unless the second semester is completed satisfactorily.

62. **SHORTHAND AND TRANSCRIPTION. *Second semester. 4 credits.***

Prerequisite, 61 and 51 or equivalent. Typewriting 52 must accompany or precede. Introduction of transcription and general dictation. Speed attainment: 60-80 words per minute. Fee, \$1.

63-64. **ADVANCED SHORTHAND AND TRANSCRIPTION. *4 credits each semester.***

Prerequisite, 62 and 52 or equivalent. Vocabulary building; general dictation on letters, articles, and Congressional Record material. Speed attainment: 100-120 words per minute. Fee, \$1 each semester.

74. **SECRETARIAL TRAINING. *Either semester. 2 credits.***

Prerequisite, 62 and 52 or equivalent. Advanced typewriting, transcription, business forms, duplicating processes, dictating and transcribing machines. Fee, \$1.50.

83-84. **INTERMEDIATE DICTATION. *Evening session. 3 credits each semester.***

Prerequisite, 42 and 58, or equivalent. Vocabulary building, general dictation on letters and articles. Speed attainment: 80-100 words per minute. Fee, \$1 each semester.

85. **INTERMEDIATE DICTATION. *First semester. Evening session. 3 credits.***

Prerequisite, 84 or equivalent. Vocabulary building; dictation on letters, articles, and Congressional Record material. Speed attainment: 100-120 words per minute. Fee, \$1.

93. **BUSINESS LETTERS. *Either semester. 2 credits.***

Principles and practice in the writing of business letters.

95-96. **OFFICE MANAGEMENT AND PRACTICES. *Evening session. 2 credits each semester.***

A study of office functions and of the principles involved in office management, adapted for adults with office experience. Credit not allowed for this course and also for 296.

UPPER COLLEGE

133. **BUSINESS CORRESPONDENCE. *Either semester. 3 credits.***

Prerequisite, English 2. An advanced treatment of business letter writing, including extensive outside reading and reports. Credit not allowed for this course and also for 93.

163-164. **INTERMEDIATE DICTATION. *4 credits each semester.***

Prerequisite, 62 and 52, or equivalent. Vocabulary and phrase building. Dictation on letters, articles, and Congressional Record material. Speed attainment: 100-120 words per minute. Fee, \$1.

165-166. **ADVANCED DICTATION. *4 credits each semester.***

Prerequisite, 64 or 164, or equivalent. Letters, articles, Congressional Record material, and lectures. Speed attainment: 130-150 words per minute. Fee, \$1 each semester.

186. ADVANCED DICTATION. *Second semester. Evening session. 3 credits.*

Prerequisite, 85 or equivalent. Abbreviated vocabulary, dictation on letters and Congressional Record material. Speed attainment: 110-130 words per minute. Fee, \$1.

187-188. ADVANCED DICTATION. *Evening session. 3 credits each semester.*

Prerequisite, 186, or equivalent. Letters, articles, Congressional Record material, and lectures. Speed attainment: 130-150 words per minute. Fee, \$1 each semester.

293-294. OFFICE PRACTICE. *3 credits each semester.*

Prerequisites, 25, 27, and 64 or 164. The fundamental principles and procedures which relate to the secretarial position; laboratory work on duplication machines, transcribing and dictating machines, filing, general secretarial duties, and office experience. Fee, \$2.50 a semester.

296. OFFICE ORGANIZATION AND MANAGEMENT. *Second semester. 3 credits.*

Prerequisite, Commerce 61. Individual projects relating to analyses of various aspects of the office and to problems involved in office management.

SOCIOLOGY

Professor DeGraff, Associate Professor Rogler, Mr. Ireland, Miss Hawk

For General College courses suggested but not required, see General College section.

Students emphasizing Sociology in their field of concentration are expected to take 24 hours in the field of Sociology. The courses in this requirement are selected with special reference to the needs of the individual student. In special cases, either more or less than 24 hours may be required.

Students emphasizing social welfare work as their field of concentration are required to take Field Work 111-112; Technique of Social Case Work 251-252; Theory of Social Work 223; Government and Social Welfare 109; Community Organization 206; Child Welfare 117; Welfare Aspects of Social Security 209; Community Social Studies 219-220; Specific courses in economics, home economics, and biology are also recommended.

Students may do their supervised field work with the Summit County Children's Home, the Family Service Society, the Juvenile Court, the City Hospital, Department of Public Charities, Y.M.C.A., Y.W.C.A., the Boy Scouts, the Girl Scouts, Community Chest, Federal Housing, Jewish Center, Catholic Service League, Council of Social Agencies, Red Cross, Travelers' Aid Society, Jewish Social Service Federation, and selected industries.

A course in statistics is required for all students. Mathematics 57, Social Statistics, meets this requirement.

The following courses count toward the 24-hour requirement. The courses all have Sociology 41 and 42 (offered in the General College) as a prerequisite. However, with permission of the head of the department, the prerequisite may be taken collaterally with these courses.

Courses 43, 104, 117, 206, 209, 221, 251 and 252 are planned to meet the needs of both University students and field workers in social agencies and institutions.

GENERAL COLLEGE

23. INTRODUCTION TO SOCIOLOGY (For Nurses). *3 credits.*

This course treats of personal adjustment of nurse to patient, patient to nurse, and the nurse's relationship to the community.

41. GENERAL SOCIOLOGY. *Either semester. 3 credits.*

A study of the origin, development, structure, and function of social groups.

42. SOCIAL ATTITUDES. *Either semester. 3 credits.*

Prerequisite, 41. A study of the development of a person and personality, emphasizing the processes by which such are developed as a function of the social group.

43. MODERN SOCIAL PROBLEMS. *3 credits.*

A presentation of social problems from the sociological point of view.

45. SOCIAL ANTHROPOLOGY. *3 credits.*

An elementary course dealing with the fundamental concepts of our cultural heritage.

UPPER COLLEGE
Courses Offered Each Year

109-110. SEMINAR AND THESIS. *2 credits each semester.*

For seniors only. Required. A study of research techniques and a presentation of a paper before a group composed of students, faculty, and special guests.

111-112. FIELD WORK. *3 credits for 150 hours of work at a recognized agency or institution.*

Intended primarily for students interested in welfare or group work. Seniors only. Two semesters recommended.

201. PENOLOGY. *3 credits.*

A study of penal systems, practices and theories, past and present, with special emphasis on the changing conceptions about the treatment of prisoners in penal institutions. Prerequisite, Sociology 41.

206. COMMUNITY ORGANIZATION. *First semester. 3 credits.*

A practical study of the social, religious, educational, relief, and character building agencies of a community. A required course.

215. SOCIAL THEORY. *First semester. 3 credits.*

A study and analysis of theoretical basis of modern thoughts, institutions, and organizations. A required course for majors. Seniors and graduate students.

216. SOCIAL ORIGINS. *Second semester. 3 credits.*

A study and analysis of the origin of social institutions, organizations, and systems of social thought. A required course for majors. Seniors and graduate students.

219-220. COMMUNITY SOCIAL STUDIES. *3 credits each semester.*

No credit is given toward graduation for less than a full year's work. Study and analysis of community problems based upon research with reference to Census Tract Maps.

251-252. TECHNIQUE OF SOCIAL CASE WORK. *2 credits each semester.*

A study of practical techniques with emphasis upon case work interpretation and procedure.

202. COLLECTIVE BEHAVIOR. *First semester. 3 credits.*

A study of group behavior in the early stages of social movements, including such topics as crowds, mobs, crazes, booms, panics, revolutions, etc. Prerequisite, Sociology 42.

205. THE SOCIOLOGY OF LEISURE TIME. *First semester. 3 credits.*

A study of the public, private, commercial, and industrial provisions for recreation and leisure time activities.

209. WELFARE ASPECTS OF SOCIAL SECURITY. *Second semester. 3 credits.*
An analysis of social security as interpreted by social and welfare agencies.

223. THEORY OF SOCIAL WORK. *First semester. 3 credits.*
An interpretation of the historical and theoretical background of social work, techniques, and philosophy.

231. SOCIAL CONFLICT. *First semester. 3 credits.*
Social conflict will be considered here as a fundamental aspect of social interaction; emphasis will be on principles regarding the nature, causes, results and techniques for resolving conflict. Particular cases of conflict will be used for illustration only. Class discussion will include social conflict, its similarities and differences compared with competition; types of conflict including that between individuals, between small groups, between factions in larger groups, between institutions, e.g., church versus the state and between whole collectivities, e.g., rural versus urban. Social conflict is also considered as a factor in group solidarity as a cultural phenomenon rather than due to instincts or personal antipathies. Techniques for controlling social conflict are considered. Prerequisite, Sociology 42.

Courses Offered 1951-52 and Alternate Years

104. LEADERSHIP. *Second semester. 2 credits.*
An interpretation of leaders and leadership with emphasis upon problems, techniques, and processes of the same.

113. URBAN-RURAL SOCIOLOGY. *First semester. 2 credits.*
A comparison and analysis of urban and rural life with emphasis upon the person.

Courses Offered 1952-53 and Alternate Years

114. CRIMINOLOGY. *Second semester. 3 credits.*
A general background course for delinquency and penology. Cause, treatment, and prevention of crime.

117. CHILD WELFARE. *Second semester. 3 credits.*
A study of the relation and responsibility of the state and community to the child.

204. THE FAMILY. *Second semester. 3 credits.*
A presentation of the family as a group of interacting personalities.

210. POPULATION MOVEMENTS. *Second semester. 3 credits.*
Present movements of population as in-migration, refugee, prison, urban and rural, with their sociological implications.

213. THE JUVENILE DELINQUENT. *First semester. 3 credits.*
A study of the delinquent as a person. Emphasis upon causes, treatment and prevention.

217. RACE RELATIONS. *Second semester. 3 credits.*
A study of minority groups with emphasis upon the sociological interpretation.

221. SOCIAL CONTROL. *First semester. 3 credits.*
A consideration of the foundations, means and techniques for controlling social behavior.

SPEECH

Associate Professors Sandefur and Varian, Mrs. Hardenstein, Miss Hittle, Mr. Turner, Mr. Wilson, Mr. Plant

The courses in the Department of Speech are designed to provide education in the fundamentals of speech, including social adaptation and control, public address, and personal proficiency. Students are trained in one or more of the following fields: public speaking, argumentation and debate, acting and dramatic production, interpretation, radio speaking, and speech correction. Since Upper College work in speech embraces these fields, the student should elect a program in General College that will apply directly to the specific interests in the field of speech which he proposes to follow in Upper College.

Major: A minimum of 24 hours in speech. The following courses are required: 41, 51, 271, 272, 291, 292, 293. Students are expected to take at least one course in each area of the speech field.

Suggested Electives: Any General College speech courses, the basic courses in the social sciences and psychology, Shakespeare 41, Appreciation of Drama 50, Design 21, Art Appreciation 29-30, History of Music 101-102.

The University Theatre: The University Theatre provides excellent facilities for training students in acting and dramatic production. At least three full length plays are staged each year.

Forensic Activities: The Department of Speech sponsors a University Debate Team and supervises a program of intramural and intercollegiate debates.

The Speech and Hearing Clinic: The clinic, which is free to all citizens of Akron, provides guidance and assistance in the diagnosis and treatment of all kinds of voice and speech disorders. Remedial treatment is offered to a limited number. Advanced students assist with the work of the clinic.

Radio Broadcasting Studio: Training is provided in announcing, writing, and performing for the radio. Practical training is offered through the facilities of local radio stations.

Speakers' Bureau: The Speech Department supervises a Speakers' Bureau for the convenience of the residents of Akron and for training of its students. Speakers, debaters, readers, and discussion panels are available to local groups. Occasionally a one-act play can be provided.

Ashton Public Speaking Contests: Several prizes are available each year to the winners of the public speaking contests and the interpretation contest. The contests are open to all students in the University.

Pixley Scholarships in Speech: See section on scholarships and prizes.

GENERAL COLLEGE

41. PUBLIC SPEAKING. *Either semester. 3 credits.*

A beginning course designed to provide instruction in the essentials of effective general speech, and to improve oral communication.

42. ADVANCED PUBLIC SPEAKING. *Either semester. 3 credits.*

Prerequisite, 41. An advanced course for those who wish to develop skill in direct public address.

45-46. ORAL ARGUMENT. *2 credits each semester.*

A study of the theory of argument. Analysis of the logical processes in the speech situation. Practice in argument and discussion.

47. BUSINESS AND PROFESSIONAL SPEAKING. *Either semester. 2 credits.*

An adaptation of the speech skills to business and professional life. Practice in conference, discussion, and types of speeches.

48. ADVANCED BUSINESS AND PROFESSIONAL SPEAKING. *Either semester.*

2 credits.

Prerequisite, 47.

51. READING ALOUD. *First semester. 3 credits.*

A basic course designed to provide experience in the oral interpretation of the printed page.

52. ADVANCED INTERPRETATION. *Second semester. 3 credits.*

Prerequisite, 51. Further practice in reading aloud. Program building in reference to specific audiences and specific types of literature.

53. INTRODUCTION TO THE THEATRE. *3 credits.*

A beginning course in theatre arts designed to acquaint the student with a background for the study of modern theatre practice.

54. VOICE AND ARTICULATION. *2 credits.*

A basic course in voice training designed to provide practice in the correct production of speech sounds.

56. PUBLIC DISCUSSION AND GROUP PROCEDURE. *Second semester. 3 credits.*

Prerequisite, permission. The technique of discussion in terms of the skills of the effective discussion leader and the effective discussion-participant. Practice in the various types of discussion.

57-58. INTERCOLLEGIATE DEBATE. *1 or 2 credits each semester.*

A study of the nature of argument in its application to a particular question which is debated among the universities and colleges each year. A group is selected to comprise the University Debate Team which fulfills intercollegiate engagements.

65-66. SPEECH IMPROVEMENT. *1 credit each semester.*

For those students who need special help to improve their articulation and enunciation, voice quality, pitch, intensity, or rate.

76. FUNDAMENTALS OF SPEECH. *Either semester. 3 credits.*

A course designed especially for majors in the College of Education. Effective speaking for the classroom teacher with emphasis upon organization, delivery, voice, and articulation. Introduction to the problems of the speech handicapped school child.

81. RADIO SPEAKING. *3 credits.*

A beginning course in radio speaking designed to provide instruction in microphone technique and announcing.

UPPER COLLEGE

114. TEACHING OF SPEECH. *Either semester. 2 credits.*

A course in teaching methods to improve the speech of the elementary and secondary school child.

161. PLAY PRODUCTION. *First semester. 3 credits.*

An introductory course in play direction and stage design. The fundamentals of scenery construction, stage lighting, make-up, and theatre management. Fee, \$2.

162. ADVANCED PLAY PRODUCTION. *Second semester. 3 credits.*

Prerequisite, 161. Fee, \$2.

163-164. ACTING. *3 credits each semester.*

Prerequisite, 51. A detailed study of the actor's resources, stage practice, gesture, movement, timing and pointing of lines, sustaining emotional scenes, effective characterization, and styles in acting.

167. HISTORY OF THE THEATRE. *First semester. 3 credits.*

An historical survey of modes and manners in the theatre from ancient times to the present day. Styles in acting, scene design, stage construction, stage lighting, and drama.

181. RADIO PRODUCTION. 3 credits.

A study of the technique and the performance of radio broadcasting. Practice in dramatic production for the radio. Fee, \$1.

204. SPEECH PHONETICS. *Second semester. 2 credits.***271-272. SPEECH CORRECTION. 2 credits each semester.**

The classification, diagnosis, and treatment of speech defects. In the second semester special attention is given to case studies and clinical practice.

273-274. CLINICAL PRACTICE IN SPEECH CORRECTION. 1 credit each semester.

This course is designed to provide the student with practice in clinical therapy and should be taken concurrently with Speech Correction 271-272.

287. ADVANCED RADIO WRITING AND PRODUCTION. 3 credits.

Practical experience in writing and adapting for the radio. Opportunity is provided for performance from the University studio over one of the local stations. Fee, \$1.

291-292. HISTORY AND DEVELOPMENT OF SPEECH. 2 credits each semester.

First semester: a study of the development of rhetorical principles from Plato and Aristotle to the present.

Second semester: criticism of British and American public address, including speeches by Fox, Pitt, Burke, Webster, Clay and Calhoun.

293. SPEECH SEMINAR. *Second semester. 2 credits.***393. RESEARCH. *Either semester. 1 to 3 credits.***

THE COLLEGE OF ENGINEERING

R. D. LANDON, C.E., M.S., *Dean*
E. K. HAMLEN, M.E., *Coordinator*

GENERAL INFORMATION

Establishment of the College of Engineering was approved by the Board of Directors of the University in 1914. Because of the magnitude and diversity of industrial development in the Akron area, the advantages of the cooperative plan were apparent. Accordingly, a five year course, similar to that originated at the University of Cincinnati by the late Dean Herman Schneider, was developed by Dr. Fred E. Ayer, another pioneer in cooperative engineering education.

All graduating classes since the first in 1919 followed the cooperative plan until in 1942 the accelerated curriculum was adopted as a temporary expedient to aid the war effort. Instruction on the cooperative plan was resumed with the class entering in September, 1947.

THE COOPERATIVE PLAN

Fundamentally, the cooperative plan provides for a coordinated sequence of alternate periods of class room instruction and industrial employment. During the cooperative phase of the five year course, the student body is divided into two equal groups, Sections A and B. While those in Section A attend classes for the first period, the students in Section B are employed in industry. During the second period those in Section A report for industrial employment and the students in Section B attend classes. This schedule of alternation continues throughout the calendar year. By pairing a student in Section A with an alternate in Section B and by deducting vacations from school periods, employers are assured that one of each pair will be on duty in industry every working day of the year.

The cooperative plan provides simultaneously for the development of fundamental principles in the class room and for their application in industrial practice. The cooperative student has the opportunity to find the type of work and industrial organization in which he can best apply his individual ability. He gains an appreciation of the problems of labor and management by first-hand experience. He develops a maturity of judgment by coping with the everyday problems which are inherent in the modern industrial world. The employer of cooperative students has the opportunity to select and train students whose abilities and aptitudes can be adapted to the needs of his technical staff requirements.

At The University of Akron, engineering students attend classes full time for two semesters during the first year and for two and one-half semesters during the second year. At the beginning of the third year, students alternate class room instruction with industrial employment in periods of one-half semester. The cooperative phase extends through the third, fourth and first half of the fifth year. At that time, all students return to classes for a final semester before graduation.

While students are at work, they are required to obey all rules and regulations prescribed by the employer. In addition, they are subject to all current labor laws and conditions.

The University does not guarantee employment, but makes every effort to place students to the best financial advantage that is consistent with the acquisition of sound sub-professional experience.

THE COOPERATIVE SCHEDULE

FRESHMAN YEAR

(Full Time)

<u>First Semester</u>	<u>Second Semester</u>
(Fall)	(Spring)

SOPHOMORE YEAR

(Full Time)

<u>First Semester</u>	<u>Second Semester</u>	<u>Third Term*</u>
(Fall)	(Spring)	(Summer)

PRE-JUNIOR YEAR

(Cooperative)

	<u>First Semester</u>		<u>Second Semester</u>		<u>Third Term</u>
	(Fall)		(Spring)		(Summer)
Section A	School (1)*	Work (1)	School (2)	Work (2)	School (3)
Section B	Work (1)*	School (1)	Work (2)	School (2)	Work (3)

JUNIOR YEAR

(Cooperative)

	<u>First Semester</u>		<u>Second Semester</u>		<u>Third Term</u>
	(Fall)		(Spring)		(Summer)
Section A	Work (3)	School (4)	Work (4)	School (5)	Work (5)
Section B	School (3)	Work (4)	School (4)	Work (5)	School (5)

SENIOR YEAR

(Cooperative)

(Full Time)

	<u>First Semester</u>		<u>Second Semester</u>
	(Fall)		(Spring)
Section A	School (6)	Work (6)	
Section B	Work (6)	School (6)	

*All third terms and all cooperative school and work periods are of one-half semester duration.

CURRICULA AND DEGREES

The College of Engineering offers curricula on the cooperative plan in Civil, Electrical, and Mechanical Engineering with an Industrial Option in Mechanical Engineering. The degrees conferred for satisfactory completion of the prescribed courses and a satisfactory employment record are Bachelor of Civil Engineering, Bachelor of Electrical Engineering and Bachelor of Mechanical Engineering.

It is the aim of this College to provide basic training for effective living in a modern society as well as to provide the fundamentals necessary for a career in engineering. Since the fundamentals in all branches of engineering are identical, the program for the first two years is the same for all students. Upon satisfactory completion of this phase of the curricula, students select their field of specialization and are promoted to the Upper College department of their choice.

Since the cooperative phase of the curricula begins in the third year, it is necessary that all students complete the work of the first two years before they are eligible for placement on cooperative work assignments. Students who are unable to carry the courses as scheduled should allow extra time, probably one year, for completion of the requirements for graduation.

ADMISSION REQUIREMENTS

The admission of any student to The University of Akron will depend upon the evidences of his preparation and ability to do college work in a satisfactory manner. The evidences are: (1) graduation from an accredited four-year secondary school or its equivalent; (2) quality of work done in the secondary school; (3) ranking in certain tests given by the University to determine preparation, ability and aptitudes; (4) attitude toward college work.

Any student applying for admission is expected to have an adequate background in both oral and written English. In addition, any student applying for admission in Engineering is required to present the following secondary school credits:

Algebra $1\frac{1}{2}$ units Plane Geometry 1 unit
Solid Geometry or Trigonometry $\frac{1}{2}$ unit
Chemistry or Physics 1 unit

It is strongly recommended that any applicant in Engineering present additional credits in mathematics and physical science.

Since the Engineering curricula have been designated to operate on an annual rather than on a semester basis, beginning students are regularly admitted only in September. In special cases, admission may be granted in February.

All beginning students who are admitted to the University will register in the General College. Those admitted in Engineering will be eligible for transfer to the College of Engineering after satisfactory completion of the first semester Engineering schedule.

ADMISSION FROM OTHER COLLEGES

Applicants with college credits earned at other accredited colleges may be eligible for admission to the College of Engineering provided the quality of work completed meets the scholastic requirements of the University and such applicants are eligible to re-enter the institution of last attendance.

Because of the nature of the cooperative course, applicants from other colleges should plan to enter the College of Engineering not later than the beginning of the sophomore year.

REQUIREMENTS FOR GRADUATION

It is necessary that a candidate for the Bachelor's degree fulfill the following requirements: (1) earn credit in all of the required courses listed in the schedule, (2) accumulate at least 155 credits, (3) earn a quality point ratio of at least 2 in his departmental courses as well as in total credits and (4) complete satisfactorily six cooperative work periods.

FEEES AND OTHER EXPENSES

Payment of fees is part of the registration procedure. All fees must be paid at the Treasurer's office at the time of enrolment.

Tuition is not charged to legal residents of Akron. Tuition charges for other students are included in the following listing of expenses for a normal, full-time schedule during both complete semester periods and during half-semester school periods in the cooperative plan:

FEEES WHILE ON FULL TIME BASIS

	First Semester	Second Semester
Tuition fee, for non-residents of Akron.....	\$ 90.00	\$ 90.00
Fees for all students		
Maintenance fee	56.00	56.00
Student activity fee	10.00	4.00
Student Building fee	3.00	3.00
Library fee	1.50	1.50
Total for non-residents of Akron	\$160.50	\$154.50
Total for residents of Akron	\$ 70.50	\$ 64.50

FEE WHILE ON COOPERATIVE BASIS

	First Semester Period	Second Semester Period	Summer Period
Tuition fee, for non-residents of Akron...	\$ 60.00	\$ 60.00	\$ 60.00
Fees for all students			
Maintenance fee	40.00	40.00	40.00
Student activity fee	10.00	4.00	2.00
Student Building fee	3.00	3.00	1.50
Library fee	1.50	1.50	1.00
Total for non-residents of Akron	\$114.50	\$108.50	\$104.50
Total for residents of Akron.....	\$ 54.50	\$ 48.50	\$ 44.50

Laboratory fees are included in course descriptions.

SCHEDULE OF REQUIRED COURSES

FRESHMAN YEAR

(Full Time)

FIRST SEMESTER (Fall)

Subject	Rec.	Lab.	Cr.
College Algebra 21.....	3	0	3
Trigonometry 22	3	0	3
English, Oral and Written 1.....	3	0	3
Engineering Drawing 21	0	6	2
Survey of Engineering 23	1	0	1
Hygiene, Mental 15.....	2	0	2
Military S. and T. 11.....	2	1	1½
Physical Education 3	0	2	1
	14	9	16½

SECOND SEMESTER (Spring)

Subject	Rec.	Lab.	Cr.
Analytic Geometry 43.....	3	0	3
Physics 24 (Mechanics)	3	2	4
English, Oral and Written 2*.....	3	0	3
Engineering Drawing 22	0	6	2
Intr. to Social Sciences 6.....	3	0	3
Military S. and T. 12.....	2	1	1½
Physical Education 4.....	0	2	1
	14	11	17½

*Special Sections for Engineering Students.

SOPHOMORE YEAR

(Full Time)

FIRST SEMESTER (Fall)

Subject	Rec.	Lab.	Cr.
Differential Calculus 45	3	0	3
Physics 41 (Heat)	3	2	4
Descriptive Geometry 43	1	5	3
(Economics 41 or Public Speaking 41.....)	3	0	3
Intr. to Humanities 7	3	0	3
Military S. and T. 43.....	2	1	1½
	15	8	17½

SECOND SEMESTER (Spring)

Subject	Rec.	Lab.	Cr.
Integral Calculus 46	3	0	3
Physics 42 (Electricity)	3	2	4
(Public Speaking 41 or Economics 41	3	0	3
Intr. to Humanities 8	3	0	3
Applied Mechanics 48 (Statics).....	3	0	3
Military S. and T. 44.....	2	1	1½
	17	3	17½

THIRD TERM (Half Semester) (Summer)

Subject	Rec.	Lab.	Cr.
Heat Power Engineering ME 46.....	6	0	3
Applied Mechanics 49 (Dynamics) 6	6	0	3
Elementary Surveying CE 47.....	2	6	2
D.C. and A.C. Principles EE 30.....	3	3	2
(for C.E. and M.E. students) or E.E. Fundamentals EE 31.....	4	0	2
(for E.E. students)			
	17	9	10
	18	6	10

BASIC ENGINEERING COURSES

GENERAL COLLEGE

20. DRAWING INTERPRETATION AND SKETCHING. *1 credit (0-1)**

(For Industrial Management students.) Principles of projections. Free-hand and scaled sketches. Dimensioning, cross sections, notes and shop terms. Reading exercises on prints of machines, structures and industrial layouts.

21. ENGINEERING DRAWING. *2 credits (0-2)*

Freehand sketching, lettering and proper use of drawing instruments. Geometric drawing. Orthographic projection. Emphasis on accuracy and technique with pencil and pen. Lab. fee, \$1.

22. ENGINEERING DRAWING. *2 credits (0-2)*

Prerequisite, Engineering Drawing 21. Auxiliary views, isometric and oblique drawing and cross sections. Detailed dimensions. Bolt and screw details. Working drawings. Tracings and prints. Lab. fee, \$1.

23. SURVEY OF ENGINEERING. *1 credit (1-0)*

Engineering as a profession, including personal aptitudes, educational requirements, scope of the various branches, professional duties, responsibilities and ethics. Lectures by staff members and practicing engineers.

43. DESCRIPTIVE GEOMETRY. *3 credits (1-2)*

Prerequisite, Engineering Drawing 22. Graphical methods of solving three dimensional problems involving points, lines, planes and solids. Intersection and development of surfaces. Application of graphical methods to solution of engineering problems. Lab. fee, \$1.

48. APPLIED MECHANICS (STATICS). *3 credits (3-0)*

Prerequisite, Physics 24. Prerequisite or corequisite, Math. 46. Forces. Resultants. Couples. Equilibrium of force systems. Friction. First moments and centroids. Second moments of areas. Moments of inertia of bodies.

49. APPLIED MECHANICS (DYNAMICS). *3 credits (3-0)*

Prerequisite, Applied Mechanics 48. Motion of particles and of rigid bodies. Force, mass and acceleration. Translation, rotation and plane motion. Work. Potential and kinetic energy. Efficiency. Impulse, momentum and impact.

UPPER COLLEGE

112. ENGINEERING MATHEMATICS. *3 credits (3-0)*

Prerequisite, Math. 46 and Junior standing. Complex numbers. Introduction to linear differential equations, power series, solution of cubic and higher degree equations, method of least squares and empirical graphing. Applications of mathematics to solution of engineering problems in student's major field.

118. HYDRAULICS. *3 credits (3-0)*

Prerequisite, Applied Mechanics 49. Liquids at rest, including balance of liquid columns, forces on plane and curved surfaces and center of pressure. Liquids in motion, including flow through orifices, tubes, weirs, pipes and open channels. Characteristics of tangential wheels, reaction turbines and centrifugal pumps.

119. HYDRAULICS LABORATORY. *1 credit (0-1)*

Prerequisite, Hydraulics 118. Verification of water flow through orifices, tubes, weirs, pipes and open channels. Calibration of meters. Applications of logarithmic plotting. Performance tests of displacement and centrifugal pumps. Lab. fee, \$2.

131. ENGINEERING CHEMISTRY. *4 credits (3-1)*

Prerequisite, Pre-Junior standing. Study of fundamental laws and important reactions with emphasis on applications in industry. Concurrent laboratory exercises for illustration and verification. Lab. fee, \$5.

*Rec.—Lab. credit.

132. ENGINEERING CHEMISTRY. 4 credits (3-1)

Prerequisite, Chemistry 131. Continuation of 131. Lab. fee, \$5.

133. PHYSICAL METALLURGY. 3 credits (3-0). Evening session

Prerequisite, Chemistry 22 or 132 or permission of instructor. Physical properties of non-ferrous metals. Principles of alloying. Phase diagrams. White metals, light alloys, copper alloys. Die castings.

134. FERROUS METALLURGY. 3 credits (3-0). Evening session

Prerequisite, 133. Properties of pure iron and carbon steel. Effects of alloying elements and impurities. Heat treatment. Surface treatment. Cast steel. Welding. Cast iron. High alloy steels. Tool steels.

151. TECHNICAL REPORT WRITING. 2 credits (2-0)

Prerequisites, English 2 and Pre-Junior standing. Detailed study of content, style, graphic aids and arrangement of informal and formal technical reports. Requirements include submission of four complete reports.

CIVIL ENGINEERING

Dean Landon, Associate Professor Schlenk, Assistant Professors Richards and Weinberg

The field of civil engineering may be divided into four branches covering structures, transportation, hydraulics and sanitation.

The structural engineer designs and supervises the construction of such facilities as bridges, buildings, dams and tunnels. He must consider not only utility and safety but also economy and appearance. Often the unseen part of structures, the foundation, presents problems most difficult of solution.

In the field of transportation, the civil engineer applies his design and construction ability to railroads, highways, airports and water transportation, including harbor facilities and waterways.

The hydraulic engineer is concerned with the control and conservation of water for such projects as water supply, irrigation, drainage, flood control, navigation and water power. In this field, determination of economic feasibility is of utmost importance.

The sanitary engineer devotes his efforts to improving the cleanliness and healthfulness of both industrial and residential areas. Safe water supplies and adequate facilities for the removal of wastes are unquestioned necessities in modern communities.

Many civil engineers are employed by departments of federal, state and local governments. Others are employed by construction companies or by firms of consulting engineers.

SCHEDULE OF REQUIRED COURSES

PRE-JUNIOR YEAR

(Cooperative)

FIRST SEMESTER (Fall) (Sections A & B)*				SECOND SEMESTER (Spring) (Sections A & B)*			
Subject	Rec.	Lab.	Cr.	Subject	Rec.	Lab.	Cr.
Strength of Materials CE 101	6	3	3½	Advanced Strength of Materials CE 102	6	0	3
Engineering Chemistry 131	6	6	4	Engineering Chemistry 132	6	6	4
A.C. Machines EE 131	4	6	3	Route Surveying CE 108	2	12	3
	16	15	10½		14	18	10

*Section A attends classes for first half of semester.
Section B attends classes for second half of semester.

THIRD TERM (Half Semester)
(Summer)
(Section A Only)

Subject	Rec.	Lab.	Cr.
Technical Report Writing 151.....	4	0	2
Stress Analysis CE 105.....	6	0	3
Advanced Surveying CE 109.....	4	12	4
	<u>14</u>	<u>12</u>	<u>9</u>

JUNIOR YEAR

(Cooperative)

FIRST SEMESTER

(Fall)

(Section B—First Half)

Subject	Rec.	Lab.	Cr.
Technical Report Writing 151.....	4	0	2
Stress Analysis CE 105.....	6	0	3
Advanced Surveying CE 109.....	4	12	4
	<u>14</u>	<u>12</u>	<u>9</u>

(Section A—Second Half)

Statically Indeterminate	6	0	3
Structures CE 106.....	6	0	3
Highway Design and Construction CE 110.....	4	6	3
Hydraulics 118.....	6	0	3
	<u>16</u>	<u>6</u>	<u>9</u>

SECOND SEMESTER

(Spring)

(Section B—First Half)

Subject	Rec.	Lab.	Cr.
Statically Indeterminate	6	0	3
Structures CE 106.....	6	0	3
Highway Design and Construction CE 110.....	4	6	3
Hydraulics 118.....	6	0	3
	<u>16</u>	<u>6</u>	<u>9</u>

(Section A—Second Half)

Structural Steel Design CE 114.....	6	0	3
Engineering Mathematics 112.....	6	0	3
Accounting Survey 121.....	6	0	3
Concrete Laboratory CE 112.....	0	6	1
	<u>18</u>	<u>6</u>	<u>10</u>

THIRD TERM (Half Semester)

(Summer)

(Section B Only)

Subject	Rec.	Lab.	Cr.
Structural Steel Design CE 114.....	6	0	3
Engineering Mathematics 112.....	6	0	3
Accounting Survey 121.....	6	0	3
Concrete Laboratory CE 112.....	0	6	1
	<u>18</u>	<u>6</u>	<u>10</u>

SENIOR YEAR

FIRST SEMESTER (Cooperative)

(Fall)

(Sections A & B)*

Subject	Rec.	Lab.	Cr.
Structural Steel Design CE 115.....	2	12	3
Reinforced Concrete Design CE 117.....	6	0	3
Water Supply CE 121.....	6	0	3
Hydraulics Laboratory 119.....	0	6	1
	<u>14</u>	<u>18</u>	<u>10</u>

SECOND SEMESTER (Full Time)

(Spring)

Subject	Rec.	Lab.	Cr.
Reinforced Concrete Design CE 118.....	1	6	3
Sewerage CE 122.....	2	0	2
Sanitary Design CE 124.....	0	3	1
Applied Soil Mechanics CE 120.....	3	0	3
Non-Technical Elective**.....	3	0	3
Community Planning CE 126.....	3	0	3
C.E. Problems CE 128.....	1	6	3
	<u>13</u>	<u>15</u>	<u>18</u>

*Section A attends classes for first half of semester.

Section B attends classes for second half of semester.

**In field of Social Sciences or Humanities.

DESCRIPTION OF CIVIL ENGINEERING COURSES

GENERAL COLLEGE

47. ELEMENTARY SURVEYING. 2 credits (1-1)*

Prerequisite, Math. 22. Principles of plane surveying. Use of tape, level and transit. Computation of areas. Field problems in measuring horizontal and vertical distances and angles. Principles of stadia and plane table. Lab. fee, \$5.

UPPER COLLEGE

101. STRENGTH OF MATERIALS. 3½ credits (3-½)

Prerequisite, Applied Mechanics 48. Tensile, compressive and shearing stresses. Riveted and welded joints. Torsion. Shear and bending moment diagrams. Deflection of single span beams. Design of single span beams. Elementary combined stresses. Columns under axial loads. Laboratory tests of steel in tension and torsion, wood in compression, wood and cast iron in flexure, concrete in compression. Hardness tests. Lab. fee, \$4.

102. ADVANCED STRENGTH OF MATERIALS. 3 credits (3-0)

Prerequisite, 101. Columns under eccentric loads. Combined stresses in two and three dimensions. Continuous beams. Elastic energy of bodies subjected to static and dynamic loads. Curved beams. Beams of variable cross-section. Beams of two materials. Concept of fatigue.

105. STRESS ANALYSIS. 3 credits (3-0)

Prerequisite, 101. Types of loads. Reactions, shears and moments due to fixed and moving loads. Stresses in trusses due to fixed and moving loads. Graphic statics. Influence lines.

106. STATICALLY INDETERMINATE STRUCTURES. 3 credits (3-0)

Prerequisite, 105. Shear, moment and deflection in beams. Single-span frames and arches. Complex frames. Moment distribution. Slope deflection. Truss deflection. Secondary stresses. Redundancy.

108. ROUTE SURVEYING. 3 credits (1-2)

Prerequisite, 47. Simple, compound and reverse curves. Spirals. Vertical curves. Earthwork computations. Mass diagrams applied to highway and railway locations. Field work on curves and earthwork. Highway and railway location including determination of final grades. Lab. fee, \$5.

109. ADVANCED SURVEYING. 4 credits (2-2)

Prerequisite, 47. Adjustment of instruments. Precise leveling and triangulation. Topographic survey by plane table-stadia, including map drafting. Subdivision and platting. Astronomical observations to determine azimuth, latitude, longitude and time. Lab. fee, \$5.

110. HIGHWAY DESIGN AND CONSTRUCTION. 3 credits (2-1)

Prerequisites, 101, 108. Principles of highway design and construction. Drainage, foundations and roadway materials. Design and cost estimate of a highway to meet given specifications.

112. CONCRETE LABORATORY. 1 credit (0-1)

Prerequisite, Chemistry 132. Tests of cement, aggregates and concrete in accordance with A.S.T.M. Standards. Design of concrete mixes. Lab. fee, \$3.50.

114. STRUCTURAL STEEL DESIGN. 3 credits (3-0)

Prerequisites, 102, 105. Riveted, welded and pinned connections. Tension members. Compression members. Floor systems. Combined direct stress and flexure.

115. STRUCTURAL STEEL DESIGN. 3 credits (1-2)

Prerequisite, 114. Detailed design of plate girders, roof truss and highway bridge.

*Rec.—Lab. credit.

117. REINFORCED CONCRETE DESIGN. 3 credits (3-0)

Prerequisites, 102, 106, 112. Rectangular beams. Tee beams. Shear, moment and bond stresses. Floor systems. Columns. Footings. Retaining walls. Stairways.

118. REINFORCED CONCRETE DESIGN. 3 credits (1-2)

Prerequisite, 117. Detailed design of multi-story building. Design of rigid frame structure.

120. APPLIED SOIL MECHANICS. 3 credits (3-0)

Prerequisites, 102, Hydraulics 118. Analysis of earth pressures. Study of embankment failures, soil bearing capacity and frost action. Design of coffer dams, footings and piles. Soil testing methods.

121. WATER SUPPLY. 3 credits (3-0)

Prerequisite, Hydraulics 118. Elements of hydrology. Quality and quantity requirements. Development of surface and ground water supplies. Treatment of domestic and industrial supplies. Distribution systems, including reservoirs and pumping stations. Principles of water works finance.

122. SEWERAGE. 2 credits (2-0)

Prerequisite, 121. Hydraulics of sewers. Quantity of domestic sewage and storm water. Collection by separate and combined systems. Treatment of domestic sewage.

124. SANITARY DESIGN. 1 credit (0-1)

Prerequisite or corequisite, 122. Analysis of water distribution system. Water works finance, including least capitalized cost. Design of sanitary and storm water drains. Dimensional design of water and sewage treatment units.

126. COMMUNITY PLANNING. 3 credits (3-0)

Prerequisite, Senior standing. History of community planning. Provisions for orderly and balanced development. Zoning. Benefits of planning as reflected in physical and mental health of residents. Requirements for streets, playgrounds, parks, transportation facilities. Development of residential, commercial, industrial and civic areas. Detailed study of a selected modern city plan.

128. CIVIL ENGINEERING PROBLEMS. 3 credits (1-2)

Prerequisite, Senior standing. Selected problems assigned to individuals or small groups under supervision of staff member. Requirements include complete engineering report.

ELECTRICAL ENGINEERING

Professor Sibila, Associate Professors Smith and Huss, Mr. Lomaz

The many branches of electrical engineering include production and distribution of electrical energy; development and manufacture of electrical equipment and products ranging in size from huge generators to miniature electric bulbs; design, installation and operation of communication systems including telephone, telegraph, radio and television; adaptation of electronic principles to industrial needs such as indicating and control mechanisms; design of modern lighting, both indoors and out; design of electrical systems for vehicles, ships and aircraft and cooperation in such fields as electro-chemistry, metallurgy and medicine.

The growth of the electrical industry has been steady and rapid. In the two decades from 1918 to 1938, the total use of electrical energy in the United States increased threefold. Electrical manufacturing is one of the leading American industries and includes organizations of all sizes from the privately owned shop employing a few workers to the huge corporation manufacturing hundreds of items and employing thousands of men and women.

The large majority of electrical engineers are employed by utility companies and manufacturers of electrical equipment. Other employment opportunities may be found with large industrial firms and with electrical contractors and consultants.

SCHEDULE OF REQUIRED COURSES

PRE-JUNIOR YEAR

(Cooperative)

FIRST SEMESTER

(Fall)

(Sections A & B)*

Subject	Rec.	Lab.	Cr.
Strength of Materials CE 101	6	3	3½
Engineering Chemistry 131	6	6	4
A.C. Circuits EE 141	3	0	1½
Shop Practice ME 169	0	6	1
	15	15	10

SECOND SEMESTER

(Spring)

(Sections A & B)*

Subject	Rec.	Lab.	Cr.
Shop Practice ME 170	0	6	1
Engineering Chemistry 132	6	6	4
Technical Report Writing 151	4	0	2
D.C. Machines EE 160	3	3	2
A.C. Circuits EE 142	3	0	1½
	16	15	10½

THIRD TERM (Half Semester)

(Summer)

(Section A Only)

Subject	Rec.	Lab.	Cr.
Thermodynamics ME 175	6	0	3
Engineering Electronics EE 153	3	3	2
A.C. Circuits EE 143	3	0	1½
A.C. Machines EE 161	3	3	2
Electrical Measurements EE 145	3	3	2
	18	9	10½

*Section A attends classes for first half of semester.
Section B attends classes for second half of semester.

JUNIOR YEAR

(Cooperative)

FIRST SEMESTER

(Fall)

(Section B—First Half)

Subject	Rec.	Lab.	Cr.
Thermodynamics ME 175	6	0	3
Engineering Electronics EE 153	3	3	2
A.C. Circuits EE 143	3	0	1½
A.C. Machines EE 161	3	3	2
Electrical Measurements EE 145	3	3	2
	18	9	10½

SECOND SEMESTER

(Spring)

(Section B—First Half)

Subject	Rec.	Lab.	Cr.
Hydraulics 118	6	0	3
M.E. Laboratory ME 189	0	3	½
Electrical Measurements EE 147	3	3	2
Engineering Electronics EE 154	3	3	2
A.C. Machines EE 162	3	6	2½
	15	15	10

(Section A—Second Half)

Subject	Rec.	Lab.	Cr.
Hydraulics 118	6	0	3
M.E. Laboratory ME 189	0	3	½
Electrical Measurements EE 147	3	3	2
Engineering Electronics EE 154	3	3	2
A.C. Machines EE 162	3	6	2½
	15	15	10

(Section A—Second Half)

Subject	Rec.	Lab.	Cr.
Engineering Mathematics 112	6	0	3
Electrical Measurements EE 148	2	6	2
Engineering, Electronics EE 155	3	3	2
A.C. Machines EE 163	3	6	2½
M.E. Laboratory ME 188	0	3	½
	14	18	10

THIRD TERM (Half Semester)

(Summer)

(Section B Only)

Subject	Rec.	Lab.	Cr.
Engineering Mathematics 112	6	0	3
Electrical Measurements EE 148	2	6	2
Engineering Electronics EE 155	3	3	2
A.C. Machines EE 163	3	6	2½
M.E. Laboratory ME 188	0	3	½
	14	18	10

SENIOR YEAR

FIRST SEMESTER (Cooperative)

(Fall)

(Sections A & B)*

Subject	Rec.	Lab.	Cr.
A.C. Machines EE 164	3	3	2
Industrial Electronics EE 152	4	0	2
Industrial Instrumentation EE 149	3	3	2
Engineering Electronics EE 156	0	3	½
Illumination Engineering EE 135	4	3	2½
	14	12	9

SECOND SEMESTER (Full Time)

(Spring)

Subject	Rec.	Lab.	Cr.
Electrical Controls EE 165	2	3	3
E.E. Problems EE 167	0	3	1
Non-technical Elective**	3	0	3
Circuit Analysis EE 144	3	0	3
Power Transmission and Distribution EE 159	2	0	2

Power Option

Advanced A.C. Machines EE 166	2	3	3
Electrical Machine Design EE 168	1	6	3
	13	15	18

Electronics Option

Ultra High Frequencies EE 157	2	3	3
Communication Networks EE 158	3	0	3
	15	9	18

**In Field of Social Sciences or Humanities.

*Second A attends classes for first half of semester.

Section B attends classes for second half of semester.

DESCRIPTION OF ELECTRICAL ENGINEERING COURSES

GENERAL COLLEGE

30. DIRECT CURRENT AND ALTERNATING CURRENT PRINCIPLES.

*2 credits (1½-1½)**

Prerequisite, Physics 42. (For C.E. and M.E. students) Principles of direct current circuits, generators and motors. Principles of alternating current circuits and instruments. Lab. fee, \$3.

31. ELECTRICAL ENGINEERING FUNDAMENTALS. *2 credits (2-0)*

Prerequisite, Physics 42. Fundamental units of electricity. Ohm's Law. Kirchhoff's Laws. Power. Analysis of series and parallel circuits. Magnetic properties and circuits. Induced and generated electromotive forces. Inductance. Force on a conductor. Electrostatics. Direct current instruments.

UPPER COLLEGE

131. ALTERNATING CURRENT MACHINES. *3 credits (2-1)*

Prerequisite, 30. (For C.E. and M.E. students) Three-phase power measurements. Principles, characteristics and applications of alternators, motors and transformers. Introduction to electronics. Lab. fee, \$3.

135. ILLUMINATION ENGINEERING. *2½ credits (2-1½)*

Prerequisite, Physics 42. Fundamentals of illumination and principles underlying specifications and designs for adequate electrical lighting. Lab. fee, \$1.50.

141. ALTERNATING CURRENT CIRCUITS. *1½ credits (1½-0)*

Prerequisite, 31. Vector analysis of alternating current, voltage and power. Complex operator. Real and apparent power. Series and parallel circuits.

142. ALTERNATING CURRENT CIRCUITS. *1½ credits (1½-0)*

Prerequisite, 141. Network theorems. Coupled circuits. Balanced and unbalanced polyphase circuits.

143. ALTERNATING CURRENT CIRCUITS. *1½ credits (1½-0)*

Prerequisite, 142. Voltage and current loci. Metering polyphase power. Electric filters. Non-sinusoidal waves. D.C. transients.

144. CIRCUIT ANALYSIS. *3 credits (3-0)*

Prerequisites, 143, 155, 164, Math. 112. A.C. transients. Current in vacuum tubes. Fourier analysis of non-sinusoidal waves. Operational methods.

145. ELECTRICAL MEASUREMENTS. *2 credits (1½-1½)*

Prerequisite, 31. High and low resistance potentiometers. Precision direct current measurements. Direct current meter calibration. Dudell oscillograph. Ballistic galvanometer applications. Lab. fee, \$1.50.

147. ELECTRICAL MEASUREMENTS. *2 credits (1½-1½)*

Prerequisites, 142, 145. Alternating current bridges for capacitance, inductance and frequency measurements. Calibration of alternating current meters. Rectifier and thermocouple meters. Instrument transformers. Lab. fee, \$1.50.

148. ELECTRICAL MEASUREMENTS. *2 credits (1-1)*

Prerequisite, 147. Study of graphic meters. Calibration of watt-hour, vacuum tube and special meters. Transmission line and audio frequency measurements. Lab. fee, \$3.

149. INDUSTRIAL INSTRUMENTATION. *2 credits (1½-1½)*

Prerequisite, 131 or 141. Principles of electric indicating, recording and control instruments as applied to temperature, pressure and fluid flow. Detailed analysis of measuring characteristics of such instruments. Lab. fee, \$1.50.

151. INDUSTRIAL ELECTRONICS. *2 credits (2-0)*

Prerequisite, 131. (For M.E. students) Principles of vacuum and gas tubes and photocells. Analysis and application of industrial electronic circuits.

152. INDUSTRIAL ELECTRONICS. *2 credits (2-0)*

Prerequisites, 154, 160. Analysis and application of electronics to industrial control circuits. Design of elementary electronic control circuits.

*Rec.—Lab. credit.

153. ENGINEERING ELECTRONICS. 2 credits (1½-1½)
Prerequisite, 142. Mathematical analysis of vacuum and gas tubes and photocells. Tube circuits. Emphasis on measuring techniques. Lab. fee, \$1.50.
154. ENGINEERING ELECTRONICS. 2 credits (1½-1½)
Prerequisite, 153. Circuit applications. Amplifiers, relays and oscillators. Power conversion, rectifiers and inverters. Lab. fee, \$1.50.
155. ENGINEERING ELECTRONICS. 2 credits (1½-1½)
Prerequisite, 154. Continuation of 154. Radio transmitters and receivers. Modulation. Antennas and radiation. Radio frequency measuring techniques. Lab. fee, \$1.50.
156. ENGINEERING ELECTRONICS. ½ credit (0-½)
Prerequisite, 155. Continuation of laboratory portion of 155. Lab. fee, \$1.50.
157. ULTRA HIGH FREQUENCIES. 3 credits (2-1)
Prerequisite, 155. General study of high frequency applications. Ultra high frequency oscillators using klystrons, magnetrons and cavity resonators. Coaxial cables. Wave guides. Lab. fee, \$3.
158. COMMUNICATION NETWORKS. 3 credits (3-0)
Prerequisite, 155. Advanced treatment of transmission lines and filters. General communication problems. Ultra high frequency designs.
159. POWER TRANSMISSION AND DISTRIBUTION. 2 credits (2-0)
Prerequisites, 143, 164, Math. 112. Power transmission line design, construction and stability. Symmetrical components, circle diagrams, short circuit calculations, lightning, corona, surges.
160. DIRECT CURRENT MACHINES. 2 credits (1½-1½)
Prerequisite, 31. Armature windings and reactions. Commutation. Analysis of generators and motors, their characteristics and design features. Control equipment. Machine applications. Lab. fee, \$1.50.
161. ALTERNATING CURRENT MACHINES. 2 credits (1½-1½)
Prerequisites, 141, 160. Principles and operation of alternators and transformers. Predetermination of characteristics. Transformer connections. Lab. fee, \$1.50.
162. ALTERNATING CURRENT MACHINES. 2½ credits (1½-1)
Prerequisite, 161. Principles and operation of polyphase induction motors. Predetermination and analysis of characteristics. Lab. fee, \$3.
163. ALTERNATING CURRENT MACHINES. 2½ credits (1½-1)
Prerequisite, 162. Principles and operation of polyphase synchronous motors. Predetermination and analysis of characteristics. Special types of synchronous and asynchronous machines. Power rectifiers. Lab. fee, \$3.
164. ALTERNATING CURRENT MACHINES. 2 credits (1½-1½)
Prerequisite, 163. Principles and applications of power and fractional horsepower single-phase motors. Lab. fee, \$1.50.
165. ELECTRICAL CONTROLS. 3 credits (2-1)
Prerequisites, 152, 163. Principles and applications of important types of electromagnetic and electronic controls. Specifications and designs. Lab. fee, \$3.
166. ADVANCED ALTERNATING CURRENT MACHINES. 3 credits (2-1)
Prerequisite, 164. Detailed study of alternating current machine characteristics and problems such as alternator wave shapes, inrush currents to transformers and motors, harmonics, unbalanced circuits, heating and insulation design. Lab. fee, \$3.
167. ELECTRICAL ENGINEERING PROBLEMS. 1 credit (0-1)
Prerequisite, Senior standing. Selected comprehensive problems. Supervised discussion and computation periods.
168. ELECTRICAL MACHINE DESIGN. 3 credits (1-2)
Prerequisites, 160, 164. Individual student problems involving designs and estimates for direct current and alternating current machines to meet definite specifications. Designs must be based on fundamental considerations.

MECHANICAL ENGINEERING

*Professor Griffin, Associate Professors Wilson and Petry,
Mr. Bezbatchenko*

The more important branches of mechanical engineering include machine design, manufacturing and production methods and the heat-power field.

The importance of machine design in this age is self evident. The mechanical engineer designs and supervises the manufacture of not only the machines used in everyday life but also the machine tools which make these machines. The design of special equipment required in industries as unrelated as textile and toy manufacturing challenges the ingenuity of the mechanical engineer.

In the field of heat-power, the mechanical engineer designs, builds and operates boilers, turbines and engines which convert the heat content of fuels into useful energy for immediate application or for conversion into electrical energy which can be distributed over wide areas. Motive power for automobiles, railroads, ships and aircraft is being constantly improved with respect to both thermal efficiency and dependability.

The design and installation of complete air conditioning equipment for the control of both temperature and humidity is a relatively recent but major development in the heat-power field.

All the way from the mine to the final delivery of finished products, the knowledge and skill of the mechanical engineer have aided the development of modern industry to the point at which more people can purchase more goods for less cost.

The great majority of mechanical engineers are employed in a wide variety of capacities in industry but a limited number act as independent consultants.

SCHEDULE OF REQUIRED COURSES

PRE-JUNIOR YEAR

(Cooperative)

FIRST SEMESTER

(Fall)

(Sections A & B)*

Subject	Rec.	Lab.	Cr.
Strength of Materials CE 101.....	6	3	3½
Engineering Chemistry 131	6	6	4
A.C. Machines EE 131	4	6	3
	16	15	10½

SECOND SEMESTER

(Spring)

(Sections A & B)*

Subject	Rec.	Lab.	Cr.
Advanced Strength of Materials CE 102	6	0	3
Engineering Chemistry 132	6	6	4
Industrial Electronics EE 151.....	4	0	2
	16	6	9

THIRD TERM (Half Semester)

(Summer)

(Section A Only)

Subject	Rec.	Lab.	Cr.
Thermodynamics ME 175	6	0	3
Mechanism ME 172	6	0	3
Technical Report Writing 151.....	4	0	2
Machine Drawing ME 171.....	0	12	2
	16	12	10

*Section A attends classes for first half of semester.
Section B attends classes for second half of semester.

JUNIOR YEAR

(Cooperative)

FIRST SEMESTER

(Fall)

(Section B—First Half)

Subject	Rec.	Lab.	Cr.
Thermodynamics ME 175	6	0	3
Mechanism ME 172	6	0	3
Technical Report Writing 151	4	0	2
Machine Drawing ME 171	0	12	2
	16	12	10

SECOND SEMESTER

(Spring)

(Section B—First Half)

Subject	Rec.	Lab.	Cr.
Thermodynamics ME 176	4	0	2
Hydraulics 118	6	0	3
Mechanism Drawing ME 174	0	6	1
Machine Design ME 178	6	0	3
Shop Practice ME 169	0	6	1
	16	12	10

(Section A—Second Half)

Subject	Rec.	Lab.	Cr.
Thermodynamics ME 176	4	0	2
Hydraulics 118	6	0	3
Mechanism Drawing ME 174	0	6	1
Machine Design ME 178	6	0	3
Shop Practice ME 169	0	6	1
	16	12	10

(Section A—Second Half)

Subject	Rec.	Lab.	Cr.
Steam Power Plants ME 185	6	0	3
Engineering Mathematics 112	6	0	3
M.E. Laboratory ME 182	0	12	2
Shop Practice ME 170	0	6	1
	12	18	9

THIRD TERM (Half Semester)

(Summer)

(Section B Only)

Subject	Rec.	Lab.	Cr.
Steam Power Plants ME 185	6	0	3
Engineering Mathematics 112	6	0	3
M.E. Laboratory ME 182	0	12	2
Shop Practice ME 170	0	6	1
	12	18	9

SENIOR YEAR

FIRST SEMESTER (Cooperative)

(Fall)

(Sections A & B)*

Subject	Rec.	Lab.	Cr.
Heat Transfer ME 186	4	0	2
Internal Combustion Engines ME 190	6	0	3
Hydraulics Laboratory 119	0	6	1
M.E. Laboratory ME 183	0	18	3
	10	24	9

SECOND SEMESTER (Full Time)

(Spring)

Subject	Rec.	Lab.	Cr.
Heating and Air Conditioning ME 187	3	0	3
M.E. Problems ME 194	1	6	3
Machine Design ME 179	3	6	5
Inspection Trips ME 196	0	3	1
Non-technical Elective**	3	0	3
Production Management 62	3	0	3
	13	15	18

INDUSTRIAL OPTION

Mechanical Engineering students electing the Industrial Option will substitute five courses in Industrial Management for ME 183, 185, 186, 187 and 194. Courses selected must be approved by Department Head.

*Section A attends classes for first half of semester.

Section B attends classes for second half of semester.

**In Field of Social Sciences or Humanities.

DESCRIPTION OF MECHANICAL ENGINEERING COURSES

GENERAL COLLEGE

46. HEAT POWER ENGINEERING. 3 credits (3-0)*

Prerequisite, Physics 41. Principles of production of energy and power by means of heat engines. Study of fuels, properties of steam, steam boilers, steam engines and turbines, internal combustion engines, gas turbines and power plant auxiliaries.

UPPER COLLEGE

169. SHOP PRACTICE. 1 credit (0-1)

Study of various types of machine tools and operations that can be performed on them. Assigned projects include use of hand tools, drill press, grinder, lathe, shaper and milling machine. Emphasis on accuracy and shop safety. Lab. fee, \$2.

170. SHOP PRACTICE. 1 credit (0-1)

Prerequisite, 169. Continuation of 169 and heat treatment. Lab. fee, \$2.

171. MACHINE DRAWING. 2 credits (0-2)

Prerequisite, Engineering Drawing 22. Detailed drawings of machine parts and assemblies of complete machines. Technical sketching. Notes and specifications. Shop terms and methods. Drafting room practice. Piping diagrams. Tire and mold drawings. Welding practice and symbols applied to machine parts construction. Lab. fee, \$1.

172. MECHANISM. 3 credits (3-0)

Prerequisite, Applied Mechanics 49. Motion, velocity and acceleration of machine parts and various devices for producing desired motions. Development and action of spur, bevel, helical and worm gears.

174. MECHANISM DRAWING. 1 credit (0-1)

Prerequisite or corequisite, 172. Problems of conventional mechanisms solved by accurate graphical methods. Lab. fee, \$1.

175. THERMODYNAMICS. 3 credits (3-0)

Prerequisites, Math. 46, Physics 41. Reversible transformation of heat and work. Energy equations. Heat properties of liquids, gases and vapors. Heat cycles. Entropy. Available and unavailable energy. Air vapor mixtures. Flow through nozzles. Refrigeration cycles. Ideal and actual engines, including gas turbines and jet propulsion.

176. THERMODYNAMICS. 2 credits (2-0)

Prerequisite, 175. Application of thermodynamic principles. Problems covering thermodynamic equations, heat transfer, heat exchange, heat engines, refrigeration and steam power plant cycles.

178. MACHINE DESIGN. 3 credits (3-0)

Prerequisite, 172, CE 102. Functions of various machine elements. Selection of materials. Construction methods. Design of parts for strength and balance.

179. MACHINE DESIGN. 5 credits (3-2)

Prerequisite, 178. Continuation of 178. Assigned design problems involving all calculations, sketches and drawings of a machine. Lab. fee, \$1.

182. MECHANICAL ENGINEERING LABORATORY. 2 credits (0-2)

Prerequisite, 46. Calibration and use of instruments including thermometers, gages, planimeters, engine indicators, orsat apparatus and oil testing equipment. Basic tests on internal combustion engines. Lab. fee, \$4.

183. MECHANICAL ENGINEERING LABORATORY. 3 credits (0-3)

Prerequisite, 182. Economy and performance tests on steam engines and turbines, condensers, auxiliaries, centrifugal fans and air compressors. Measurement of air flow in ducts. Standard S.A.E. tests on gas, gasoline and diesel engines. Lab. fee, \$5.

*Rec.—Lab. credit.

185. STEAM POWER PLANTS. 3 credits (3-0)

Prerequisite, 176. Adaptation of fuels, boilers, engines, turbines and auxiliaries. Calculations involve principles of combustion, thermodynamics and heat transfer.

186. HEAT TRANSFER. 2 credits (2-0)

Prerequisite, 176. Fundamentals of heat transfer by conduction, radiation and convection. Properties of fluids and solids affecting heat transfer. Use of combined heat transfer coefficients. Analyses of cycles by means of heat balances. Application of principles to design problems.

187. HEATING AND AIR CONDITIONING. 3 credits (3-0)

Prerequisite, 176. Heat transfer, heat losses in buildings. Types of heating equipment and methods used to calculate required capacities. Properties of air, cooling, the cooling load, humidifying, dehumidifying and air circulation. Methods used to design and select equipment to satisfy given requirements.

188. MECHANICAL ENGINEERING LABORATORY. 1/2 credit (0-1/2)

Prerequisite, 175. (For Electrical Engineering students) A shorter course, similar to 182, with emphasis on internal combustion engines. Lab. fee, \$1.

189. MECHANICAL ENGINEERING LABORATORY. 1/2 credit (0-1/2)

Prerequisite, 175. (For Electrical Engineering students) A shorter course, similar to 183, with emphasis on steam prime movers. Lab. fee, \$1.

190. INTERNAL COMBUSTION ENGINES. 3 credits (3-0)

Prerequisite, 176. Fuels, combustion, heat cycles, carburetors, injection and ignition systems. Comparison of ideal and actual performance of stationary, automotive and aircraft engines. Characteristics of gas turbines and jet engines.

194. MECHANICAL ENGINEERING PROBLEMS. 3 credits (1-2)

Prerequisite, Senior standing. Investigation of design projects selected by student and approved by supervising staff member. Requirements include complete engineering report covering descriptive material, data, calculations and drawings.

196. INSPECTION TRIPS. 1 credit (0-1)

Prerequisite, Senior standing. Trips through power stations and industrial plants in northern Ohio. Written reports required.

ACCELERATED PROGRAM

For information only, the Accelerated Program which was in effect for students enrolled in the College of Engineering during the recent emergency is printed below. Students beginning the Engineering course after February 1947 follow the Co-operative Program. Description of courses listed in the Accelerated Program can be found in the March, 1946 Catalog.

THE GENERAL COLLEGE**First Year**

First Semester		Cr. Hrs.	Second Semester		Cr. Hrs.
Military Science and Tactics 11	.....	1 1/2	Military Science and Tactics 12	.....	1 1/2
Hygiene 15	.....	2	Hygiene 16	.....	2
Physics 21 (Mechanics)	.....	4	Physics 22 (Mechanics)	.....	4
Math. 21 (Algebra)	.....	3	Math. 22 (Trigonometry)	.....	3
English 1	.....	3	English 2	.....	3
Engineering Drawing 21	.....	2	Engineering Drawing 22	.....	2
Survey of Engineering 24	.....	1	Physical Ed. 4	.....	1
Physical Ed. 3	.....	1	Elective	.....	2
		<u>17 1/2</u>			<u>18 1/2</u>

Summer Quarter

	Cr. Hrs.
Military Science and Tactics 43	1½
Physics 43 (Heat and Sound)	4
Math. 43 (Analytical Geometry)	3
Math. 45 (Differential Calculus)	3
Surveying 21-22	2

**CIVIL ENGINEERING
SCHEDULE OF COURSES**

Second Year

First Semester	Cr. Hrs.	Second Semester	Cr. Hrs.
Military Science & Tactics 44	1½	Strength of Materials CE 46	3
Physics 44 (Electricity and Magnetism)	4	Economics 41	3
Math. 46 (Integral Calculus)	3	Engineering Geology CE 44	2
Elements of Electrical Engineering		Engineering Mathematics 213-214	2
EE 58	3	Elements of Electrical Engineering	
Engineering Chemistry 131	3	EE 123	3
Applied Mechanics CE 109-110	3	Engineering Chemistry 132	3
		Descriptive Geometry ME 44	3

Summer Quarter

	Cr. Hrs.
Heat Power Engineering ME 46	3
Hydraulics ME 184	3
Surveying CE 43-101	4
Strength of Materials CE 117-118	3

Third Year

First Semester	Cr. Hrs.	Second Semester	Cr. Hrs.
Structural Design CE 114	3	Structural Design CE 200	3
Route Surveying CE 108	3	Highways CE 107	3
Concrete Laboratory CE 112	1	Statically Indeterminate Structures CE 205	3
Thermodynamics ME 189	3	Water Supply CE 210	2
English 61-62 (Report Writing)	2	Business Organization and	
Stress Analysis CE 122	3	Management 61	3
Business & Professional Speaking 47	2	Electives	5

Summer Quarter

	Cr. Hrs.
Roofs and Bridges CE 103	3
Structural Design CE 201	3
Soil Mechanics CE 215	3
Sewerage CE 211	2
Elective	3

**ELECTRICAL ENGINEERING
SCHEDULE OF COURSES**

Second Year

First Semester	Cr. Hrs.	Second Semester	Cr. Hrs.
Military Science & Tactics 44	1½	Descriptive Geometry ME 44	3
Physics 44 (Electricity and Magnetism)	4	Strength of Materials CE 46	3
Math. 46 (Integral Calculus)	3	Engineering Math. 213-214	2
Elements of Electrical Engineering EE 58	3	Elements of Electrical Engineering EE 123	3
Applied Mechanics CE 109-110	3	Heat Power Engineering ME 46	3
Engineering Chemistry 131	3	Engineering Chemistry 132	3

Summer Quarter

	Cr. Hrs.
Elements of Electrical Engineering EE 124	3
Strength of Materials CE 117-118	3
Machine Drawing ME 23	2
Hydraulics ME 184	3
Shop Practice ME 49	2

Third Year

First Semester	Cr. Hrs.	Second Semester	Cr. Hrs.
Basic Industrial Electronics EE 127	2	Engineering Electronics EE 150	3
A.C. Machines EE 170	3	A.C. Machines EE 172	3
A.C. Machines Lab. EE 171	1½	A.C. Machines Lab. EE 173	2
A.C. Circuits EE 130-131	3	Electrical Drafting, Blue Print Reading	
Thermodynamics ME 189	3	EE 128	3
English 61-62 (Report Writing)	2	Economics 41	3
Elective	5	Elective	6

Summer Quarter

	Cr. Hrs.
Electrical Measurements EE 149	3
Illumination Engineering EE 180	2
Electron Tube Applications EE 151	2
Thesis EE 198	1½
Option—Senior Electrical Engineering Problems EE 190 or Business Organization and Management 61 or Steady State Analysis EE 200.....	3
	12½

**MECHANICAL ENGINEERING
SCHEDULE OF COURSES**

Second Year

First Semester	Cr. Hrs.	Second Semester	Cr. Hrs.
Military Science and Tactics 44	1½	Engineering Math. 213-214	2
Physics 44 (Electricity and Magnetism).....	4	Heat Power Engineering ME 46.....	3
Math. 46 (Integral Calculus)	3	Strength of Materials CE 46	3
Elements of Electrical Engineering EE 58.....	3	*Descriptive Geometry ME 44	3
Applied Mechanics CE 109-110.....	3	Elements of Electrical Engineering EE 123.....	3
Engineering Chemistry 131	3	Engineering Chemistry 132	3
	17½		17

Summer Quarter

	Cr. Hrs.
Strength of Materials CE 117-118	3
Machine Drawing ME 23	2
Shop Practice ME 49	2
Hydraulics ME 184	3
Elements of Electrical Engineering EE 124	3
	13

Third Year

First Semester	Cr. Hrs.	Second Semester	Cr. Hrs.
Mechanical Engineering Laboratory ME 182 2	3	Mechanical Engineering Laboratory ME 183.....	3
Thermodynamics ME 189	3	Steam Power Plants ME 185	3
Mechanism ME 172	3	Machine Design ME 178	3
Mechanism Drawing 174	1	Business Organization and Management 61.....	3
Heating and Air Conditioning ME 187.....	3	Elective	5
English 61-62 (Report Writing)	2		17
Business and Professional Speaking 47	2		
Economics 41	3		
	19		

Summer Quarter

	Cr. Hrs.
Gas and Oil Engines ME 190	3
Special Mechanical Engineering Problems ME 194	3
Steam Power Plants ME 186	3
Machine Design ME 179	5
	14

(INDUSTRIAL OPTION)*Third Year*

First Semester	Cr. Hrs.	Second Semester	Cr. Hrs.
Industrial Plants 101	3	Production Planning and Control 103	3
Time Study 157	2	Motion Study 158	2
Mechanical Engineering Laboratory ME 182.....	2	Machine Design ME 178	3
Thermodynamics ME 189	3	Engineering Accounting 25	3
Mechanism ME 172	3	Business and Professional Speaking 47.....	2
Mechanism Drawing ME 174	1	Descriptive Geometry ME 44	3
English 61-62 (Report Writing)	2	Electives	3
Economics 41	3		19
	19		

Summer Quarter

	Cr. Hrs.
Gas and Oil Engines ME 190	3
Machine Design ME 179	5
Industrial Management Problems 256	3
Personnel Administration and Relations 163	2
	13

*Students electing the Industrial Option will take Business Organization and Management 61 in their second year and Descriptive Geometry in their third year.

THE COLLEGE OF EDUCATION

HOWARD R. EVANS, PH.D., *Dean*

GENERAL INFORMATION

The College of Education, formerly known as the Teachers College, was established in 1921 in cooperation with the Akron Board of Education, replacing the former Perkins Normal School of Akron. Teachers College, until the close of the academic year 1930-31, was supported by both educational systems. For its faculty it draws upon the teaching staff of both the Public Schools and the University. Along with the reorganization plan which was placed into effect in September, 1935, the name was changed to the College of Education.

The University of Akron is so organized that students in any college may take courses in other colleges. This enables the College of Education to use the facilities of the whole University in the preparation of teachers. The Akron Public Schools cooperate with the University in a number of ways, chief of which is the provision of the Spicer Elementary School for observation and laboratory experiences. Students in the University are inducted into actual school experience, for the most part in classes in the public schools of the city of Akron. Occasionally, however, Barberton, Summit County, and other neighboring school systems are used. Particular emphasis is placed upon the preparation of teachers for the city of Akron. Graduation does not, however, insure appointment to a teaching position in the city. Selection is made on the basis of scholarship, professional training, personality, and character.

The College of Education has for its first major purpose the professional preparation of teachers. Attention is given, however, to the development of characteristics and qualities which are equally important, such as a broad and liberal education, strong and pleasing personality, and desirable character.

In the preparation of teachers there is a related function, that of the improvement of teachers in service. In order to satisfy this need, evening, Saturday, and summer session courses are offered. These courses are designed to strengthen academic preparation, to improve professional mastery, and to inspire and lead teachers to a clearer conception of their responsibilities and privileges.

A third purpose is to bring teacher training into closer contact with the instructional, supervisory, and administrative forces of the city. The real, vital problems of education may thus be studied by all who represent these forces. In this way the vigorous progressive phases of school

work in the city will be reflected in the training courses, and the study of these problems by the College of Education will bring suggestions for new forms of training and for various modifications of school work.

COURSES OF STUDY AND DEGREES

The College of Education offers curricula in the following fields: high school teaching in the regular academic subjects, the special fields such as physical education, music, art, secretarial science, commerce, speech, and home economics; nursery school, kindergarten-primary, and all grades of the elementary school.

The Department of Psychology is open to the students in the Liberal Arts College or the College of Education who wish to make Psychology their field of concentration.

The State of Ohio will grant a Cadet provisional elementary school Certificate upon the completion of a two-year program. Such a program is provided by the College of Education for those students who wish to complete it.

Any student in the University who is not enrolled in the College of Education and who wishes to enter the teaching profession should register with the Dean of the College of Education at least two years prior to the time at which he expects to be eligible to teach.

Students who complete a prescribed four-year curriculum of 128 semester hours and have the required quality of work are entitled to receive the B.A. in Education or the B.S. in Education degree.

Attendance is required for all graduates at both the Baccalaureate and Commencement exercises.

Graduate courses are open to any student who holds a Bachelor's degree from an accredited institution and who has the necessary background and ability for advanced study. The Master's degree is granted upon the completion of 30 semester hours of study.

REQUIREMENTS FOR ADMISSION

1. Each student must have secured an average quality point ratio of 2 in all work carried.
2. Each student is required to meet a satisfactory standard with respect to personality. This rating is made by instructors conducting the courses in Education in the General College, by the office of the Dean of Students, or by means of a standardized rating, or by a combination of them.
3. Each student planning to major in a special field must take an examination by the special department.

4. Each prospective high school teacher must be prepared for certification in three subjects, one major and two minors. Students who are preparing to teach in the special fields are required to have only one minor. The teaching majors and minors are defined on the next page.

5. Each prospective high school teacher must be prepared to enter upper college courses in at least two teaching fields.

BASIC REQUIREMENTS FOR ALL DEGREES

1. *General Education and prerequisite pre-professional requirements:*

	Cr. Hrs.
English 1-2	6
Introduction to Social Science 5-6	6
Introduction to Humanities 7-8	6
Introduction to Natural Science 9-10.....	6
Hygiene, Mental and Physical 15-16	4
Physical Education 3-4	2
General Psychology 41	3
Educational Psychology 52	3
Introduction to Education 55	3
Fundamentals of Speech 76	3
Mathematics, Foreign Language, Accounting or *Elective	6-8
Military Science and Tactics (Men)	6

2. *Professional courses:*

Tests and Measurements 105	2
School Management 115	2
Student Teaching 124	6
Methods	Varies with the teaching field
Principles of Education 201	3

3. *Major field plus one or two minors, depending upon field.*

A student who has a major in either of the special fields Music or Art is not required to have a teaching minor. In the other special fields or in an academic field where the major requirement is 40 semester hours or more, only one minor teaching field is required. In the regular academic fields where the major is 24-30 semester hours, two minor teaching fields are required.

REQUIREMENTS FOR THE B.A. IN EDUCATION

The B.A. degree in Education is granted to those whose major is in one of the regular academic fields such as English, History, Mathematics, Science, etc. (Majors in special fields, including elementary, receive the B.S. degree in Education.)

*For Elementary Curriculum.

STATEMENT OF NUMBER OF HOURS REQUIRED IN
VARIOUS FIELDS FOR THE COMPLETION OF
MAJORS AND MINORS

Field	H. S. Units as Pre- requisites	Major	Minor	Special
Art	—	—	24	60
Biological Science	1	24	15	—
Business Education	—	—	—	45
Bookkeeping—Social Business	—	40	20	—
Salesmanship—Merchandising	—	40	20	—
Stenography—Typing	—	40	20	—
Typing	—	—	5	—
Earth Science	1	—	15	—
English	3	*30	18	—
†French	2	24	15	—
General Science	—	40—com- prehensive major	15	—
†German	2	24	15	—
History	2	24	15	—
Home Economics	—	—	20	38
†Latin	2	18	15	—
Mathematics	2	20	15	—
Music—Instrumental	—	—	24	53
Vocal	—	—	24	53
Physical Education	—	—	24	46
Physical Science	1	24	15	—
Psychology	—	24	15	—
Social Science	1	*24	15	—
Social Studies (comprehensive major)	—	40	—	—
†Spanish	2	24	15	—
Speech	—	24	15	40

For selection of required courses to constitute a teaching field, consult the Dean of the College of Education or appropriate adviser.

Each student expecting to receive the Bachelor of Arts in Education degree is required to have one major and two minors according to the definitions above, in addition to the requirements for promotion to the upper college as listed on page 45 and the following courses in education:

‡Methods	3 hours
Tests and Measurements 105	2
Principles of Education 201	3
Student Teaching 124	6
School Management 115	2

Each student is required to complete 128 semester hours of work with a minimum of a 2 point average. At the time of entering upon student teaching, this must be 2.5 in the major field and 2 in the minors.

*General courses are not included in the total hours listed above.

†The two units of high school which are required as prerequisites to college study in a language may be satisfied by taking the eight-hour beginning course. This means that, in order to place a language on a certificate as a teaching field, 23 hours would be required if the study of the language is begun in college.

‡Varies with the major and minors. In some cases the methods requirement is included as a part of the major.

DUAL CERTIFICATION PROGRAM ELEMENTARY AND SECONDARY

This curriculum is designed to prepare a larger number of teachers for the elementary school, and at the same time, make it possible for those students who are interested in teaching in the secondary school to accomplish that purpose also. Students completing this curriculum will receive the four-year provisional certificate to teach at least two fields in the secondary school and will also receive a certificate which will qualify them to teach in grades 1 through 8 of the elementary school.

The need for secondary school teachers will diminish in the next three years but the need for elementary school teachers will continue to increase for several years. It is hoped that students will avail themselves of the better placement opportunities by selecting this program or one of the curricula designed primarily for kindergarten, primary and elementary grades.

General College Courses

	Cr. Hrs.
English 1 and 2	6
Int. to Soc. Science 5 and 6	6
Int. to Nat. Science 9 and 10	6
Physical and Mental Hygiene, 15 and 16.....	4
Int. to Humanities 7 and 8	6
General Psychology 41	3
Educational Psychology 52	3
Introduction to Education 55	3
Fundamentals of Speech 76	3
Children's Literature 86	3
Geography	3

Teaching Fields

Two academic fields for secondary school teaching. (Hours vary with fields) (General college courses, in most instances, will apply on major field)

Professional Courses

	Cr. Hrs.
High School Methods 113	3
Teaching of Reading 135.....	3
Science for Elementary Grades 133	3
Teaching of Arithmetic 136	2
Teaching of Social Studies 138	2
Child and Adolescent Psychology 107.....	3
Hygiene and Health Activities 131	2
Primary-Elementary Music Education 121..	2
Art for the Grades 121	2
Tests and Measurements 105	2
Student Teaching 124	4
Elementary	4
High School	4
School Management 115	2
Principles of Education 201	3

TWO YEAR ELEMENTARY PROGRAM

The acute shortage of teachers in the elementary school has resulted in the establishment of a two year program. Completion of this program will enable the student to secure a cadet provisional certificate which is valid for four years. Before the expiration of this period, students will be expected to continue work toward a degree, in order to keep their certificates in force. Any student who wishes to enroll in this program should plan to complete it by August, 1952.

(TWO YEAR)

	Cr. Hrs.		Cr. Hrs.
Physical Education	2	Fund. of Speech	3
Educ. Psychology	3	Children's Literature	3
School Management	2	Hyg. and Health Act. 131	2
Principles of Education	3	Games for Elem. Grades 132	1
Teaching of Reading	3	Introduction to Music 61	2
Teaching of Arithmetic	2	Prim.-Elem. Music Educ. 121	2
Teaching of Lang. Arts	2	Intro. to Natural Science 9-10	6
Teaching of Social Studies	2	European History	3
Student Teaching	5	American History	3
Design 21	2	Intro. to Sociology	3
Art for Grades	2	Prin. of Geography	3
English 1 and 2	6		—

ELEMENTARY EDUCATION

The following curriculum for the preparation of elementary school teachers leads to the B.S. degree in Education.

Elective work should be chosen in consultation with the advisers so that there will be some concentration comparable to at least one minor.

The lower elementary course is designed for students preparing to teach in grades one to three inclusive. The upper elementary course is for those preparing to teach in grades four to eight inclusive.

<i>Required Courses</i>		<i>Required Courses</i>	
	Cr. Hrs.		Cr. Hrs.
General College:		Major field, Upper College:	
English 1-2	6	Teaching of Reading 135	3
Physical Education 3-4	2	Prim. El. Music Educ. 121	2
Intro. to Soc. Sci. 5-6	6	Art for the Grades 121	2
Intro. to Human. 7-8	6	Hyg. & Health Act. 131	2
Intro. to Nat. Sci. 9-10	6	Games for El. Gr. 132	1
Ment. & Phys. Hyg. 15-16	4	Science for Elementary Grades 133	3
Mil. Sci. & Tactics (Men)	6		
General Psych. 41	3	General Professional courses:	
Educational Psych. 52	3	Tests and Measurements 105	2
Intro. to Educ. 55	3	School Management 115	2
Fund. of Speech 76	3	Student Teaching 124	6
		Principles of Education 201	3
<i>Required Courses</i>			
Major field, General College:			
Design 21-22	4		
Handicrafts 41	3		
Intro. to Music 61	2		
El. School Music Lit. and Apprec. 62	2		
Geography	6		
Story Telling 83	3		
Children's Literature 86	3		
Economics, History, Pol. Science			
or Sociology	6		

The above courses constitute the basic curriculum for the elementary grades. For the three divisions of Elementary grades, the following courses are required in addition to the above:

	Cr. Hrs.		Cr. Hrs.
Kindergarten-Primary		Primary	
Child and Adolescent Psychology 107.....	3	Child and Adolescent Psychology 107.....	3
Kindergarten Educ. 129	3	Primary Education 131	3
Primary Education 131	3	Primary Education 132	3
Student Teaching must be done in the Kindergarten and/or the first grade.			
Elementary			
Teaching of Arith. 136	2		
Teaching of Lang. Arts 137	2		
Teaching of Soc. Studies 138	2		
Child and Adolescent Psychology 107.....	3		

ART COURSE

To obtain the B.S. in Education degree with a major in Art, one must fulfill the basic requirements listed on page 131 plus the following courses in Art.

	Cr. Hrs.		Cr. Hrs.
Drawing:		Design, Painting, Sculpture:	
Drawing and Rendering 45-46	4	Design 21-22	4
Illustration 179	2	Industrial Design 43	2
Graphic Arts 104-105	4	Still Life Painting 115-116	4
Figure Drawing 175-176	4	Ceramics 59-60	4
Methods, etc.:		Weaving 106	2
Methods in Teaching Art 191	3	Crafts 70	2
Art for the Grades 121	2	Crafts 102	2
		Costume 151-152 or	
		Interior Decoration 171-172	6
		Appreciation and History:	
		Appreciation 29-30	4
		History of Art 200-201	6

Suggested courses for minor in Art. Minimum requirements in the teaching field of Art for the Provisional High School Certificate.

	Cr. Hrs.
Design 21-22	4
Drawing and Rendering 45-46.....	4
Ceramics 59	2
Painting 115-116	4
Figure Drawing 175	2
History of Art 200-201	6
Methods of Teaching Art 121	3

COMMERCIAL TEACHER TRAINING

The general field of Business Education is divided into three specific fields: Stenography-Typing, Bookkeeping-Social Business, and Salesmanship-Merchandising. Students preparing to teach commercial subjects may follow a comprehensive major of 45 hours distributed over all three fields, or else a specific major of 40 hours in any one. The requirements for each follow:

Business Education—Valid for teaching all subjects in the secretarial and commercial field, 45 semester hours distributed over all three fields and including second-semester Dictation, third-semester Accounting, Special Methods, High School Methods, one minor, general and professional requirements.

Stenography-Typing—Valid for teaching Shorthand, Typewriting, Business English, Clerical Practice, and Secretarial Practice. The course must include fourth-semester Dictation, preparation for other valid teaching subjects, Special Methods, and pertinent electives to total 40 hours; also two minors, High School Methods, general requirements, and professional requirements.

A minor in this field includes Shorthand, Typewriting, and Dictation, 14 hrs.; Special Methods, 2 hrs.; and Secretarial Training, 2 hrs.

Bookkeeping-Social Business—Valid for teaching Bookkeeping, Business Law, Economic Geography, Business Economics, Business Organization and Management. The course must include fourth-semester Accounting, preparation for the other valid teaching subjects, Special Methods, and pertinent electives to total 40 hours; also two minors, High School Methods, general requirements, and professional requirements. A minor in this field includes Accounting, 9 hrs.; Business Law, 3 hrs.; Economic Geography, 3 hrs.; Business Administration, 3 hrs.; and Special Methods, 1 hr.

Salesmanship-Merchandising—Valid for teaching Merchandising, Retail Store Selling, Salesmanship, Advertising, and Economic Geography. The course must include Marketing, 3 hrs.; Salesmanship, 3 hrs.; preparation for the other valid teaching subjects; Special Methods; and pertinent electives to total 40 hours; also two minors, High School Methods, general requirements, and professional requirements.

A minor in this field includes Marketing Principles, 3 hrs.; Salesmanship, 3 hrs.; Advertising; Retailing; Merchandising; Economic Geography and pertinent electives to total 20 hours.

CURRICULUM IN COMMERCIAL TEACHER TRAINING

First Year, General College

First Semester	Cr. Hrs.	Second Semester	Cr. Hrs.
English 1	3	English 2	3
Introduction to Social Science 5	3	Introduction to Soc. Sc. 6	3
Hygiene, Mental 15	2	Hygiene, Physical 16	2
Physical Education 3	1	Physical Educ. 4	1
Military Training (Men)	1½	Military Training (Men)	1½
Mathematics, Accounting, or Foreign Language	3 or 4	Mathematics, Accounting, or Foreign Language	3 or 4
Introduction to Humanities 7 or Elective	3	Introduction to Humanities 8 or Elective	3

Second Year, General College

Introduction to Natural Science 9	3	Introduction to Natural Science 10	3
General Psychology 41	3	Educational Psychology 52	3
Military Training (Men)	1½	Military Training (Men)	1½
Fundamentals of Speech 76 or Major	3	Typewriting (Major) 52	2
Typewriting (Major) 51	2	Major	3
Introduction to Education 55	3		

Major subjects to be selected from Accounting, Business Administration, Business Law, Consumer Economics, Economic Geography, Filing and Machine Calculation, Secretarial Procedure, Selling and Advertising, and Shorthand.

Third Year, College of Education

Special Methods	3	High School Methods 113	3
Economics 41	3	Special Methods or Major	2 to 3
Tests and Measurements 105	2	Economics	3
Major or Minor	6 to 9	Major or Minor	6 to 9

Additional major subjects: Advertising, Business Correspondence, Dictation, Marketing, Purchasing.

Fourth Year, College of Education

Student Teaching 124	6	Principles of Education 201	3
School Management 115	2	Major, Minor, or Elective	13
Major, Minor, or Elective	8		

Additional major subjects: advanced work in any field for which prerequisites have been taken.

HEALTH AND PHYSICAL EDUCATION

To obtain the B.S. in Education degree with a major in Physical Education, one must fulfill the basic requirements listed on page 131 plus the following courses:

MEN

Cr. Hrs.		Cr. Hrs.	
Physical Education 45-46	4	Anatomy 127	3
Organization and Administration of Community Recreation 70	2	Physiology 128	3
Theory and Practice 103-104	4	Org. and Adm. of Phyc. Ed. 121-122	4
Theory and Practice 105-106	4	School Health Problems 118	3
Child and Adolescent Psychology 107	3	Org. and Adm. of Health Ed. 123	2
Normal Diagnosis and C. E. 115	2	Mat'ls. and Meth. in Tchg. Health Ed. 133	3
Red Cross First Aid 111	1	Games and Rhythms for El. Gr. 134	2
Swimming 114	2	Minor and Electives	15
Athletic Injuries and Massage 112	1	*H. S. Methods 113	3

WOMEN

Cr. Hrs.		Cr. Hrs.	
Physical Education 45-46	4	Anatomy 127	3
Organization and Administration of Community Recreation 70	2	Physiology 128	3
Theory and Practice 103-105	4	Org. and Adm. of Phys. Ed. 121-122	4
Theory and Practice 106-108	4	School Health Problems 118	3
Child and Adolescent Psychology 107	3	Org. and Adm. of Health Ed. 123	2
Normal Diagnosis and C. E. 115	2	Mat'ls. and Meth. in Tchg. Health Ed. 133	3
First Aid 111	1	Games and Rhythms for El. Gr. 134	2
Swimming 114	2	Minor and Electives	18
		*H. S. Methods 113	3

HOME ECONOMICS COURSE

To obtain the B.S. in Education degree with a major in home economics one must fulfill the basic requirements listed on page 131 plus the home economics major plus one minor.

MAJOR IN HOME ECONOMICS

Foods	Cr. Hrs.
General Foods 45-46	6
Nutrition 119 or 42	3
Experimental Foods 115	3
Clothing	
Textiles 21	3
Clothing 22-23	6
Advanced Clothing 105	3
	24

14 Hrs. additional from the following:

General	Cr. Hrs.
Child Development 65	3
Home Management 62	3
Home Eco. Survey 53	2
Selection of Home Furnishings 58	3
Household Equipment 215	3
Home Econ. Educ.	3
*H. S. Methods	3

MINOR IN HOME ECONOMICS

Foods	Cr. Hrs.
General Foods 45-46	6
Clothing	
Textiles 21	3
Clothing 22	3
General	
Child Development 65	3
Home Management 62	3
Methods	
Home Economics Education 151	3

*Required if student wishes to teach the academic minor as well as in the major field.

MUSIC

To obtain the B.S. in Education degree with a major in Music one must complete the basic requirements listed on page 131 and the requirements given below.

MUSIC—VOCAL

	Cr. Hrs.
Music Ed.	
Primary El. Music Ed. 121	2
Secondary Music Ed. 123	2
Theoretical Music	
Music 52	2
Music 23	2
Theory I 41	5
Theory II 42	5
Theory III 103	3
History of Music 101-102	4
Orchestration 114	2
Conducting 110	2
Applied Music (Individual)	
Piano (Req. of all)	4
Voice (Req. of all)	4
A Major Instr. or Voice	8
Applied Music (Class)	
Voice Class	2
Ensemble	4
Electives (Women)	3-6
Electives (Men)	2-0

MUSIC—INSTRUMENTAL

	Cr. Hrs.
Music Ed.	
Primary El. Music Ed. 121	2
Secondary Music Ed. 123	2
Theoretical Music	
Music 52	2
Music 23	2
Theory I 41	5
Theory II 42	5
Theory III 103	3
History of Music 101-102	4
Orchestration 114	2
Conducting 110	2
Applied Music (Individual)	
Piano (Req. of all)	4
Voice (Req. of all)	4
A Major Instr. or Voice	8
Applied Music (Class)	
Piano Class	1
String Class	1
Brass Class	1
Woodwind Class	1
Ensemble	4
Elective (Women)	6-4

STATE REQUIREMENTS FOR A MINOR IN MUSIC

Subject	Cr. Hrs.
Fundamentals of Music 23	2
Art of Music 22	2
Theory I, 41	5
Theory II, 42	5
History of Music 101 or 102	2
Music Education 123	2
Conducting 110	2
Applied Music	4

DEPARTMENT OF MUSIC REQUIREMENTS

MUSIC ORGANIZATIONS

- | | |
|----------------------------|-------------------------------|
| University Women's Chorus | University Symphony Orchestra |
| University Men's Glee Club | University Theatre Orchestra |
| University Singers | |

ADDITIONAL REQUIREMENTS FOR MAJORS IN MUSIC

- (1) If a student wishes to major in School Music, he must have reached a satisfactory degree of achievement in Voice, or in some instrument, before entering college. A musical aptitude test will be given each student near the beginning of the first year of study.
- (2) Sixteen credits are necessary in individual instruction and must include 4 credits in Piano and 4 credits in Voice.
- (3) Class instruction may not be substituted for individual instruction.
- (4) Presentation of both Junior and Senior recitals is recommended.
- (5) Continuous enrolment in any one of the music organizations is required.
Public school music majors may not count more than six hours of this credit toward the degree.

*Required if student wishes to teach in the academic minor as well as in the major field.

NURSING EDUCATION

The nursing program originated as a part of the United States Cadet Nurse program sponsored by the federal government, and was operated in cooperation with the three general hospitals of Akron—City Hospital, Peoples Hospital, and St. Thomas Hospital. This cooperative plan continues since the closing of the United States Cadet Program on October 15, 1945.

BASIC NURSING PROGRAM LEADING TO A DIPLOMA IN NURSING

In addition to the first semester's work, formerly offered to pre-Cadets, the University also provides the second semester's work for students of the City Hospital of Akron School of Nursing and the Peoples Hospital School of Nursing. The student nurses are regularly enrolled in the University, with college credit, for these two semesters.

All applications for admission to this program are handled through the hospital schools of nursing.

The following courses constitute the two semesters' work:

First Semester	Cr. Hrs.	Second Semester	Cr. Hrs.
Anatomy and Physiology 47	3	Anatomy and Physiology 48	3
Chemistry 25	4	Diet Therapy 44	3
Psychology 21	3	Int. to Medical Science 58	3
Foods 43	3	Sociology 23	3
History of Nursing 59	2	Microbiology 33	3
Nursing Arts	1	Int. Nursing Arts	2
	<u>16</u>		<u>17</u>

LEADING TO B.S. DEGREE IN NURSING

This five-year basic program provides for candidates to be admitted directly to the University. The first two academic years and the first semester of the third year are spent on the campus. The remaining time is spent in hospitals and allied health centers. It includes general cultural courses and courses directly relating to nursing.

CURRICULUM FOR FIVE-YEAR BASIC NURSING PROGRAM

First Year

First Semester	Cr. Hrs.	Second Semester	Cr. Hrs.
English 1	3	English 2	3
Int. to Soc. Sci. 5	3	Int. to Soc. Sci. 6	3
Anatomy and Physiology 47	3	Anatomy and Physiology 48	3
Chemistry 21 or 23	3-4	Chemistry 22 or 24	3-4
Physical Education 3	1	Physical Education 4	1
Mental Hygiene 15	2	Psychology 21 or 41	3

Second Year

First Semester	Cr. Hrs.	Second Semester	Cr. Hrs.
Int. to Humanities 7	3	Int. to Humanities 8	3
Bacteriology 107	4	Bacteriology 108	4
Educational Psychology 52	3	General Sociology 41	3
History of Nursing 59 or 70	2-3	Int. to Medical Science 58	3
Foods and Nutrition 43	3	Diet Therapy 44	3
Pharmacology I 54	2	Nursing Arts I 52	2

Fifth Year

Second Semester	Cr. Hrs.
Professional Adjustments II 57	2
Nursing Elective	3
General electives to meet graduation requirements.	

Clinical portion of the program begins the fifth semester and continues through the first semester of the fifth year. Public Health Nursing 112 and Public Health Nursing Practice 113 will be taken during the clinical portion of the program.

ADVANCED PROFESSIONAL PROGRAM FOR GRADUATE NURSES

Programs of advanced study are available for graduate nurses leading to the Degree of Bachelor of Science in Nursing Education. This program is designed for graduates of accredited nursing schools who wish to prepare for positions of ward management and teaching in hospitals. Special programs may be arranged for graduate nurses interested in certification to teach in the public schools.

Candidates must present evidence of graduation from an approved school of nursing. They are required to complete at least 128 semester hours which include approximately 15 semester hours in professional nursing courses. The required courses include:

GENERAL COURSES		PROFESSIONAL COURSES	
	Credits		Credits
English	6	Administration in Schools of Nursing.....	3
Intro. to Soc. Sc.	6	Principles and Methods of Tchg. Nursing....	3
Intro. to Human.	6	Public Health Nursing	3-9
Math., Acct'g., or Foreign Language.....	6-8	History of Nursing	3
Chemistry or Physics	8	Nursing Trends	3
Bacteriology	8	Ward Management and Teaching	3
Sociology	6	Elements of Supervision	3
Psychology	6	Curriculum Construction	3

Graduate nurses are allowed some credit for their professional education in nursing. The amount of this credit is dependent upon the quality of the program completed and the amount of work completed in the various subjects. The number of electives will depend on the credit allowed the individual student for her basic professional program.

SPEECH

To obtain the B.S. in Education degree with a major in Speech one must fulfill the basic requirements listed on page 131, the following courses, and one minor.

	Cr. Hrs.		Cr. Hrs.
Public Speaking 41	3	Speech Correction 271, 272	4
Reading Aloud 51	3	History of Speech 291, 292	4
Fundamentals of Speech 76	3	Seminar 293	2
Play Production 161	3	Teaching of Speech 114	2
Elective			16

The B.A. in Education with a major in Speech may be obtained by completing 24 hours of Speech including the courses listed above with the exception of Teaching of Speech 114. The minor requirement is 15 hours and includes the courses listed above with the exception of History of Speech 291-292, Seminar 293 and Teaching of Speech 114.

STUDENT ADVISERS

All students should confer with the following persons regarding their work according to the fields in which they expect to teach. Students should also feel free to consult the Dean of the College of Education.

Art	MISS DAVIS
Commercial Subjects	MR. DOUTT, MR. LEIGH
Two-Year and Four-Year Elementary	MR. DISTAD
High School	MISS RIEDINGER
Home Economics	MISS BEAR
Kindergarten-Primary	MISS BECKER
Music	MR. PARMAN
Physical Education	MISS LAMKIN, MR. SEFTON
Primary-Elementary	MISS BECKER
Speech	MR. SANDEFUR
Graduate Students	DEAN EVANS

RECOMMENDATIONS FOR CERTIFICATION

Some students who receive degrees from the College of Liberal Arts wish to qualify for teaching. Some instruction regarding this is given on page 55. These persons will be recommended for certification on the basis of the major and minor requirements on page 132 and the completion of the courses listed above under Sequence of Pre-Professional and Professional courses. Such students must be in continuous advisement and subject to acceptance in the College of Education during the last two years.

Admission to student teaching will be based upon the same point average requirement as in the case of students in the College of Education. Satisfactory work must be done in teaching fields and in education, particularly student teaching, to warrant recommendation for teaching certificates.

Every teacher in the public schools of Ohio is required to have a certificate covering the fields in which he is teaching. This certificate is issued by the State Department of Education upon recommendation of the Dean of the College of Education. The student must make out an application form, which may be obtained in the office of the Dean or in the office of the Registrar. This form should be filled out about one month before the student plans to complete all of his requirements for teaching.

CONVERSION FROM SECONDARY TO ELEMENTARY CERTIFICATE

The holder of a high school certificate may be certified for elementary teaching upon completion of the following 18 semester hours:

Course	Sem. Hrs.
Teaching of Reading 135	3
Teaching of Arithmetic 136	2
Teaching of Language Arts 137	2
Teaching of Social Studies 138	2
Child and Adolescent Psychology 107	3
Student Teaching 124	3
Elementary Education 151	3

The certificate obtained would be a cadet provisional elementary valid for grades 4-8.

STUDENT TEACHING

The student teaching in all courses is done in the public schools under the supervision of supervising critic teachers and a representative of the faculty of the College of Education. Each student must teach for a semester under regular assignment. Under such supervision the student teacher really assumes full teaching responsibility.

A student, in order to be eligible to engage in student teaching, must have at least an average quality point ratio of 2.5 in his major field, an average quality point ratio of 2 in his minor fields, and at least an average quality point ratio of 2 in all subjects taken.

GRADUATE STUDY

The College of Education offers graduate courses leading to the following degrees: Master of Arts in Education (to candidates holding the B.A. degree), and Master of Science in Education (to candidates holding the B.S. degree, the B.S. in Education or the B.E. degree).

Requirements for the Master's degree are 30 semester hours of graduate work. Usually the student will do work in a major and a minor field. There is no definite division in the number of hours required for a major and a minor. The student's program is planned with the idea of meeting his need most effectively. Of the 30 hours required for graduation, four hours may be earned by credit for a thesis and the remaining 26 hours in course credit. The student may, however, choose to do two semester hours credit in an educational problem instead of writing a thesis, and the remaining 28 hours will be done in course work. The difference between the thesis and the educational problem lies largely in the scope and originality of the research and the formality of the written account of the study.

If the student has completed his Bachelor's degree at the University of Akron, he may be permitted to complete from 6-8 semester hours of work at another approved university. If the student has not earned his Bachelor's degree at the University of Akron, the entire 30 hours of work for the Master's degree must be completed at the University of Akron.

The Dean of the College of Education will advise the student regarding his program. An adviser for the student's thesis investigation or educational problem will be appointed by the Dean. The thesis adviser will serve as chairman of a committee which will approve the completed work. The student will be expected to obtain the approval of his problem and the entire plan of study before beginning his research or investigation. Each student will be required to pass a comprehensive final examination. This examination is given in May. It is usually a written examination, however, it may be either oral or both.

There are several required courses for all students working on the programs listed below. They are:

1. Advanced Educational Psychology 303
or
Advanced Child and Adolescent Psychology 308
2. History and Systems of Psychology 317
3. Statistics in Psychology and Education 311
4. Techniques of Research 425
5. Philosophy of Education 323-324

The following outlines are intended to serve as guides to graduate students in their respective areas of interest. Each program is subject to the approval of the Dean of the College of Education.

ELEMENTARY EDUCATION

Cr. Hrs.

Statistics in Psychology and Education 311.....	2
Techniques of Research 425	2
Contemporary Philosophies of Education 324	2
Elementary School Curriculum and Teaching 330	2
Advanced Child and Adolescent Psychology 308	2
Diagnostic Testing and Remedial Teaching 313	2
Techniques of Evaluation 312	2
Supervision of Instruction 322	2
Seminar in Elementary Education 436	2

A minor of twelve hours in an academic field or psychology or twelve hours elected from courses in education.

This is intended primarily for the student who expects to progress as a teacher in elementary schools. Students who wish to look forward to an elementary school principalship will qualify by electing courses in Administration.

SECONDARY EDUCATION

Cr. Hrs.

Statistics in Psychology and Education 311.....	2
Techniques of Research 425	2
Contemporary Philosophies of Education 324	2
Secondary School Curriculum and Teaching 319	2
Advanced Child and Adolescent Psychology 308	2
Guidance in the Secondary School 302	2
Techniques of Evaluation 312	2
Supervision of Instruction 322	2
Seminar in Secondary Education 437	2

A minor of twelve hours in an academic field is recommended for teachers of academic subjects.

ELEMENTARY SCHOOL PRINCIPAL

Cr. Hrs.

Statistics in Psychology and Education 311.....	2
Techniques of Research 425	2
Contemporary Philosophies of Education 324	2
Public School Administration 345-346	4
Elementary School Administration 331	2
Supervision of Instruction 322	2
Elementary School Curriculum and Teaching 330	2
Seminar in Elementary Education 436	2
Techniques of Evaluation 312	2
Diagnostic Testing and Remedial Teaching 313	2
Advanced Educational Psychology 303	2
Advanced Child and Adolescent Psychology 308	2
Psychotherapy for Professional Workers 310	2
History of Educational Thought 323	2
Comparative Education 433-434	4
Principles and Techniques in Personnel Counseling 208	2
Psychological Testing in Personnel 207	3

SECONDARY SCHOOL PRINCIPAL

Cr. Hrs.

Statistics in Psychology and Education 311.....	2
Techniques of Research 425	2
Contemporary Philosophies of Education 324	2
Public School Administration 345-346	4
Secondary School Administration 320	2
Supervision of Instruction 322	2
Secondary School Curriculum and Teaching 319	2

SECONDARY SCHOOL PRINCIPAL (Continued)

	Cr. Hrs.
Seminar in Secondary Education 437	2
Educational Psychology, Advanced 303	2
Guidance in the Secondary School 302	2
Techniques of Evaluation 312	2
Principles and Techniques in Personnel Counseling 208	2
Advanced Child and Adolescent Psychology 308	2
Psychotherapy for Professional Workers 310	2
Diagnostic Testing and Remedial Teaching 313	2
History of Educational Thought 323	2
Comparative Education 433-434	4
Adult Education 211	2

SCHOOL SUPERINTENDENT

	Cr. Hrs.
Statistics in Psychology and Education 311.....	2
Techniques of Research 425	2
Contemporary Philosophies of Education 324	2
Public School Administration 345-346	4
Elementary School Administration 331	2
Secondary School Administration 320	2
Supervision of Instruction 322	2
Seminar: Individual Problems 438	2
Elementary School Curriculum and Teaching 330	2
Secondary School Curriculum and Teaching 319	2
Guidance in the Secondary School 302	2
Advanced Educational Psychology 303	2
Advanced Child and Adolescent Psychology 308	2
Techniques of Evaluation 312	2
Principles and Techniques in Personnel Counseling 208	2
Psychotherapy for Professional Workers 310	2
History of Educational Thought 323	2
Comparative Education 433-434	4
Adult Education 211	2

GUIDANCE COUNSELOR

	Cr. Hrs.
<i>Required Courses:</i>	
Statistics in Psychology and Education 311.....	2
Techniques of Research 425	2
Contemporary Philosophies of Education 324	2
Elementary School Curriculum and Teaching 330	2
or	
Secondary School Curriculum and Teaching 319	2
Advanced Child and Adolescent Psychology 308	2
Diagnostic Testing and Remedial Teaching 313	2
Elementary School Administration 331	2
or	
Secondary School Administration 320	2
Principles and Techniques in Personnel Counseling 208	2
Psychotherapy for Professional Workers 310	2
Individual Psychological Testing 306	3
Principles and Practices of Guidance 302	2
Techniques of Guidance	2
Vocational Guidance and Occupational Information	2
<i>Recommended—Optional:</i>	
Public School Administration 345-346	4
Labor Problems 206	3
Community Organization 206	3

SCHOOL PSYCHOLOGIST

Please consult Head of Department of Psychology.

SUBJECTS OF INSTRUCTION

ART

Professor Davis, Assistant Professor Cable, Mrs. Packan

121. ART FOR THE GRADES. *Either semester. 2 credits.*

Prerequisite, 21. A survey of art requirements in the elementary grades with laboratory work, to give teachers a knowledge of materials and mediums, and skill in handling them.

191. METHODS IN TEACHING ART. *First semester. 3 credits.*

Prerequisite, completion of the required course for art teachers and quality point ratio of 2 in the field. Study of trends and procedure in teaching and in supervision; relation of art to the home, school and community; observation in selected schools is required.

BUSINESS EDUCATION

Professor Doutt, Associate Professor Flint

173. METHODS IN TYPEWRITING. *1 credit.*

Prerequisite, Secretarial Training and a quality point ratio of 2 in the field. Methods of presentation in typewriting will be studied. Demonstrations and observations will be required. A theory test in the field must be passed before credit will be given for the course.

174. METHODS IN SHORTHAND AND TRANSCRIPTION. *1 credit.*

Prerequisite, Secretarial Science 63 or 142 and a quality point ratio of 2 in the field. Methods of presentation in shorthand and transcription will be studied. Demonstrations and observations will be required. A theory test in the field must be passed before credit will be given for the course.

175. METHODS IN BOOKKEEPING. *1 credit.*

Prerequisite, Accounting 22 or 42 and a quality point ratio of 2 in the field. Methods of presentation in bookkeeping will be studied including the business cycle, practice sets, and lesson plans. A theory test in the field must be passed before credit will be given for the course.

EDUCATION

Dean Evans, Professor Distad, Associate Professors Becker, W. I. Painter and Riedinger; Assistant Professors Jones and Mrs. H. W. Painter; Mr. Campbell, Mr. Pottinger

GENERAL COLLEGE

41. HANDICRAFTS IN ELEMENTARY SCHOOL. *1 to 3 credits.*

This course consists of a broad range of experiences through the manipulation of various craft mediums which will enrich the curriculum of the elementary school. Lab. fee, \$2.

45. HISTORY OF EDUCATION. *3 credits.*

A study of the development of civilization with particular reference to the role of education.

55. INTRODUCTION TO EDUCATION. *Either semester. 3 credits.*

An orientation course giving an overview of the characteristic features of the American educational system and some explanation of the forces that have affected its development.

65. EDUCATIONAL SOCIOLOGY. *Either semester. 3 credits.*

The purpose of this course is to study the political, social, and economic forces and problems in relation to educational problems such as delinquency, population shifts, vital statistics, unemployment and technological advance.

69. INTRODUCTION TO AVIATION. Evening session. 3 credits.

This is an introductory course covering general principles of aviation. Topics include: flight principles, construction and operation of airplanes and airplane engines, flying instruments, and safety devices.

83. STORY TELLING. 3 credits.

A study of story material, discriminative selection, preparation, and presentation of traditional and modern stories for children; emphasis on the telling of stories and creative dramatics.

86. CHILDREN'S LITERATURE. 3 credits.

A survey of materials for children in prose, poetry, and illustrations from early historical periods to modern types; criteria of selection and methods of presentation are critically examined.

88. SPEECH FOR THE CLASSROOM TEACHER. Either semester. 2 credits.

The course will deal with choral speaking as a means to speech improvement, and the correction of simple speech deviation.

UPPER COLLEGE

101. ACTIVITY SCHOOL. 3 credits.

A course offered in connection with the demonstration school in the summer. Designed to examine critically recent trends and newer practices in elementary education and to develop a forward-looking point of view.

105. EDUCATIONAL TESTS AND MEASUREMENTS. Either semester. 2 credits.

Prerequisite, 52. A study of the various methods and devices employed in comprehensive and continuous evaluation. Some attention given to the treatment and interpretation of scores. Fee, \$2.

113. HIGH SCHOOL METHODS. Either semester. 3 credits.

Prerequisite, 52. This course includes four units of study carried on concurrently: (1) the basic principles of teaching; (2) a working knowledge of methodology in a specific field; (3) daily observation and participation; (4) preparation of teaching materials.

115. SCHOOL MANAGEMENT AND ADMINISTRATION. 2 credits.

Accompanies Student Teaching. A study of the administrative relations and responsibilities of the teacher. Group discussion of problems arising in student teaching.

124. STUDENT TEACHING. Either semester. 6 credits.

Prerequisite, Education 113 or equivalent. Student teaching under the guidance of a directing teacher and a university supervisor.

131. EARLY ELEMENTARY EDUCATION. First semester. 3 credits.

Prerequisite, Psychology 52. This course aims to develop a forward-looking viewpoint in the education of young children. Materials, techniques, and practices are examined which furnish opportunities for cooperative enterprise and serve as a background for democratic living.

132. PRIMARY EDUCATION. Second semester. 3 credits.

Prerequisite, Education 131. A continuation of course 131 with emphasis on the teaching of the language arts, science, and social studies at the primary level.

133. SCIENCE FOR THE ELEMENTARY GRADES. 3 credits.

Prerequisite, Psychology 52. A course for the prospective teacher of science in the elementary school; the development of a point of view toward science teaching and a study of methods of presenting science material; major emphasis is placed upon science content.

135. THE TEACHING OF READING. *First semester. 3 credits.*

Prerequisite, Psychology 52. A survey of the reading program for the elementary school, together with modern methods of teaching reading at the various levels.

136. THE TEACHING OF ARITHMETIC. *2 credits.*

Prerequisite, Psychology 52. A study of trends in arithmetic instruction in the elementary school. Attention is given to procedures for the development of mathematical concepts and skills.

137. TEACHING THE LANGUAGE ARTS. *2 credits.*

Prerequisite, Psychology 52. This course deals with materials, grade allocations, and methods for teaching oral and written expression, spelling, and handwriting in elementary grades, according to the best modern practice.

138. THE TEACHING OF SOCIAL STUDIES. *2 credits.*

Prerequisite, Psychology 52. A study of social studies program in the elementary school and the varied means of implementing the program.

151-152. ELEMENTARY EDUCATION. *Evening and summer sessions. 3 credits each semester.*

An evaluation of recent trends and newer practices in elementary education. A refresher course.

201. PRINCIPLES OF EDUCATION. *Either semester. 3 credits.*

Prerequisite, Senior status in Education. The purpose of this course is to assist the senior student in integrating his thinking regarding the purpose of an educational system in a democratic community.

211. ADULT EDUCATION. *2 credits.*

A survey course for public school teachers and administrators as well as for those engaged full time in Adult Education. An historical background including European influences and their relation to the rapid developments in the field during the last decade will be emphasized. A greater share of the course will be devoted to current programs throughout the United States which include the social, economic, and civic importance of a well-planned program of Adult Education in a Democracy.

234. AUDIO-VISUAL EDUCATION. *2 credits.*

The primary purpose of this course is to acquaint teachers of all levels with the wide variety of visual and auditory aids available and the techniques for their respective use. Other purposes are learning to operate all types of projectors and sound reproducers, to locate materials available, and to construct materials for one's own specific use.

235. WORKSHOP (*Elementary School*). *2 or 3 credits.*

Opportunity for individual work under staff guidance on curriculum problems; utilization of community resources; planning of curriculum units.

GRADUATE COURSES IN EDUCATION

*Dean Evans, Professor Distad, Associate Professor W. I. Painter,
Assistant Professors H. W. Painter and Riedinger*

Prerequisite to graduate courses in Education: At least 12 hours of undergraduate work in Education or the equivalent, and the Bachelor's degree or equivalent, and the provisional certificate for teaching.

302. GUIDANCE IN THE SECONDARY SCHOOL. *2 credits.*

A study of the principles and techniques of student guidance; the setting up of an effective guidance program in the secondary school.

311. STATISTICS IN PSYCHOLOGY AND EDUCATION. *2 credits.

A course in statistical methods and techniques used in the field of measurement and by research workers in education and psychology.

*Required graduate course.

312. TECHNIQUES OF EVALUATION. 2 credits.

A study of the techniques of measuring and evaluating pupil progress. Some attention will be given to the theory of test construction. Fee, \$2.

313. DIAGNOSTIC TESTING AND REMEDIAL TEACHING. 2 credits.

A study of the factors contributing to educational disability. Techniques of diagnostic and remedial work will also be treated. Fee, \$2.

319. SECONDARY SCHOOL CURRICULUM AND TEACHING. 2 credits.

The application of the dominant theory of education as applied to curriculum building and procedures in teaching.

320. SECONDARY SCHOOL ADMINISTRATION. 2 credits.

A treatment of the problems, procedures, and principles of organization and administration in secondary schools.

322. SUPERVISION OF INSTRUCTION. 2 credits.

A study of the principles, organization, and techniques of supervision with a view to the improvement of instruction.

***323. HISTORY OF EDUCATIONAL THOUGHT. 2 credits.**

An historical study of educational theory and its originators, necessary to an understanding of current theory and practice.

***324. CONTEMPORARY PHILOSOPHIES OF EDUCATION. 2 credits.**

An appraisal of conflicting philosophies which are most important in present school practice.

330. ELEMENTARY SCHOOL CURRICULUM AND TEACHING. 2 credits.

The application of the dominant theory of education as applied to curriculum building and procedures in teaching.

331. ELEMENTARY SCHOOL ADMINISTRATION. 2 credits.

A study of the problems, procedures, and principles of organization, administration, and supervision in elementary schools.

335. WORKSHOP (*Secondary School*). 2 credits.

This course consists of lectures on workshop technique supplemented by the working out of individual problems under staff guidance.

341. EVALUATION OF SECONDARY SCHOOLS. 2 credits.

This is a laboratory course in which the evaluation of a high school will be made by use of up-to-date techniques and criteria.

345-346. PUBLIC SCHOOL ADMINISTRATION. *Each semester*. 2 credits.

The theory and practices of educational administration in the state and county systems, cities, and rural districts. Also includes school law, organization, administration, finance, pupil accounting, planning and completion of school buildings.

***425. TECHNIQUES OF RESEARCH. 2 credits.**

A study of research methods and techniques commonly used in education and psychology; some emphasis given to the preparation of research reports.

427. SEMINAR IN CURRICULUM. 2 credits.

A study of the principles underlying curriculum construction; review of important investigations; and practice in construction of curriculum units.

*Required graduate courses.

433. COMPARATIVE EDUCATION. 2 credits.

A comparison of the educational philosophy and organization of English and American education.

434. COMPARATIVE EDUCATION. 2 credits.

A comparison of the educational philosophy and organization of American and Latin American education.

436. SEMINAR IN ELEMENTARY EDUCATION. 2 credits.**437. SEMINAR IN SECONDARY EDUCATION. 2 credits.****450. RESEARCH PROBLEM. 2 to 4 credits.**

This course is required of candidates for the Master's degree. Credit will vary from 2 to 4 hours depending upon whether the research is classified as a problem or as a thesis.

GEOGRAPHY

Assistant Professor Jones

GENERAL COLLEGE**71. PRINCIPLES OF GEOGRAPHY. 3 credits.**

A study of those principles which are basic in gaining an understanding of the relationship of man's activities to his natural environment.

72. GEOGRAPHY OF NORTH AMERICA. 3 credits.

A study of the natural regions, climate, natural resources, work patterns and industries of the continent.

73. GEOGRAPHY OF SOUTH AMERICA. 3 credits.

This course will give each student a basic view of the entire South American continent, its climate, products, types of inhabitants, its various kinds of government and its relation to the North American neighbors.

74. GEOGRAPHY OF EUROPE. 3 credits.

A study of the natural regions, the uneven distribution of resources among the several political units and an evaluation of some of the problems faced by the countries of the continent.

75. WORLD GEOGRAPHY. 3 credits.

In this course a general study is made of the effects of geographical environment upon the human response of people living in Africa, Malaysian Lands, India, China, Japan, Russia, South America, Caribbean Lands, The United States, and Western Europe.

76. METEOROLOGY. Evening session. 2 credits.

A first course covering the composition and properties of the atmosphere, causes of clouds and cloud types, variations of temperature and their effects, circulation of air, air masses, fronts, and disturbances, weather reports, weather maps, and weather forecasts.

77. GEOGRAPHY OF ASIA. Either semester. 3 credits.

Prerequisite, 71. This course is designed to help develop an understanding of the various countries of Asia, their economic-geographic regions, their major commodities, and their industries and commerce. It will help to interpret adjustments to the environment through the study of space relationships, climate, relief, and natural resources as well as significant political, racial and social factors which have a bearing upon industrial and commercial activities.

HOME ECONOMICS

Professor Bear

151. HOME ECONOMICS EDUCATION. First semester. 3 credits.

Organization of home economics in the secondary schools. Two hours observation, two hours lecture.

MUSIC EDUCATION

Professor Parman, Associate Professor Ende, Assistant Professors Smith and Witters; Mr. Stein, Mr. Lightfritz, Miss Resler, Miss Whitaker, Mr. Ferguson, Mrs. Mitchell

50. VOICE CLASS. *2 credits.*

A study of the technique employed in choral conducting with emphasis on securing attacks, releases, dynamic and tempo changes; voice classification; and methods of securing correct intonation. Also an analysis of choral literature.

52. FUNDAMENTALS OF MUSIC. *2 credits.*

A functional introduction to music embracing notation, terminology, scale construction, simple melodic dictation and sight singing, familiarity with the piano keyboard, and experience in singing part songs. A prerequisite to any further study of music.

55-56. STRING CLASS. *1 credit each semester.*

Actual playing of string instruments with special emphasis on the violin. Study of material and teaching techniques.

57. WOODWIND CLASS. *1 credit.*

Actual playing of woodwind instruments with special emphasis on clarinet. Study of material and teaching techniques.

58. BRASS CLASS. *1 credit.*

Actual playing of brass instruments with special emphasis on the cornet. Study of materials and teaching techniques. Rudimentary drumming is also introduced in this course.

59. INSTRUMENT REPAIR. *1 credit.*

Woodwind instruments: proper method of cleaning, corking joints, repadding, replacing springs and other minor adjustments. Elective.

60. INSTRUMENT REPAIR. *1 credit.*

Brass and String instruments: proper method of cleaning, aligning of valves; replacing corks and felts, soldering technique. Fitting of bridges, rehairing bows and setting of sound posts for string instruments. Attention is also given to tucking of drum heads. Elective.

62. ELEMENTARY SCHOOL MUSIC LITERATURE AND APPRECIATION.

2 credits.

Materials and methods for teaching music appreciation in grade school classes, beginning with rote and reading song correlation with children's activities and progressing to the enjoyment of familiar serious music through recordings and concerts.

63. GENERAL THEORY OF MUSIC. *2 credits.*

Sight singing and ear training; keyboard; two part harmony; four part harmony in fundamental positions; chord sequence and modulation. (Not open to music majors.)

110. CONDUCTING. *2 credits.*

The fundamentals of conducting technique, and individual practice in conducting.

121. PRIMARY-ELEMENTARY MUSIC EDUCATION. *2 credits.*

Theory and practice of presenting vocal and instrumental music in the grade school. Study of rote, observation, sight reading, and part-songs, and discussion of objectives and methods for grades I and VI. Survey of available materials in these fields and instruction in Rhythm Band, Melody Band, and other pre-instrumental methods.

123. SECONDARY MUSIC EDUCATION. *2 credits.*

The procedures that should be employed to give the adolescent a well-balanced participation in applied and theoretical music.

Other music courses are described in the Music Department Section under Liberal Arts.

NURSING EDUCATION

25. CHEMISTRY FOR NURSES. *See Chemistry Department.*

33. MICROBIOLOGY. *See Biology Department.*

43. FOODS AND NUTRITION. *3 credits.*

For student nurses. This course combines the study of principles of food preparation with that of diet in normal nutrition. Two hours lecture, two hours laboratory. Lab. fee, \$6.

44. DIET THERAPY. *3 credits.*

For student nurses. This course is the application of the study of nutrition as a means of therapy. Two hours lecture, two hours laboratory. Lab. fee, \$4.

47-48. ANATOMY AND PHYSIOLOGY. *See Biology Department.*

52. NURSING ARTS I. *2 credits.*

Designed to aid students in their orientation to nursing, in developing desirable ideals and attitudes, and in recognizing the principles of health conservation and promotion.

54. PHARMACOLOGY I. *2 credits.*

An introductory course planned to give the student a thorough understanding of the systems and methods used in weighing and measuring drugs, making solutions, calculating dosage, and of the nurse's responsibility in the administration of medicine.

56. PROFESSIONAL ADJUSTMENTS I. *1 credit.*

Consideration of the underlying principles of nursing ethics, and guidance to the student in making her personal and professional adjustments to nursing.

58. INTRODUCTION TO MEDICAL SCIENCE. *3 credits.*

To acquaint the student with the causes of disease, bases for treatment, methods of prevention and control, and with the various professional groups with whom she associates in the care of the sick. Also to encourage the application of scientific principles and methods to the nursing care of patients.

63. FOOD ECONOMICS. *3 credits.*

For student nurses. The relative, the nutritional, and material values of foods as used in the family dietaries and in planning and preparing meals. Two hours lecture, two hours laboratory. Fee, \$4.

71. HISTORY OF NURSING. *3 credits.*

Open to graduate nurses or seniors in the five-year program. A study of the development of nursing from the pre-Christian period to the present time; its relation to religion, science, and social institutions; the influence of leaders and origin of organizations.

100. NURSING TRENDS. *3 credits.*

A survey of nursing trends with emphasis on current developments and problems in the various fields of nursing, and attention to developments in other fields affecting nursing.

101. TEACHING THE NURSING ARTS. *3 credits.*

A study of the principles and methods of teaching the nursing arts in classroom and wards. Analysis of nursing procedures and opportunity for students to demonstrate the teaching of a procedure before the group and benefit by their criticism; opportunity to observe and participate in classroom and ward teaching in the local hospitals.

105. PRINCIPLES AND METHODS OF TEACHING NURSING. *3 credits.*

Open to graduate nurses or seniors in the five-year program. A study of the principles of learning and teaching and methods of teaching, through which the student may understand and apply these to instruction in the nursing field. Will include discussion of classroom and clinical instruction and the preparation of a plan for teaching an area of nursing according to major interest of the student.

106. WARD MANAGEMENT AND TEACHING. 3 credits.

Open to graduate nurses or seniors in the five-year program. An introductory course planned to guide thinking and preparation basic to the organization and management of a hospital division as a head nurse. Principles of administration, supervision and teaching will be explored, discussed and developed as they relate to nursing service and the guidance of all workers in the division as well as interdepartmental relations.

112. PUBLIC HEALTH NURSING. 3 credits.

Open to graduate nurses or seniors in the five-year program. The function and scope of public health services. Responsibilities, duties and techniques involved in public health nursing.

113. PUBLIC HEALTH NURSING PRACTICE. 6 credits.

Open to graduate nurses or seniors in the five-year program. Supervised visitation of homes in connection with the service rendered by the Visiting Nurse Service—the practice of public health nursing under supervision.

PHYSICAL EDUCATION

*Professor Sefton, Associate Professors Smith, Lamkin, Cochrane;
Assistant Professors Beichly, Houghton, Maluke and Scott;
Mr. Evans, Mr. Muir, Miss Sullivan*

GENERAL COLLEGE***15-16. HYGIENE, MENTAL AND PHYSICAL. For description see page 46.**

One lecture, one discussion period a week.

3-4. PHYSICAL EDUCATION. 1 credit each semester.

Required course in physical education activity planned for freshman year.

Men

- I. Tumbling, apparatus and stunts (each semester).
- II. Minor sports, soccer, volleyball, basketball.
- III. Calisthenics (each semester).
- IV. Athletics—football, basketball, track (varsity squad), freshman football, wrestling, and boxing.
- V. Swimming—beginning. Fee, \$2.50.
- VI. Swimming—intermediate. Fee, \$2.50.
- VII. Swimming—advanced. Fee, \$2.50.
- VIII. Leisure time sports.

Tests will be given in physical efficiency, knowledge of games and technique of skills.

Women

- I. Folk and Square Dancing (each semester) 1 credit.
- II. Team Sports (Field Hockey-Basketball) (first semester) 1 credit.
- III. Team Sports (Basketball-Softball) (second semester) 1 credit.
- IV. Individual Sports (Archery-Badminton) (each semester) 1 credit.
- V. Beginning Swimming (each semester) 1 credit. Fee, \$6.
- VI. Intermediate Swimming (each semester) 1 credit, Fee, \$6.
- VII. Advanced Swimming and Diving (each semester) 1 credit. Fee, \$6.
- VIII. Advanced Swimming and Life Saving (second semester) 1 credit. Fee, \$6.
- IX. Modern Dance (each semester) 1 credit.

45-46. BASIC COURSE IN PHYSICAL EDUCATION PRACTICE. Each semester. 2 credits.

Men students majoring in Physical Education are required to take all laboratory sections provided for Physical Education 3-4. Women majors are required to take sections I-IX given above.

69. ORGANIZATION AND ADMINISTRATION OF INDUSTRIAL RECREATION.*2 credits.*

There is a lecture and discussion course of the following material: Health Education, Athletic Equipment, Noon-Hour Recreational Physical Activities, Programs of Activities, Programs of Games, Organization and Administration of Athletic Meets, and Industrial Athletic Organization.

70. ORGANIZATION AND ADMINISTRATION OF MUNICIPAL RECREATION.*2 credits.*

This course will deal with subjects of Administration, Budgets, Management of Individual Playgrounds, the Neighborhood Recreation Center and Community Activities.

UPPER COLLEGE

103. THEORY AND PRACTICE OF PHYSICAL EDUCATION (for women).*Second semester. 2 credits.*

Historical development, methods and practice in the teaching of apparatus, gymnastics, stunts and tumbling (first nine weeks). Tests and measurements in physical education (second nine weeks).

103-104. THEORY AND PRACTICE OF PHYSICAL EDUCATION (for men).*Each semester. 2 credits.*

The purpose of this course is to develop personal technique and skill in presenting calisthenics, marching, gymnastic activities, and officiating in sports; history; general lesson plans suitable for elementary and secondary school programs.

105.-106. THEORY AND PRACTICE OF ATHLETICS. 2 credits for men and 2 credits for women each semester.

Interpretation of rules, techniques and practice in officiating in team and individual sports.

108. THEORY AND PRACTICE OF DANCING. Second semester. 2 credits.

History, theory and philosophy of dance as a creative art experience. Practice in rhythmical analysis and composition.

111. RED CROSS FIRST AID. 1 credit.

This is the standard American Red Cross course which gives instruction and practice in the immediate and temporary care of injuries and sudden illness.

112. ATHLETIC INJURIES AND MASSAGE (men) Second semester. 1 credit.

Theory and practice in the scientific manipulation of the muscles as related to therapeutic exercise.

114. THEORY AND PRACTICE OF SWIMMING. Second semester. 2 credits.

Analysis of strokes and dives; methods and practice in the teaching of swimming. Fee (men), \$2.50; (women), \$6.00.

115. NORMAL DIAGNOSIS AND INDIVIDUAL CORRECTIVE GYMNASTICS AND CORRECTIVE EXERCISE. 2 credits.

A study of current theories and practices relating to the needs of physically handicapped children; particular emphasis is given to underlying philosophy, purpose, and administration.

118. SCHOOL HEALTH PROBLEMS. 3 credits.

This subject emphasizes work units of Health Teaching based upon structural and functional facts as a basis for developing good health habits. A precise knowledge of the WHY in healthful living. There is strong emphasis upon visual aid units and planned field trips.

121-122. ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION.*2 credits each semester.*

A comprehensive study of the various aspects of the organization and administration of physical education programs.

123. ORGANIZATION AND ADMINISTRATION OF HEALTH EDUCATION. 2 credits.

Deals with the organization of Health Education, with special reference to national, state, and local control. Considers staff, program, budget, health and safety, facilities and other phases of administration.

127. APPLIED ANATOMY. 3 credits.

This is a study of the structure of the architecture of the human body, specializing on the origin, insertion, action, innervation and blood supply of the important muscles of the body in relation to physical education and health.

128. APPLIED PHYSIOLOGY. 3 credits.

The purpose of this course is to study the general laws of life and the functional activity of tissues, organs and systems, learning what they can do and how they work in everyday life.

131. HYGIENE AND HEALTH ACTIVITIES FOR ELEMENTARY GRADES. 2 credits.

A survey of the hygiene and health factors which influence child development physically, mentally, and socially; methods and materials in teaching hygiene and health at the various age-levels.

132. GAMES FOR ELEMENTARY GRADES. 1 credit.

Practical analysis of games and rhythms for the elementary school child in relation to child development at the various age-levels.

133. METHODS AND MATERIALS IN TEACHING HEALTH EDUCATION. 3 credits.

The course will include a study of current materials for the elementary and secondary school grades, the integration and correlation of Health Education in the education of school children, and a survey of community, state and federal agencies concerned with the health of school age children.

134. GAMES AND RHYTHMS FOR ELEMENTARY GRADES. 2 credits.

Two lectures and two laboratory periods each week. The lectures concern theories of play, child development and the supervision responsibilities with classroom teachers in the program of physical education. The laboratories give an opportunity for analysis of games and rhythms for the first six grades with emphasis on materials and methods for the various age groups. For Majors in Physical Education.

PSYCHOLOGY

Professor Twining, Associate Professor Witzeman, Assistant Professors Alven, Henderson; Mrs. Clayton, Mr. Grotz, Mr. Hartz, Mr. Thompson

GENERAL COLLEGE

21. ELEMENTARY PSYCHOLOGY.

An introduction to the field of psychology with emphasis on the basic facts and principles found in the behavior of the typical human adult. This course is open only to people in the Pre-Clinical Nursing Program for whom it is a substitute for Psychology 41.

41. GENERAL PSYCHOLOGY. 3 credits.

A study of the basic facts and principles involved in normal human behavior. Lectures, demonstrations, and discussions.

43. APPLIED PSYCHOLOGY. 3 credits.

Prerequisite 41. Introductory survey of techniques used and results obtained by applied psychologists in their analyses of business, education, clinical problems, home, industry, law, and criminology, medicine, personnel relationships, social change, and vocation. Lectures, reports, and discussions.

45. INTRODUCTION TO EXPERIMENTAL PSYCHOLOGY. 2 credits.

(Required of majors) Prerequisite, 41. This is an introduction to laboratory procedures and quantitative methods in psychology. It involves lecture demonstrations, reference reading, and direct experience in doing experiments, including the quantitative treatment of the data obtained. One lecture and two one-hour laboratory periods a week.

52. EDUCATIONAL PSYCHOLOGY. 3 credits.

Prerequisite 41. Designed to prepare the prospective teacher or supervisor to guide the all-around development of his students more efficiently. Concepts of growth, learning, adjustment, and individual differences are stressed. Observations of different classroom situations are included.

62. HUMAN RELATIONS IN BUSINESS AND INDUSTRY. 3 credits.

Prerequisite 41. Principles and techniques for improving labor management relationships; psychological factors in supervision which affect results in training, adjustment, and morale; psychological factors in marketing, advertising, and selling which have effects upon producers, distributors and consumers.

Only two of the three courses numbered 43, 52, and 62 may be presented for credit.

UPPER COLLEGE

107. PSYCHOLOGY OF CHILDHOOD AND ADOLESCENCE. 3 credits.

Prerequisite 41. A developmental study of the individual from birth through the adolescent period; emphasis on needs and problems of typical children and adolescents; preparation of case histories of individual children or adolescents.

108. PSYCHOLOGY OF EXCEPTIONAL CHILDREN AND ADOLESCENTS. 3 credits.

Prerequisite, 107. A study of atypical or exceptional conditions in the psychological development of children and adolescents; emphasis on diagnostic and treatment procedures in the clinical approach to helping these individuals in their adjustment.

110. EXPERIMENTAL PSYCHOLOGY. 3 credits.

Prerequisite 45. A study of the scientific methods and tools of modern experimental psychology; group and individual laboratory experiments in such topics as sensory processes, attention and perception, and learning; some attention to field studies in the measurement of public opinion. One lecture and two 2-hour laboratory periods a week. Fee, \$2.

115. SOCIAL PSYCHOLOGY. 3 credits.

Prerequisite 41. A study of the psychological responses of the individual in relation to the group situations and the social influences of modern life.

206. NORMAL AND ABNORMAL PERSONALITY. 3 credits.

Prerequisite, two courses in psychology. Basic principles regarding the nature, development and organization of normal personality; a study of the range of adjustment mechanisms including the normal, the minor maladjustment area, the psychoneuroses, and the extreme psychoses. Lectures, recitations and visits to mental hospitals when possible.

207. PSYCHOLOGICAL TESTING IN PERSONNEL. 3 credits.

Prerequisite, 6 hours of psychology. A survey of psychological tests and their common uses in business, industry, government and education; some attention to theoretical bases of test construction; practice in administering and interpreting general ability, special aptitude, vocational interest and personality tests. Two lectures and two 1-hour laboratory periods a week. Fee, \$2.00.

208. PRINCIPLES AND TECHNIQUES IN PERSONNEL COUNSELING. 2 credits.

Prerequisite 207 or adult engaged in counseling. Instruction and practice in interviewing; survey of occupations and use of Dictionary of Occupational Titles; special problems of counselors in industrial, commercial and school situations. One lecture and two 1-hour laboratory periods per week. Fee, \$2.

211. PSYCHOLOGICAL FACTORS IN MARITAL AND HOME ADJUSTMENT. 2 credits.

Prerequisite, a senior or adult with at least one course in psychology. A study of the psychology of sex adjustments in adolescence, adulthood, and marriage; attention to a psychological evolution of the factors which are important to successful marriage and parenthood. Lectures, readings, and discussions.

214. PHYSIOLOGICAL AND COMPARATIVE PSYCHOLOGY. 3 credits.

Prerequisite, 9 credits in psychology. A comparative study of animal and human behavior by means of a critical survey of laboratory experiments. There is considerable emphasis on the physiological factors underlying such areas of response as sensation, emotion, and adaptive learning.

‡216. SEMINAR AND RESEARCH PROBLEM. 2 credits.

Prerequisite, senior major or graduate. Reports by students on reading research and experimental research; individual experimental problem done by some students; reviews and critical discussion of current literature in the psychology journals.

GRADUATE COURSES

207, 208, 213, 214, and 216 are recommended for graduate students. They will be required to do additional work to that required for undergraduates. The prerequisite for graduate psychology courses is graduate standing with some background in psychology or seniors with 15 credit hours of psychology who may be admitted to courses at the 300 level.

301. ADVANCED GENERAL PSYCHOLOGY. 2 credits.

Prerequisite, 9 credits in psychology. A critical survey of major findings in the study of the normal human adult. Emphasis is on physiological background and contemporary experimental results. Lectures, readings, and reports.

302. ADVANCED SOCIAL PSYCHOLOGY. 2 credits.

Concepts and techniques involved in analyzing the behavior of individuals in such social phenomena as folkways, institutions, attitudes, propaganda, leadership, public opinion, and social morality.

***303. ADVANCED EDUCATIONAL PSYCHOLOGY. 2 credits.**

An analysis of development of skills and knowledge; interests and ideals; problem solving and creative activity; social growth and character formation. Designed for teacher or supervisor.

306. INDIVIDUAL PSYCHOLOGICAL TESTING. 3 credits.

Prerequisite, Psychology 207 and Permission of Instructor. Offered only to outstanding students who are interested in becoming Clinical Psychologists or School Psychologists. There is instruction and intensive practice in the administration and interpretation of the Stanford-Binet and Wechsler-Bellvue Tests with some attention to several other individual tests.

308. ADVANCED CHILD AND ADOLESCENT PSYCHOLOGY. 2 credits.

Analysis and evaluation of methods and conclusions of current major researches in child and adolescent development.

*Required graduate courses.
‡Required for senior majors.

310. PSYCHOTHERAPY FOR PROFESSIONAL WORKERS. 2 credits.

A consideration of basic principles and techniques of psycho-therapeutic counseling. The major emphasis is placed on the client-centered approach and on psycho-analytic therapy as represented by the neo-Freudians. This course presupposes an understanding of the dynamics of adjustment as presented in psychology 206.

312. CLINICAL STUDY OF EXCEPTIONAL INDIVIDUALS. 2 credits.

Prerequisite, 15 hours of psychology or permission. This is a functional study of diagnostic and treatment problems in the clinical approach to helping typical individuals in their adjustment. Such areas as educational, social, and vocational adjustment are considered. Previous courses in psychology 206, 207, and 310 recommended.

***317. HISTORY AND SYSTEMS OF PSYCHOLOGY. 2 credits.**

A critical survey of the evolution of methods and concepts of psychology and of contemporary points of view.

402. PSYCHOLOGY RESEARCH PROBLEM. 2-4 credits.

This is the reading and experimental research course which fills the problem or thesis requirement for the Master's degree.

SPEECH

Associate Professor Sandefur

76. FUNDAMENTALS OF SPEECH. Either semester. 3 credits.

A course designed especially for majors in the College of Education. Effective speaking for the classroom teacher with emphasis upon organization, delivery, voice, and articulation.

*Required graduate course.

GRADUATE STUDY

In certain colleges and departments opportunity is offered properly qualified persons to study for the master's degree. In some of the departments graduate courses given in connection with the work in Adult Education have been arranged on a rotating plan to enable candidates to meet the requirements for a major or a minor.

Courses for graduate credit may be taken in the following departments:

English	Biology
Commerce	Chemistry
Economics	Mathematics
History	Physics
Political Science	Education
Sociology	Psychology

It is planned that each of these departments will offer sufficient courses to enable students to complete a major or minor for a master's degree. Graduate courses are offered in rotation over a period of three to five years.

For details as to the actual courses offered, refer to the various colleges and departments.

Graduate work is characterized by quality as well as quantity. The degree is granted on the basis of high level of attainment in a certain field rather than for the collection of a specified number of credit hours.

Attainment is to be judged by (1) the thoroughness of the candidate's acquaintance with his field, (2) his knowledge of the methodology of his field, and (3) his initiative and independence.

The applicant for admission to graduate study must satisfy the Admissions Committee that all required secondary school and college credits have been secured and that the candidate has received a bachelor's degree from a college of recognized standing. A transcript must be sent to the Registrar by the institution from which the applicant obtained his bachelor's degree. The Committee on Graduate Study reserves the right to require any applicant for graduate work to prove that he has a satisfactory background for such work by taking and passing such examination or examinations as the Committee may prescribe.

Total credit of 26 to 30 semester hours, including a thesis, is required of all candidates; 20 to 24 semester hours of this work must be done at the University of Akron. If both major and minor are laboratory

sciences, the total credit required is 26 hours; if either major or minor is a laboratory science, the total credit required is 28; if neither major nor minor is a laboratory science, the requirement is 30 hours. The writing of a thesis is a requirement for the degree. Four hours of credit may be granted for the thesis. No work done more than five years previous to the date of granting the degree will be accepted in fulfilling the semester hour requirement. Six hours of graduate work may be done at another college subsequent to matriculation at the University of Akron. Graduate work done elsewhere previous to matriculation at the University of Akron will not be accepted.

No graduate credit will be granted for courses numbered under 200. Courses numbered 200-299 are primarily of senior (undergraduate) rank, and graduate credit may be established for these courses only when a greater amount and a higher quality of work is done than is required of the undergraduate students. Courses numbered 300-399 are primarily graduate courses to which a very few undergraduates who have shown unusual ability may be admitted. Courses numbered 400-499 are graduate courses for which the prerequisite is a bachelor's degree.

No grade below B in the 200 series courses will be allowed for graduate credit. In the 300 and 400 series courses, no grade below B will be allowed for more than six credits which may be of C quality.

Choice of the major and the minor must have the approval of the Committee on Graduate Study. The minor may be elected in a college or division or department other than that in which the major is taken.

The thesis must have the approval of each member of the Thesis Committee. The thesis topic must be selected by November 1 of the academic year in which the student expects to graduate. Two copies of the thesis must be presented to the Dean of the College one month before the Commencement at which the candidate receives his degree; both copies shall be placed in the library.

Not later than one semester previous to the period at which the work for the degree will presumably be finished, the student must file with the Registrar a notice of intention to apply for the degree.

The thesis and all requirements for the master's degree must be completed within one year after the major or minor examination has been passed.

The following fees must be paid at the time application for the degree is filed:

Master's degree	\$10
Thesis fee	\$10
Binding fee, approximately, a volume	\$ 2

Each candidate must pass final written and oral examinations covering the major and minor fields.

THE DIVISION OF ADULT EDUCATIONLESLIE P. HARDY, M.S.Ed., *Director*ERNEST A. TABLER, M.A., *Assistant Director***THE EVENING SESSION****ADMISSION REQUIREMENTS**

Students are admitted to the University of Akron on the basis of graduation from an accredited secondary school or equivalent preparation. However, admission to specific curricula is restricted according to standards set by the University.

Applicants for admission will present themselves for certain guidance tests necessary for placement in a suitable educational program. The only students who are exempt from this particular requirement are those over twenty-one years of age, who are not working for credit toward a degree.

PLACEMENT

Applicants are scheduled for college work in accordance with the evidences of preparation. These evidences are (1) quality of work done in the secondary school, (2) standing in guidance tests given by the University, (3) other qualities of the applicant which play a part in indicating ability to do the work in the course desired.

TRANSFER AND RE-ENTERING STUDENTS

Students transferring from other colleges to the University of Akron or re-entering after an absence of one or more semesters, will report to the Registrar's office, Room 26 Buchtel Hall, for a statement of admission.

ADULT STUDENTS

Applicants over twenty-one years of age may be permitted to enroll for not over seven credit hours in any one semester in evening classes and may be permitted to take up to a total of fourteen credits. Such students will be designated as Adult Students. If adult students desire to take any additional work for credit, they must qualify for regular student status by meeting entrance requirements to the satisfaction of the Committee on Admissions. *The initiative for change of status rests with the adult student.*

Adult students not previously registered at the University will secure a statement of admission from the Registrar at the time of registration.

SPECIAL STUDENTS

Special students are applicants who do not meet the requirements for admission, but may, by special act of the Committee on Admissions, be permitted to take a limited amount of work for which they are qualified by experience. Special students will not receive credit and will be designated as auditors. It is understood that they will not displace any regular students.

AUDITORS

Auditors are students who are required to do all the work prescribed for students enrolled for credit except the taking of credit examinations. The fee is the same as for regular credit enrolment. Designation as an auditor must be made at the time of registration.

ACADEMIC CREDIT

The unit of credit is the semester hour which requires class meetings totaling 15 clock hours or more for lecture-discussion types of classes with additional time for laboratory classes.

For graduation from the University, the student must present 128 semester hours with a quality point ratio of 2 for all work carried. No student is eligible for a degree unless he has the same ratio of quality points in his major subject as is required for graduation. Students taking the Engineering course of study are required to present 155 semester hours. Candidates for a degree are required to file an application with the Registrar by March 1 of the year in which they expect to graduate.

CONSULTATION

The director of Adult Education and staff maintain office hours to consult with students concerning the selection of courses, and other academic problems. Student programs should be carefully planned with the aid of the Office of Adult Education. It is also advisable that persons in the Upper Colleges should confer as frequently as is possible with their advisers in the field of concentration. It is wise to obtain this advice previous to the registration period, although members of the faculty will be present on registration days to confer with those who come to register.

LOAD

For those holding full-time positions 6 credit hours of work in any semester are regarded as the maximum load that should be attempted. There is no fixed rule that the student cannot carry more, but experience and records show that over 6 hours is a burden to the student working full time.

ATTENDANCE

Students are expected to be present at all meetings of classes for which they are registered. Upon request the instructor may permit a student to make up work missed through unavoidable absence. When a student has been absent from class twice as many hours as the subject offers credit in each semester, he may be dropped from the class upon recommendation of his instructor. Recommendation of the instructor and approval of the Director are necessary for reinstatement.

WITHDRAWALS

A student desiring to withdraw from the University is required to fill out a withdrawal form in the Evening College Office. Otherwise "F" grades may be received in work discontinued without official withdrawals.

The University reserves the right to cancel courses in which the registration is insufficient to warrant their continuance, in which case the fees are refunded. It is usually possible for the student to transfer to some other course.

GRADING SYSTEM

Information concerning the grading system will be found in the General Regulations section of this catalog.

STUDENT ACTIVITIES

The Student Council of the Evening Session is organized through the election of class representatives who, in turn, select the Student Senate composed of eight members.

Alpha Sigma Lambda, a national honorary scholastic evening fraternity, installed Gamma chapter at the University of Akron on May 28, 1947. Qualifications for membership are based on 3.25 scholarship record and good moral character.

Gamma Beta, evening local sorority, was organized in 1935 by a group of Evening College women with the purpose of having organized action to promote friendship, extra-curricular work and effort in the Evening College.

Gamma Chapter of Chi Sigma Nu was organized by sixteen Evening College men and received its charter from the national organization on June 11, 1932. The purpose of the organization is to further interest in the Evening College and help enlarge social contacts usually associated with university life.

The Evening Theatre, which is open to all students of the Evening Session interested in dramatics, presents one or more major productions each year, and also numerous one-act plays.

The A E Honorary Fraternity is made up of those students who have met the requirements for an A E Key, which is awarded on the basis of activities and scholarship in the Evening Session.

SUMMER SESSION

The thirtieth annual Summer Session has been planned on an eight-week term for the College of Liberal Arts and the College of Engineering, and on a six-week term for the College of Education. This plan of organization for the summer of 1951 permits flexibility in meeting the needs of:

(1) Students wishing to accelerate their educational programs. (8 weeks).

(2) Teachers, transfer students and others wishing to complete only one or two subjects in a shorter term. (6 weeks).

All departments of the University are offering subjects of instruction on the undergraduate level. A number of the departments have scheduled classes in the Evening College. For graduate students there are a number of courses in Education, Psychology and Sociology. High School graduates who wish to begin their college work immediately after graduation, and the regular students who wish to complete their undergraduate work in less than four years will find a liberal selection of offerings.

The College of Education has anticipated the special needs of teachers who wish to secure emergency certificates, to renew certificates, or to complete work toward a degree.

To meet the educational needs of the discharged veteran the summer curriculum has been planned to give these men and women courses which will help them expedite their educational program.

Each student will find the faculty and administrative officers helpful in selecting a program of studies that will make this Summer Session a valuable, pleasant and invigorating educational experience.

The eight-week term begins Monday, June 18, and closes Friday, August 10. The six-week term begins June 18 and closes Friday, July 27.

ADMISSION REQUIREMENTS

Students are admitted to the University of Akron on the basis of graduation from an accredited secondary school or equivalent preparation. However, admission to specific curricula is restricted according to standards set by the University.

Applicants for admission will present themselves for certain guidance tests necessary for placement in a suitable educational program. The only students who are exempt from this particular requirement are those over twenty-one years of age, who are not working for credit toward a degree.

PLACEMENT

Applicants are scheduled for college work in accordance with the evidences of preparation. These evidences are (1) quality of work done in the secondary school, (2) standing in guidance tests given by the University, (3) other qualities of the applicant which play a part in indicating the ability to do the work in the course desired.

Students from other colleges should present a statement of good standing from the registrar of the institution last attended.

EVENING CLASSES

A program of classes is scheduled for those who work during the day. This program also permits the student working morning hours or late night hours to plan a schedule from the day and evening classes.

ADULT STUDENTS

Applicants over 21 years of age may be permitted to enroll for not over seven credit hours in any one semester in evening classes and may be permitted to take up to a total of fourteen credits. Such students will be designated Adult Students. If Adult Students wish to take any additional work for credit, they must qualify for regular student status by meeting entrance requirements to the satisfaction of the Committee on Admissions. *The initiative for change of status rests with the Adult Student.*

REGISTRATION

Final registration for the 1951 Summer Session will be held in Buchtel Hall, Friday and Saturday, June 15 and 16 until noon. Any person registering after June 16 will be charged a late registration fee of \$5. Late registrants should report to the office of the Registrar.

All fees, including tuition and laboratory fees, must be paid to the Treasurer of the University as a part of registration. Registration and payment of fees should be made in person on or before June 15 or 16, or by mail before these dates.

FEES

All fees are payable at the Treasurer's office before the student enters classes.

Consult the fee section for information concerning charges for work taken in either the six-week term or the eight-week term.

APPOINTMENT BUREAU

The Dean of the College of Education is chairman of the Appointment Bureau for Teachers. Summer Session students may enroll for appointment without extra fee.

STUDENT TEACHING

Student teaching will be done in the Akron and Barberton public schools. All requests for student teaching should be made to the Dean of the College of Education before May 15 with the understanding that those first enrolled will be assigned first. A deposit of \$10 is required with each formal application for student teaching.

CERTIFICATION

Teachers who are planning the completion of courses for state certificates may complete this work in summer sessions at the University of Akron and in addition receive college credit toward a degree. Many subjects taught in the summer session are also credited toward degrees in the other colleges of the University.

Students who expect to complete the requirements for diplomas at the close of the 1951 Summer Session should file application in the Registrar's office the first week of the Summer Session.

HIGH SCHOOL CERTIFICATES

One who has trained in a special field to qualify for the high school four-year provisional certificate must, in addition to the professional courses required for the special certificate, possess the following credits:

Organization and management in the academic field.....	2 semester hours
Special methods in an academic major or minor.....	2 semester hours
Student teaching in the high school academic field.....	2 semester hours

CONVERSION OF A SECONDARY SCHOOL CERTIFICATE TO AN ELEMENTARY SCHOOL CERTIFICATE

The State Department of Education has provided for the issuance of a four-year provisional elementary cadet certificate to be granted to holders of provisional secondary school certificates upon the completion of the following program:

Teaching of Reading 135.....	3 semester hours
Teaching of Arithmetic 136.....	2 semester hours
Teaching of Language Arts 137.....	2 semester hours
Teaching of Social Studies 138.....	2 semester hours
Child and Adolescent Psychology 107.....	3 semester hours
Student Teaching 124.....	3 semester hours
Elementary Education 151.....	3 semester hours
Total	18 semester hours

GRADUATE STUDY

The Summer Session program offers opportunity for study on the graduate level. Students interested in graduate courses for advanced study should confer with the instructors in their specialized fields and with the Dean of their College if they wish to be candidates for the Master's degree.

SCHEDULE

The summer schedule of classes for 1951 is published separately. It will be available for distribution in April and copies may be obtained on request.

The offerings are in all departments of the University. Early registration and payment of fees is advised in order to lessen the pressure and crowding on the final registration days.

COMMUNITY COOPERATION

The University of Akron, as a municipal university, aims to bring all of its departments into close touch with the activities of the city of Akron.

The following covers the work of the several colleges and divisions.

THE COLLEGE OF ENGINEERING

Under the cooperative plan, upper college students in the College of Engineering are employed in local industries during scheduled work periods. This system provides valuable sub-professional experience for students and allows industry to develop a selective training program for future technical personnel requirements.

The faculty of the College of Engineering are available as consultants on special problems involving research, design or testing whenever such services are not competitive with other established professional services in the community.

THE COLLEGE OF EDUCATION

In addition to the preparation of teachers for the Akron Public School system and other school systems of the state, the College of Education aims to increase the opportunities for the continued education of teachers already in service. Late afternoon, evening, and Saturday courses are offered. Students are required to do student teaching for one semester before graduation. This is made possible through the cooperation of the Board of Education. Members of the faculty consult with teachers and school administrators about their educational problems.

In May 1945 operation of a program began in cooperation with the United States Veterans Administration. Under this plan the University does the testing of those veterans who apply for vocational advisement under Public Laws 16 and 346. The Veterans Administration uses the test results for vocational counseling and placement.

Although a clinic has not been formally organized in the fields of education and psychology, a wide and varied service is rendered to individuals and institutions, including welfare organizations and the public schools. This service includes not only testing of intelligence but measuring aptitudes and vocational interests, and diagnosing educational and personality difficulties. The establishment of this program has enabled us to enlarge our services in this area to the students and the public.

Members of the faculty of the College of Education are glad to present talks to Parent Teacher association groups, teachers associations, school administration groups and others who are interested in the problems of the school. Services are rendered from time to time to the administration of school boards for survey of educational facilities. The resources of the University are available for the improvement of the schools in this area.

The Graduate Record Office, an agency for the consideration and administration of tests for students who wish to enter engineering colleges, medical schools or other graduate institutions, has designated the University of Akron to conduct the testing programs for this area at appointed times during the year.

THE LIBRARY

The resources of the library are open to citizens of Akron for reference during the regular library hours, and for circulation in so far as the demands of classwork upon the collection will permit.

COOPERATION WITH THE LOCAL HOSPITALS

By special arrangement with the local hospitals courses are offered to nurses in training who are graduates of accredited high schools. This work carries regular college credit and is acceptable toward a degree. The following courses are given: Anatomy and Physiology, Chemistry, Microbiology, Nutrition and Foods, Psychology, and Sociology.

THE TESTING LABORATORY OF THE CITY OF AKRON

In accordance with the proposal made by the Directors of the University and accepted by the Akron City Council, the Testing Laboratory does much of the chemical and physical testing work of the city. It serves especially the Board of Education, the Police Department, the Service Department, and the Coroner's Office. It answers many calls requesting chemical or other technical information. In addition it serves as a commercial laboratory for those concerns which do not have testing equipment or personnel of their own and in cases in which this service does not duplicate facilities already existing.

DEPARTMENT OF BIOLOGY

Affiliation is maintained with the City Health Department. Bacteriological testing and investigations are carried on in connection with the various clinics and hospitals. Lectures and informal talks have been given to organizations in Akron. Identification of zoological and botanical specimens is made from time to time by various members of the department.

DEPARTMENT OF CHEMISTRY

Two fellowships in the chemistry of rubber technology, open to graduates of standard American colleges, have been established at the University of Akron by the Goodyear Tire & Rubber Company and the Firestone Tire and Rubber Company, for the purpose of training men for service in their laboratories.

The University has entered into a contract with the Rubber Reserve Company for conducting a research problem in synthetic rubber under the direction of the office of the Rubber Director.

COMMERCE DEPARTMENT

The Commerce Department attempts to tie in closely with the business and economic life of Akron. The Department, through the Bureau of Business Research, analyzes Akron business trends, makes traffic and occupational surveys as well as consumer and trade studies. Through the

new Sales and Merchandising Laboratory, the Department closely identifies itself with the problems, new developments, and training programs of the fields of distribution, retailing, and advertising. Finally, in the field of automotive tire distribution and market statistics the Department has become nationally known and accepted.

DEPARTMENT OF HOME ECONOMICS

Laboratory work is carried on in various nursery schools in the city and in the East Akron Community House. Dietetics majors carry on field work in local schools and hospitals. The department has cooperated this year in the five-week workshop of the public school teachers in Household Arts. The faculty are active members of the Akron Dietetics Association and assist in its program. An information bureau on all phases of home economics is provided for the public.

DEPARTMENT OF SOCIOLOGY

The Department of Sociology has active affiliations with the Akron Community Service Center, Boy Scouts, Catholic Service League, City Hospital, Community Chest, Department of Public Charities, Family Service Society, Girl Scouts, Jewish Center, Jewish Social Service Federation, Juvenile Court, Metropolitan Housing Authority, Summit County Children's Home, Y. M. C. A., Y. W. C. A., Detention Home, Council of Social Agencies, East Akron Community House, and the Summit County Home. These institutions and agencies provide the supervised training for the students who are actively interested in entering the profession of social welfare work or in character building and Community Chest Agencies.

The census tract maps for the City of Akron are under the direct supervision of the department of sociology. Surveys and specially supervised studies are conducted by the department. Students are also trained in statistical research.

THE DIVISION OF ADULT EDUCATION

The Division of Adult Education offers credit and non-credit courses.

The evening credit classes are planned to give employed as well as full-time students opportunity to work for a degree, to receive help with their everyday work, or to expand their knowledge in a special field of interest. A comprehensive program in all three of the colleges offers credit fully recognized toward the various degrees and certificates which are conferred by the University.

In the Community College and other special programs, non-credit classes are arranged to provide area education in the following fields: Business, cultural, domestic, industrial, recreational and refresher. These courses are planned to meet the specific needs of persons who want practical training for a particular vocation or avocation, for those who are not particularly concerned with obtaining college credit and who prefer shorter courses, for those who need further preparation before beginning credit work, and for many others who have completed their formal education but who believe that adult education can be a life long adventure to obtain new ideas and insights to guide actions.

The Community College classes are conducted each semester with most classes meeting for a twelve-week period with a fee of \$7. Additional courses will be arranged at any time for fifteen or more persons interested in a subject not offered in the published program.

Community College classes offered during the year of 1950-51 were: Artistic Flower Arrangement, General Insurance, Practical Labor Law as Applicable in Akron, Reading and Understanding Italian, Slide Rule Calculation, Steam Plant Operation I and II, Chemistry in Everyday Life, English for Improvement of Speech and Writing, Interior Decoration, Municipal and Industrial Fire Protection, Life Insurance Fundamentals C.L.U. Parts A & B, Basic Television, Ceramic Arts I & II, Clothing and Grooming Clinic, Electrical Machinery Operation and Maintenance, House Construction, Idea Arrangement, An Invitation to Chess, Modern Methods of Food Preparation, Parliamentary Law Drill, Photography for Beginners, Advanced Photography, Pictorial Photography, Jewelry and Metalcraft as a Hobby, Conversational Hebrew, Everyday Laws and Interesting Court Cases, Operating Programs in Industry, Party Planning, Red Cross Standard First Aid, Red Cross Beginners Swimming Class, Home Care of the Sick, Mother and Baby Care, Remedial Mathematics, Jet Propulsion, and Radio Servicing.

The Akron Building Code I & II, Conversational Spanish I, Fundamentals of Motors A.C. and D.C., Lip Reading, Power Plant Auxiliaries, Practical Fundamentals of Electrical Engineering, Record Keeping for Small Businesses, Applied Trigonometry, Boiler Feed-Water Treatment, Informal Talks, Management Essentials for Supervisors, World Civilization, Your Personal Income Taxes, Practical Air Conditioning, Psychology of Personality, Public Opinion and Current Events, Public Relations, Russian I & II, Self-Confidence, Traffic Engineering, Blue Print Reading for the Building Trades, Effective Speech and Practical English, Problems of American Democracy, Refrigeration, Furniture Reclamation and Repair, Masterpieces of American Literature, Leading the Group, Meal Planning and Table Service, Mrs. Fixit's Course, The Road to World Government, Personal Typewriting, Who Runs Our Schools, The United Nations and You, Aids in Spelling, Civilian Defense Lecture Series, Television Production and Techniques, Conference Leadership, New Trends in Quantity Food Administration, Basic English for the Foreign Born, Elements of Transportation, Family Finances, Mathematics for the Tradesman, Marriage and the Family, Millinery, and Camp Counselor Training.

The standard fee for Community College courses is \$7 for a twelve-week course meeting 1½ hours a week. The charge for courses of different length is related to the length of the course. Courses which require individual instruction, expensive equipment, consumable supplies, or other exceptional costs are charged for according to the cost. Actual charges for non-credit courses are published periodically in Community College bulletins.

PRIZES, FELLOWSHIPS, SCHOLARSHIPS,
HONORS, AND SPECIAL FUNDS*

THE ASHTON PRIZES

A fund of \$3000 was established in 1887 by Oliver C. Ashton of Bryan, Ohio, endowing the O. C. Ashton Prizes for excellence in reading and speaking. Three contests during the year are held, an Upper College Contest, a General College Contest, and an Interpretative Reading Contest. The amounts of the prizes awarded at each contest depend upon the income available from the fund.

THE SENIOR ALUMNI PRIZE

A fund has been established by the Alumni Association for the purpose of awarding an annual cash prize of \$50 to that senior student who has completed the regular undergraduate curriculum with the highest average grade for the work taken, having carried an average load of 12 credit hours per semester.

THE DR. E. B. FOLTZ PRE-MEDICAL PRIZE

Under the provisions of the will of the late Dr. E. B. Foltz a fund has been established to provide for a pre-medical prize of \$100. This prize is awarded each year to that member of the graduating class who makes the highest average grade in all work taken in the four-year pre-medical course and who plans to enter medical college the following year. The name of the winner is announced at Commencement, but the actual award is not made until the winner has enrolled in medical college.

FIRESTONE AND GOODYEAR FELLOWSHIPS

Fellowships in the Department of Chemistry are offered by the Firestone Tire and Rubber Company and the Goodyear Tire and Rubber Company for the study of the chemistry and technology of rubber. These fellowships are open to graduates of standard American colleges and universities and are of the value of \$1000 per year, with remission of all University fees.

THE OHIO STATE UNIVERSITY GRADUATE SCHOLARSHIP

In the spring of 1935 a number of graduate scholarships were established by Ohio State University, one to be assigned to each of the Ohio colleges fully accredited by the North Central Association of Colleges and Secondary Schools. The scholarship entitles the student to the exemption of tuition and fees of all kinds except a matriculation fee. Selection is left to the individual colleges.

*See page 184 for 1950 awards.

AKRON COLLEGE CLUB PRIZE

An award of \$100 sponsored by the College Club of Akron, is given annually to a woman selected from the Junior class in the College of Education. It is made on the basis of outstanding scholarship and evidence of campus leadership. It is to be used by the recipient as an aid in financing the expense of her Senior year at the University.

FRANK PIXLEY MEMORIAL FUND

The Frank Pixley Memorial Fund was established in 1931 by the will of Isabel McRoy Pixley, wife of Frank Pixley, class of 1887. The fund amounts to \$50,000, the income from which is used for the establishment of scholarships in speech, music, and literature.

THE PIXLEY SCHOLARSHIPS

In accordance with the terms of the Pixley bequest, awards are made each semester to students of outstanding ability and promise in the fields of literature, music, and speech. To be eligible for one of these awards the student must be enrolled in an upper college or qualified to enter an upper college and must be a major in the department in which the scholarship is awarded, or a divisional major in the humanities division. The awarding of these scholarships is made by a committee of which the Registrar is the chairman. To be eligible for a Pixley Scholarship, a student must have a quality point ratio of at least 2 in all work taken; in the field of the award, the quality of scholarship is expected to be much higher. Applications for scholarships should be addressed to the Registrar.

ROBERT KASSE MEMORIAL SCHOLARSHIP FUND

The Robert Kasse Memorial Scholarship Fund was established in 1945 by his family and friends to perpetuate the memory of Robert Aaron Kasse, who died in the service of his country on December 10th, 1944.

The sum of \$100 is to be awarded annually to that student in the Departments of English, Journalism, Speech, Radio and Dramatics, in Buchtel College of Liberal Arts, who at the completion of his Junior year shows the greatest promise of success based upon academic excellence, character, and leadership.

THE CLARENCE L. HYDE MEMORIAL SCHOLARSHIP

The Clarence L. Hyde Memorial Scholarship was created in 1946 by Mrs. Harriet Williams and Mrs. E. B. Perrin. The scholarship shall be a living memorial to Dr. Hyde and his service to humanity.

The sum of \$100 is to be awarded each year to a senior student residing in Akron, and shall be determined by scholarship and by need on the part of the student. Race, color, creed, or sex shall not be considered by the committee in making the award.

THE RAYMOND B. PEASE AWARD OF THE AKRON MANUSCRIPT CLUB

The Raymond B. Pease award was established in 1946 by the members of the Akron Manuscript Club. The sum of \$25 is to be awarded annually to that Junior at the University of Akron who has been consistently outstanding in the field of creative writing during his three years

at the University. In the selection of the recipient there shall be no consideration of race, sex, nationality, or creed. The recipient shall apply the award toward tuition in his Senior year at the University of Akron.

THE VICTOR I. MONTENYOHL SCHOLARSHIP

The Victor I. Montenyohl Scholarship Fund for advanced study was established in 1946 by Mrs. Elizabeth Montenyohl, his wife, and his son and daughter, Victor and Patricia, in memory of Victor I. Montenyohl, in recognition of Mr. Montenyohl's devotion to the rubber industry, and his belief that the University of Akron offered a unique opportunity for rubber research. It is considered appropriate that the income from this fund be made available whenever possible to a student of demonstrated ability in the field of rubber chemistry.

THE GEORGE E. PRICE, JR. MEMORIAL AWARD

The George E. Price, Jr. Memorial Award was established in 1949 by the Purchasing Agents Association of Akron to serve as a living commemoration of George E. Price, Jr. and his contribution to the field of Industrial Purchasing. Mr. Price was one of the founders of the local Association and a president of the National Association of Purchasing Agents.

The purpose of this award is to promote a greater interest in the field of purchasing among the students in the Commerce Department of the University of Akron. A sum of \$150 will be made available annually to two students majoring in the field of Commerce. One award of \$100 will be made at the end of the junior year with payments made to defray the expenses of the recipient during his senior year, provided the student has had or has registered for the course in Purchasing. A second award of \$50 will be made to another outstanding student upon the occasion of his graduation who has taken the course in Purchasing. The students shall be selected on the basis of academic excellence, character, and leadership.

THE BEATRICE OFFINEER SCHOLARSHIP

The Akron Automobile Dealers Association, The New Car Dealers of Summit County.

A four-year scholarship at the University will be awarded to the winner of a Summit County-wide driving contest which will consist of a written test and a driving test. This scholarship is awarded by the Akron Automobile Dealers Association, The New Car Dealers of Summit County, for the purpose of encouraging skillful, courteous and safe driving among high school students of Summit County. The above Association makes this award in honor of the late Beatrice Offineer, former reporter of the Akron Beacon Journal and a graduate of the University of Akron.

THE JULIUS MUEHLSTEIN AWARD

This award amounts to \$350 a year and is given to help a promising student to continue his education. It is awarded to a student in the field of rubber chemistry on the basis of need and satisfactory work. The committee shall make no discriminations as to race, color, or creed.

THE NATIONAL SECRETARIES ASSOCIATION SCHOLARSHIP

In 1951, Tire Town Chapter of the National Secretaries Association established an annual scholarship of \$175 for an outstanding junior in the Department of Secretarial Science to defray normal collegiate expenses in the senior year. The student is selected by the Department on the basis of criteria mutually acceptable to the Department and to Tire Town Chapter, N. S. A.

THE RUTH DUGAN AERONAUTIC SCHOLARSHIP

One of the accomplishments credited to the Akron Women's Chapter of the National Aeronautic Association is the Ruth Dugan Aeronautic Scholarship. A sum, not to exceed \$100 a year, may be awarded to an undergraduate or graduate student who is a resident of the Akron metropolitan area, upon recommendation of the cooperating committee of the University of Akron and with the approval of the scholarship committee of the Society. The scholarship is to assist a student to pursue the study of aeronautics in an accredited university for a period of one year and, with supplementary recommendation and approval, for an additional period of one year.

UNIVERSITY SCHOLARSHIPS

In January 1951, the Board of Directors of the University voted to establish a maximum of thirteen scholarships per year to be awarded to graduates of Akron High schools in the amount of \$200 per year payable at \$100 per semester. Principals of high schools in Akron may submit names of three candidates for these scholarships for the freshman year. The candidate must be in the upper third of his graduating class and must become a full time student. Scholastic achievement, citizenship promise and leadership are the qualities used as the basis for the award, which is made by a committee of the University.

Applications are made at the office of the High School principal in the last semester of the senior year.

The award for the second semester is contingent upon satisfactory scholarship for the first semester.

BETA SIGMA PHI SCHOLARSHIP

This scholarship was created by the Beta Sigma Phi International Sorority and covers the fees and books for a four year period. The grant is made to a young Akron woman on the basis of her interest and progress in college training, and is for one who otherwise might not be able to attend College.

LOAN FUNDS

The University will assist worthy students to finance their education through its loan funds. Application should be made through the Office of the Treasurer or the Dean of Students well in advance of the beginning of each semester. Loans for emergency purposes will be considered during the academic year.

HARRIET PHILLIPS FUND

The Harriet Phillips Fund was created in 1930 by a bequest of \$18,000. The income from this fund is used for the care and maintenance of gifts of paintings, etchings, and other art treasures, together with an Art Library, which was given by Miss Phillips to the University in memory of her family.

THE KATHERINE CLAYPOLE LOAN FUND

This fund was established by a number of women's organizations of the city and dedicated as a memorial to Mrs. Katherine Claypole, wife of Dr. E. W. Claypole, former Professor of Natural Science of Buchtel College. The principal of the fund is lent to students, "who in mid-semester, as often happens, find themselves without sufficient means to complete the year's work."

THE THOMAS-LITCHFIELD LOAN FUND

This fund was established by two directors of the University, Mr. John W. Thomas and Mr. P. W. Litchfield, in 1932. From it money to pay fees is lent for short periods to upperclassmen who are residents of Akron.

MABEL JANE ROGERS MEMORIAL FUND

The Mabel Jane Rogers Memorial Fund, amounting to \$100, was given by the alumnae of Flora Stone Mather College, Western Reserve University, in memory of Miss Mabel Jane Rogers, who was instructor in Spanish at the University of Akron for eight years. It is used for short emergency loans to women students.

HOMER C. CAMPBELL FUND

A fund established under the will of the late Homer C. Campbell provides for assistance by loan or gift from its income to needy students dependent on their own resources. Preference is given to young men who have been newsboys in Akron.

AKRON HOME AND SCHOOL LEAGUE LOAN FUND

This fund was established in 1925. Loans are made from this fund to Juniors and Seniors of the University to be repaid following graduation. The fund is administered by the League. Applicants are required to have the approval of the University.

THE HARRIET HALE FUND

The money in this fund was given to the University by the trustee of the Harriet Hale estate to be used in the furtherance of education in music. Loans for the payment of fees are made to students specializing in music.

RICHARD J. WITNER LOAN FUND

A fund has been established by the parents and wife of Captain Richard James Witner, who was killed in action in North Africa on March 28, 1943. The principal of this fund is to be used for loans, payable after graduation, to worthy students to finance their education.

EVENING SESSION LOAN FUND

By voluntary contributions each semester since February, 1933, the evening students have accumulated this fund to aid evening session students. Loans are made for short periods to students who have attended this division of the University for at least one year.

THE AKRON COLLEGE CLUB FUND

The Akron College Club maintains a loan fund known as the Elizabeth A. Thompson Scholarship Fund. Loans are made to deserving women students of the University. This fund is administered by a committee of the College Club. Applicants are required to be recommended by the University.

**THE CUYAHOGA PORTAGE CHAPTER
D. A. R. LOAN FUND**

The money in this fund was donated by the Cuyahoga Portage Chapter of the Daughters of the American Revolution for the purpose of aiding deserving men and women students of the University.

**INDIAN TRAIL CHAPTER OF DAUGHTERS OF
THE AMERICAN COLONISTS LOAN FUND**

The money in this fund was donated by the Indian Trail Chapter of Daughters of the American Colonists for the purpose of making loans to students of the University.

HERMINE Z. HANSEN LOAN FUND

A trust fund, established under the will of the late Hermine Z. Hansen, provides for a share of the distribution of its income to be used for the benefit of needy and deserving students while attending the University. At the discretion of the trustees of the fund, money is available through loans to needy students for purposes which will assist in completing their studies. Repayments are returned to the income of the trust fund.

THE HENRY STRONG EDUCATIONAL FOUNDATION

To assist students to complete their education, application may be made for an allotment of funds for a loan through the Henry Strong Educational Foundation. Undergraduate students beyond the Freshman year and graduate students under the age of twenty-five are eligible. Repayment is required over a period of four years after graduation. The fund is administered by the Trustees of the Foundation in Chicago. Full particulars may be obtained at the Office of the Treasurer of the University.

LICHTER FOUNDATION LOAN FUND

The aid rendered by this fund is in the form of loans in such amounts as the loan committee may decide. No interest is required, but the principal is to be repaid at face value. The recipient must be properly recommended and must be qualified as a student in good standing. It may be used for an entering freshman, a transfer, or an advanced student. This fund amounts to \$5000.

THE MAXWELL P. BOGGS MEMORIAL FUND

This fund was established in memory of Maxwell P. Boggs, Treasurer of the University of Akron (1932-1950), to aid faculty members who may need financial assistance in emergency situations. The President of the University administers the fund and receives contributions from those who wish to help in this endeavor.

GRANTS IN AID

In 1945 the Board of Directors of the University established a fund to be designated as a Student Aid Fund, to assist worthy and deserving students of recognized talent and ability to finance their education. The President of the University, and such other members of the faculty and staff as he may designate, are authorized to seek contributions to be received through the office of the Treasurer of the University. Grants are made from this fund upon recommendation of a committee to be appointed by the President.

HONORARY FRATERNITIES

PHI SIGMA ALPHA is an honorary fraternity founded in 1910 to encourage high scholarship among the students of the Liberal Arts College. The requirements are as follows:

1. Only such courses as are taken in the Liberal Arts College or such courses as are regularly accredited in that college may be counted for standing in the fraternity.
2. A minimum of 108 hours for three and one-half years for those completing the regular four-year course, or of 77 hours for two and one-half years for students who have spent one year at another institution are required.
3. All seniors who have maintained an average grade of not less than 90% (a quality point ratio of 3.25) during their three and one-half years are eligible for membership, provided that at least two and one-half years have been taken in Buchtel College of Liberal Arts.
4. Juniors who have completed two and one-half years of work in Buchtel College of Liberal Arts with the average grade not less than 92% (a quality point ratio of 3.5) shall be eligible for membership.
5. Those seniors who may have entered the institution at mid-year as freshmen and who have remained three years in the Liberal Arts College are also eligible, the required number of scholarship hours being 96.
6. Average scholarship is reckoned as a whole, not specialization.

SIGMA TAU is a national honorary engineering fraternity. Phi Chapter was established at the University of Akron in December, 1924, the charter being granted to the local honorary fraternity O.H.M. which was founded in 1919. Sigma Tau elects its men on the basis of scholarship, sociability, and practicality. Any engineering student in the upper college is eligible whose scholastic average for all his previous college work ranks him in the upper third of the combined pre-junior, junior, and senior students.

KAPPA DELTA PI, an Honor Society in Education, has for its purpose the encouragement of professional, intellectual, and personal standards. The Society is an international organization composed of a Laureate Chapter, honorary, and institutional and alumni chapters, active. Alpha Theta Chapter was chartered in 1925. Candidates for membership must be juniors, must have earned six semester hours in professional subjects, or eleven hours if of senior rank, and have a quality point average in all work of 3 when A equals 4.

SIGMA PI EPSILON is an honor fraternity established for the purpose of promoting scholarship, citizenship, and artisanship among the students of the College of Education. Students being graduated with distinction automatically become members of the fraternity.

PHI ETA SIGMA is a national fraternity for freshmen men. Its purpose is to recognize superior scholarship, and to encourage academic achievement. Men are pledged twice each year, in March and in September. To be eligible for pledging, a man must have a quality point ratio of 3.5 or better (half A's, half B's) for his first semester or for his first year.

ALPHA LAMBDA DELTA. Alpha Lambda Delta is a national honorary fraternity for freshman women. Its purpose is to recognize scholastic attainment during the freshman year at college and to encourage academic achievement among freshman women. To be eligible for pledging a woman must make a quality point ratio of 3.5 (half A's, half B's) or better for her first semester or for her first year.

SUMMARY OF STUDENTS IN DAY CLASSES

1950-51

BUCHTEL COLLEGE OF LIBERAL ARTS

	Men	Women	Total	
Graduate Students	45	52	97	
Applied Arts Division				
Commerce	223	3	226	
Secretarial Science	5	19	24	
Others	7	21	28	
Humanities Division	40	19	59	
Natural Science Division	77	11	88	
Social Science Division	94	22	116	
No majors	8	7	15	
Part-time Students	39	15	54	
	538	169	707	707

COLLEGE OF ENGINEERING

Graduate Students	2	—	2	
Full-time Students — Upper College	87	—	87	
Full-time Students — General College	114	1	115	
Part-time Students — Upper College	13	1	14	
Part-time Students — General College	13	—	13	
	229	2	231	231

COLLEGE OF EDUCATION

Graduate Students	69	82	151	
Full-time Students — Upper College	93	218	311	
Full-time Students — General College	2	128	130	
Part-time Students — Upper College	33	176	209	
Part-time Students — General College	—	3	3	
	197	607	804	804

THE GENERAL COLLEGE

New Freshmen				
Full-time Students	368	200	568	
Part-time Students	30	6	36	
Others				
Full-time Students	506	233	739	
Part-time Students	51	34	85	
	955	473	1428	1428
Grand Total	1919	1251	3170	3170
Summer Session (1950) included in above	732	605	1337	

A full-time student is one who is classified for 8 or more credits per semester; a part-time student is classified for less than 8 credits. For the summer session a load of 6 credits was used as the basis for a full-time student.

SUMMARY OF ALL STUDENTS IN THE UNIVERSITY

1950-51

	Men	Women	Total
Graduate Students	116	134	250
Upper College — Full-time	634	320	954
General College — Full-time	990	562	1552
Upper College — Part-time	85	192	277
General College — Part-time	94	43	137
Total Day Session Enrolment	1919	1251	3170
Total Evening Enrolment	1347	675	2022
Total Individuals during the year	3266	1926	5192

ENROLMENT BASED ON STUDENT CREDIT HOURS

	Total Student Credit Hours	*Full-time Student Equivalent
Buchtel College of Liberal Arts	16,713.5	522.2
College of Engineering	5,976.5	186.8
College of Education	14,144.5	442.0
General College	31,986.0	999.6
Evening Session	14,695.0	459.2
	83,515.5	2,609.8

*A full-time student is the equivalent of one student pursuing a normal full-time load (32 hours) during the academic year.

DEGREES CONFERRED JUNE 13, 1950

Graduation with Distinction—Students who have an average grade of 90% (or a quality point ratio of 3.25) or better, for all work taken during the four undergraduate years, shall be graduated with distinction. Students who transfer from another college must maintain a quality point ratio of 3.25 or better at the University of Akron.

BUCHTEL COLLEGE OF LIBERAL ARTS

Bachelor of Arts

Harvey Lee Adams	Richard Parker Jameson	Barbara Anne Rausch
Maseo Albert Adams	Vernon Wesley Jenkins	Nyles Vernon Reinfeld
Joseph Albert	George Kachur, Jr.	<i>With Distinction</i>
Carl Anderson	Joseph Kane	Donald James Rett
Harold Claudene Anderson	George Edward Kaso	Robert Arthur Riggs
Elmer Charles Argyle	Leon Clifton Kelley	Ellen Louise Rohner
Catherine Balaj	John Joseph Kelly, Jr.	Alice Ann Rooney
F. Michael L. Barno	Allan Richard Kershner	Curtis Sanger
John Richard Barrett	Catherine Ruth Kindig	<i>With Distinction</i>
William Archer Baughin	Darwin Maynard Knapp	Frederick Edward Santschi
<i>With Distinction</i>	Mary Lou Knapp	Eleanor Rose Sauer
Leslie Neal Beckwith	Herman William Knoeferl	Antonio J. Scaglione
Joseph Andrew Benko	Robert Fred Koehler	Blin Barton Scatterday
Carl Harry Birklund	Richard Ellis Kouri	Sterling George Sechrist, Jr.
John William Blowers	George Krneta	John Eli Shama
Owen Curtis Bozeman	<i>With Distinction</i>	Manson Glenn Shook
Katherine Ann Breen	Gerald Arthur Kromer	Daniel Dushan Silashki
<i>With Distinction</i>	Katherine Louise Krupp	Mary Lou Slonaker
Albert Richard Brindley, Jr.	Paul Joseph Kunkler	<i>With Distinction</i>
Ruth O. Bryant	Frederick J. Lee	Frank Sterling Smith
Robert Lee Butler	Richard Locke Levering	Josephine Milam Smith
Perry Edward Byrnes	Milton Ernest Litt	Mary Jean Smith
Helen Marie Christensen	Edmund Duane Lutz	Thomas Edwin Smith, Jr.
Barbara Lee Clark	Donald William Mansfield	Charles Clint Spangler
James Walter Clinesfelter	Jane Ellen Masterman	William Morris Spangler
Donald Edwin Cort	<i>With Distinction</i>	James V. Spear
Milton Ordway Cox	Doris J. Mathias	John Alexander Sperry, Jr.
Chester Neil Crabtree	Wade Eugene Maupin	Ernest Stadvec
Ivan Lear Davis	William A. Mavrides	Jerome Herbert Stan
James Alan Davis	Robert Francis McCort	Harry Stein
Lino Della-Bianco	John Frank McMillan	Anne Elizabeth Stiles
Betty Jewel Disque	Inga Lund Merrow	<i>With Distinction</i>
Janice Meredith Dodge	Richard Clime Mewhinney	Henry Ayres Stoner
Walter John Dolan	Andrew Michalares	Donald William Sullivan
Richard Homer Durst	Kenneth Gregory Miller	Thomas Raymond Swanson, Jr.
Ernest Steve Fiatal	Robert Whinna Miller	Peter William Tavolier
David Lowe Forbes, Jr.	James Howard Milne	Samuel Raymond Tillett, Jr.
Joseph William Fox	Alex George Molar	Frank Ely Timberlake
William Frank Fulop	Anna Moskovic	George Robert Treasure
James Herbert Gabbart	Ruth Jane Myers	Fred Trotter
Adam Gadanac, Jr.	John Thomas Nelson	<i>With Distinction</i>
Sidney Malcome Garrett	Ellen A. Niemi	Horace Junior Underwood
Bernice Weese Gibson	Barbara Ann Oberdorfer	David Patrick Vielhaber
Robert Louis Cichenrath	Robert Martin O'Herron	Barbara Ruth Wagner
Robert Baylor Glass	Louis Oralch	William Raymond Welble
Robert Clyde Greenwald	Elizabeth Ostrov	Leah Ann Wels
Stanley Paul Gnstely	Chester Frank Patrick, Jr.	Francis Joseph Werner
Bernard Eugene Hannaman	<i>With Distinction</i>	<i>With Distinction</i>
George Nicholas Hayes	Samuel John Paul	Harry Molton West
David Leon Headley	Geraldine Mock Peckham	Edna May Wetton
Beverly Jayne Henninger	Harvey Merle Petersen	<i>With Distinction</i>
Richard Francis Hentlerly	Theodora Letitia Pitts	Virginia Ann Wilson
Delmore Norman Hershey	William David Ploenes	William Joseph Wilson
Frederick Andrew Hopfinger	Herman Bailey Post	Florence Althea Wilt
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Jeanne Marie Case Huber	John H. Putnam	<i>With Distinction</i>
Paul John Hughes	Anna King Pyle	Frederick Lloyd Wood
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With Distinction
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Jack Loring Cooper
With Distinction
Peter John Cosmoglos
Dorsey Edward Dean
With Distinction
Giacinto DeLapa
Walter Blaine Dial, Jr.
Thomas Aquinas Dunderman
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Joe Thomas Garrett
Peter Joseph Gingo
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Salvatore Milani
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John James Murphy
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Buckley Bruce Porter
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Bachelor of Electrical Engineering

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 Ford Ronald Weyrick
 Charles LeRoy White
 Myrtle S. Woodard
 Edward S. Zapor

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Alice Anne Burton
With Distinction

GRADUATE STUDY

Master of Arts

GRACE IRENE LEMASTER; B.S. in Education, University of Akron, 1934.
STERLING TUCKER; B.A., University of Akron, 1946.

Master of Science

ROBERT RAYMOND BROWN; B.S., University of Akron, 1947.
ALBERT JAMES COSTANZA; B.S., University of Pittsburgh, 1940.
GHANSHYAM GORDHANDAS DALAL; B.S., Benares Hindu University, India,
1946.
PETER THOMAS GRANDE; B.S., University of Akron, 1946.
ROYAL MONROE HOCHNER; Bachelor of Mechanical Engineering, The
College of the City of New York, 1942.
OWEN EDWARD HORNER; B.S., St. Benedict's College, 1934.
KENNETH EUGENE KRESS; Bach. of Chem. Eng., Ohio State University,
1944.
HAROLD LANDFIELD; Bach. of Textile Chem., Lowell Textile Institute,
1941.
SAM BRUCE MOSS; B.S., Western Reserve University, 1948.
RICHARD W. SAVAGE; B.S., University of Akron, 1947.
HOWARD LAWRENCE STEPHENS; B.S., University of Akron, 1949.

Master of Arts in Education

CHARLES EDMUND BRYANT, JR.; B.A., University of Akron, 1933.
HAROLD GROVER DUNCAN; B.A., Baldwin-Wallace College, 1933.
EDWARD DONALD HAMILTON; B.A. in Education, University of Akron,
1948.
DOROTHY AILEEN HOOSE; B.A. in Education, University of Akron, 1944.
MARY ELLA McCOWN; B.A., University of Akron, 1928.
THOMAS EDSON McQUAY; B.A. in Education, University of Akron, 1948.
ELLIS W. SCHONER; B.A., Wittenberg College, 1929.

Master of Science in Education

HARRY JACK DAITCH; B.E., University of Akron, 1931.
MARGARET CAROLINE DAVIS; B.S. in Education, University of Akron, 1943.
J. ELIZABETH WESTLAND ELLIS; B.E., University of Akron, 1933.
JOHN JAMES POTTINGER; B.S., University of Edinburgh, Scotland, 1924.
WANDA GREN THOMAS; B.S. in Education, University of Akron, 1942.
MARDIS RAY WILLIAMS; B.S. in Education, University of Akron, 1937.

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Doctor of Science

JOHN L. COLLYER

Doctor of Laws

BERT A. POLSKY

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Mildred Marty Brown
Grace Mitchell CronanIsabella Taber Crounse
Archie P. Eves
Mary L. JamesArthur C. Johnson
Archie R. Smith

TWO-YEAR SECRETARIAL SCIENCE

Arlie Elizabeth Carver
Joyce Marie ChalfantLouise Agnes DeVittie
Mary Ellen Haahyn

June Delight Walder

RESERVE OFFICERS' TRAINING CORPS

The following are to be commissioned June 13, 1950, as Second Lieutenants, Infantry, Organized Reserve Corps, Army of the United States:

Kenneth A. Broggin
William F. Hunt, Jr.
Richard P. Jameson
Allan R. KershnerWilliam J. Martin
Thomas C. Orihel
Blin B. Scatterday
Harry SteinDavid P. Vielhaber
James H. Watson

As a "Distinguished Military Graduate," Nehemiah E. Richardson is to be commissioned June 13, 1950, as a Second Lieutenant, Infantry, United States Army.

The following are to be commissioned June 13, 1950, as Second Lieutenants, United States Air Force Reserve:

James H. Atkey
Eugene R. Allen
James H. Gebhart
James D. Herro
Charles R. McClureNed N. Novell
Bernard A. Raffath
Alfred L. Roos, Jr.
Ernest Stadvec
Raymond E. StankardJoseph M. Stern
Harry P. Stutzala
Thomas R. Swanson
William J. Wilson

As "Distinguished Military Graduates," the following are to be commissioned June 13, 1950, as Second Lieutenants, United States Air Force:

James H. Gebhart

Alfred L. Roos, Jr.

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In Speech — Glenn Colerider, Helen Evans, Jean Repp, Peter Tavolier.

*For description, see page 169.

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Barbara Price
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Sister Mary Virginia Rech, O. P.
Frances Schwindling
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Leverne George Diebel
Harry William Eckert
Glenn Chris Fauss
James Wesley Haylett
Howard Nathan Helms
Richard Burkett Henry
William Lloyd Hinks

Clarence Francis Hood
Ralph Gordon Jenney
George Wayne Johnson
Ford Kalil
Leo Virgil Kline
James Milliard Landis
Richard Dale McInnes
Peter Manis
Carlos Leroy Matthews
John Lewis Nelson
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George William Ostrander
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William Henry Quick
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Thomas Frank Rocco

Edmund Dale Romito
Walter Samerdak
Lloyd Ransom Severns
Thomas Eugene Shoup
Charlie Alfred Sippola
Raymond Joseph Slezak
Wiley Smith
Eli Solop
James Vincent Stalnaker
Karl Harry Starks, Jr.
William Michael Stefanek
Edward S. Sutton
Stanislaus Stephen Thomas
Earl Warren Wilson
William Yee
Steven Anthony Zarleng.

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Emil Charles Hervol

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Don Charles Eckert
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The Alumni Association is the official organization of alumni to advance the interests of the University through its graduates and former students, all of whom are members of the Association. Each year the Association sponsors annual Homecoming Day early in the fall, Founders Day in January, and Alumni Day at commencement time. Alumni Clubs are located in numerous cities. The Association publishes a magazine, *The Akron Alumnus*, which is sent to all former students.

All records of the Association, including card record files for each graduate and former student, biographical files, and historical data are kept in the Alumni Office on the campus.

The Alumni contribute annually to the Alumni Development Fund.

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