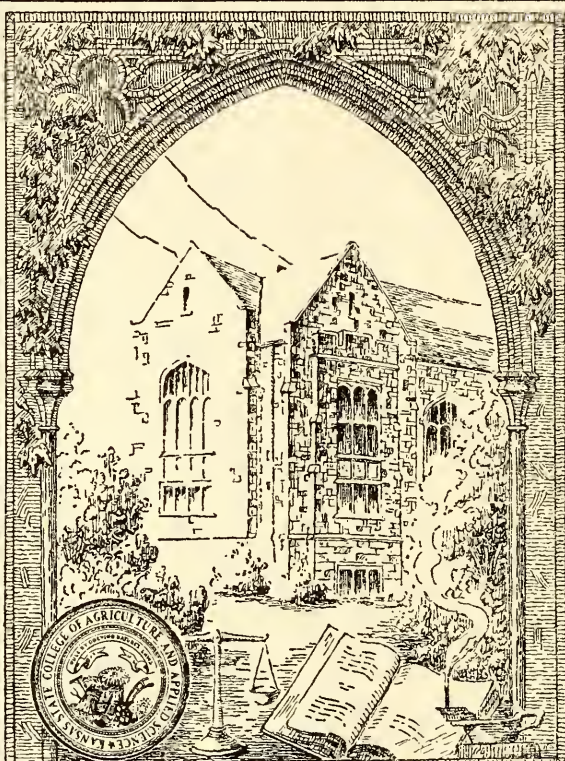


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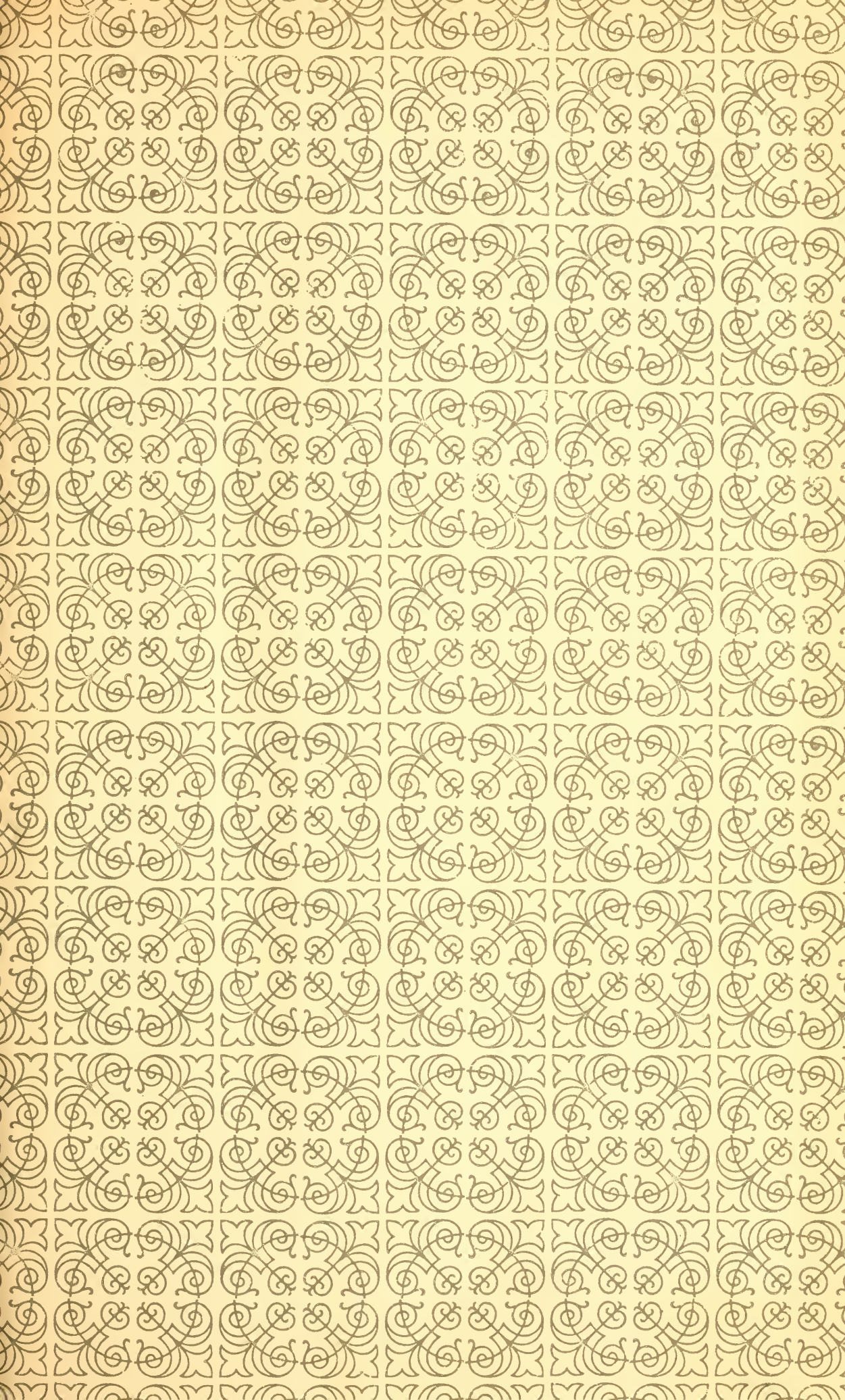
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KANSAS STATE COLLEGE BULLETIN

VOLUME XX

SEPTEMBER, 1936

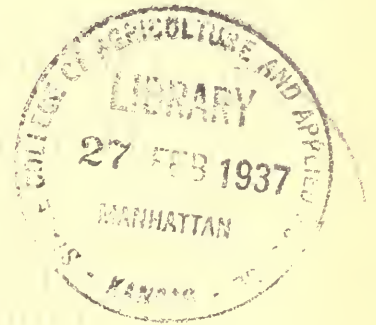
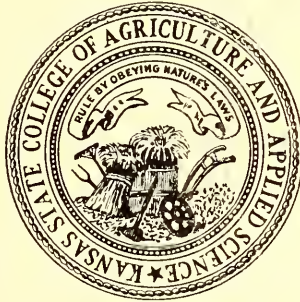
NUMBER 8

COMPLETE CATALOGUE NUMBER

SEVENTY-THIRD SESSION, 1935-1936

ANNOUNCEMENTS FOR THE SESSION OF 1936-1937

STUDENT LISTS FOR THE SESSION OF 1935-1936



KANSAS STATE COLLEGE
OF AGRICULTURE AND APPLIED SCIENCE

MANHATTAN, KANSAS

Published by the College

PRINTED BY KANSAS STATE PRINTING PLANT
W. C. AUSTIN, STATE PRINTER
TOPEKA 1936
16-4063

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KANSAS STATE COLLEGE BULLETIN

VOLUME XX

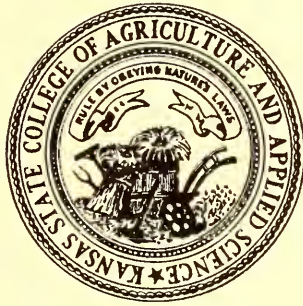
FEBRUARY 1, 1936

NUMBER 3

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ANNOUNCEMENTS FOR THE SESSION OF 1936-1937



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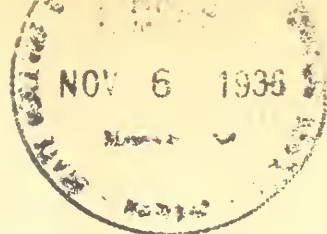


TABLE OF CONTENTS

	PAGE
The College Calendar.....	7
Registration and Assignment Schedule.....	9
Administrative Officers.....	10
Officers of Administration, Instruction and Research.....	11
Agricultural Agents.....	43
Home Demonstration Agents.....	53
Standing Committees of the Faculty.....	56
History and Location of the College.....	57
Aims and Purposes of the College.....	57
Buildings and Grounds.....	59
Admission.....	65
Requirements for Admission.....	65
Methods of Admission.....	67
Junior Colleges.....	68
Late Admission.....	69
Undergraduate Degrees.....	70
General Information.....	72
Student Health.....	95
The College Library.....	96
The Division of Graduate Study.....	97
The Division of Agriculture.....	104
Curriculum in Agriculture.....	108
Curriculum in Agricultural Administration.....	110
Curriculum in Landscape Gardening.....	111
Curriculum in Milling Industry.....	111
Agricultural Economics.....	113
Agronomy.....	116
Animal Husbandry.....	118
Dairy Husbandry.....	122
General Agriculture.....	125
Horticulture.....	125
Milling Industry.....	128
Poultry Husbandry.....	130
Agricultural Experiment Station and Branch Stations.....	132
The Division of Engineering.....	136
Curriculum in Agricultural Engineering.....	140
Curriculum in Architectural Engineering.....	141
Curriculum in Architecture.....	142
Curriculum in Chemical Engineering.....	143
Curriculum in Civil Engineering.....	144
Curriculum in Electrical Engineering.....	145
Curriculum in Landscape Architecture.....	146
Curriculum in Mechanical Engineering.....	147
Agricultural Engineering.....	148

	PAGE
Applied Mechanics.....	150
Architecture.....	152
Civil Engineering.....	156
Electrical Engineering.....	159
General Engineering.....	163
Machine Design.....	164
Mechanical Engineering.....	166
Shop Practice.....	169
Engineering Experiment Station.....	173
The Division of General Science.....	174
Curriculum in General Science.....	176
Pre-medical and Pre-pharmacial Adaptation of Curriculum in General Science.....	177
Curriculum in Industrial Chemistry.....	178
Curriculum in Industrial Journalism.....	179
Curriculum in Music Education.....	180
Curriculum in Applied Music.....	181
Curriculum in Physical Education for Men.....	182
Curriculum in Physical Education for Women.....	183
Curriculum in Commerce.....	184
Curriculum in Commerce with Special Training in Accounting.....	185
Groups of Electives and Options.....	186
Bacteriology.....	194
Botany and Plant Pathology.....	197
Chemistry.....	201
Economics and Sociology.....	209
Education.....	213
English.....	221
Entomology.....	226
Geology.....	229
History and Government.....	231
Industrial Journalism and Printing.....	236
Library Economics.....	239
Mathematics.....	240
Military Science and Tactics.....	243
Modern Languages.....	247
Music.....	249
Physical Education and Athletics.....	255
Physics.....	260
Public Speaking.....	263
Zoölogy.....	266
The Division of Home Economics.....	269
Curriculum in Home Economics.....	272
Curriculum in Home Economics with Special Training in Art.....	273
Curriculum in Home Economics with Special Training in Institutional Management and Dietetics.....	274
Curriculum in Home Economics with Special Training in Journalism.....	275
Curriculum in Home Economics and Nursing.....	275

	PAGE
Groups of Electives	276
Art	277
Child Welfare and Euthenics	280
Clothing and Textiles	281
Food Economics and Nutrition	283
General Home Economics	285
Home Economics Education	285
Household Economics	286
Institutional Management	287
Bureau of Research in Home Economics	289
The Division of Veterinary Medicine	290
Curriculum in Veterinary Medicine	291
Curriculum in Animal Husbandry and Veterinary Medicine	293
Curriculum in General Science and Veterinary Medicine	294
Anatomy and Physiology	294
Pathology	296
Surgery and Medicine	298
The Division of College Extension	301
Extension Schools	302
County Agent Work	303
Home Economics	304
Boys' and Girls' 4-H Club Work	305
Rural Engineering	305
Home Study	306
Degrees Conferred in 1935	312
Honors	319
Index	323



CALENDAR

1936														1937													
JANUARY							JULY							JANUARY							JULY						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	1	2	3	4	..	..	..	1	2	3	4	..	..	..	..	1	2	3	..	..	..	1	2	3	..
5	6	7	8	9	10	11	5	6	7	8	9	10	11	3	4	5	6	7	8	9	4	5	6	7	8	9	10
12	13	14	15	16	17	18	12	13	14	15	16	17	18	10	11	12	13	14	15	16	11	12	13	14	15	16	17
19	20	21	22	23	24	25	19	20	21	22	23	24	25	17	18	19	20	21	22	23	18	19	20	21	22	23	24
26	27	28	29	30	31	..	26	27	28	29	30	31	..	24	25	26	27	28	29	30	25	26	27	28	29	30	31
..	..	..	..	..	..	..	..	..	..	..	..	..	..	31	..	..	..	..	..	..	..	..	..	..	..	..	..
FEBRUARY							AUGUST							FEBRUARY							AUGUST						
..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	1	2	3	4	5	6	1	2	3	4	5	6	7
2	3	4	5	6	7	8	2	3	4	5	6	7	8	7	8	9	10	11	12	13	8	9	10	11	12	13	14
9	10	11	12	13	14	15	9	10	11	12	13	14	15	14	15	16	17	18	19	20	15	16	17	18	19	20	21
16	17	18	19	20	21	22	16	17	18	19	20	21	22	21	22	23	24	25	26	27	22	23	24	25	26	27	28
23	24	25	26	27	28	29	23	24	25	26	27	28	29	28	..	..	..	..	..	..	29	30	31	..	..	..	..
..	..	..	..	..	..	..	30	31	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
MARCH							SEPTEMBER							MARCH							SEPTEMBER						
1	2	3	4	5	6	7	..	..	1	2	3	4	5	..	1	2	3	4	5	6	..	..	..	1	2	3	4
8	9	10	11	12	13	14	6	7	8	9	10	11	12	7	8	9	10	11	12	13	5	6	7	8	9	10	11
15	16	17	18	19	20	21	13	14	15	16	17	18	19	14	15	16	17	18	19	20	12	13	14	15	16	17	18
22	23	24	25	26	27	28	20	21	22	23	24	25	26	21	22	23	24	25	26	27	19	20	21	22	23	24	25
29	30	31	..	..	..	..	27	28	29	30	..	..	..	28	29	30	31	..	..	..	26	27	28	29	30	..	..
..
APRIL							OCTOBER							APRIL							OCTOBER						
..	..	..	1	2	3	4	..	..	..	..	1	2	3	..	..	..	..	1	2	3	..	..	..	..	1	2	..
5	6	7	8	9	10	11	4	5	6	7	8	9	10	4	5	6	7	8	9	10	3	4	5	6	7	8	9
12	13	14	15	16	17	18	11	12	13	14	15	16	17	11	12	13	14	15	16	17	10	11	12	13	14	15	16
19	20	21	22	23	24	25	18	19	20	21	22	23	24	18	19	20	21	22	23	24	17	18	19	20	21	22	23
26	27	28	29	30	..	..	25	26	27	28	29	30	31	25	26	27	28	29	30	..	24	25	26	27	28	29	30
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	31	..	..	..	..	..	..
MAY							NOVEMBER							MAY							NOVEMBER						
..	..	..	..	..	1	2	1	2	3	4	5	6	7	..	..	..	..	1	..	1	2	3	4	5	6	..	..
3	4	5	6	7	8	9	8	9	10	11	12	13	14	2	3	4	5	6	7	8	7	8	9	10	11	12	13
10	11	12	13	14	15	16	15	16	17	18	19	20	21	9	10	11	12	13	14	15	14	15	16	17	18	19	20
17	18	19	20	21	22	23	22	23	24	25	26	27	28	16	17	18	19	20	21	22	21	22	23	24	25	26	27
24	25	26	27	28	29	30	29	30	..	..	..	..	..	23	24	25	26	27	28	29	28	29	30	..	..	..	..
31	..	..	..	..	..	..	..	..	..	..	..	..	..	30	31	..	..	..	..	..	..	..	..	..	..	..	..
JUNE							DECEMBER							JUNE							DECEMBER						
..	1	2	3	4	5	6	..	..	1	2	3	4	5	..	..	1	2	3	4	5	..	..	..	1	2	3	4
7	8	9	10	11	12	13	6	7	8	9	10	11	12	6	7	8	9	10	11	12	5	6	7	8	9	10	11
14	15	16	17	18	19	20	13	14	15	16	17	18	19	13	14	15	16	17	18	19	12	13	14	15	16	17	18
21	22	23	24	25	26	27	20	21	22	23	24	25	26	20	21	22	23	24	25	26	19	20	21	22	23	24	25
28	29	30	..	..	..	..	27	28	29	30	31	..	..	27	28	29	30	..	..	..	26	27	28	29	30	31	..
..

THE COLLEGE CALENDAR

SUMMER SCHOOL, 1936

May 26, Tuesday.—Registration of students for nine-week Summer School begins at 8 a. m.
May 26, Tuesday.—Examinations for students deficient in entrance subjects, 8 a. m. to 5 p. m.
May 26 to July 25, Tuesday to Saturday.—Nine-week Summer School in session.
May 30, Saturday.—Memorial Day, holiday.
June 1 to 5, Monday to Friday.—4-H Club Round-up.
June 6, Saturday.—Preliminary reports on masters' theses are due.
June 25, Thursday.—Scholarship deficiency reports to students and deans are due.
June 29 to July 25, Monday to Saturday.—Four-week Summer School in session.
July 3, Friday.—Abstracts of masters' theses are due.
July 4, Saturday.—Independence Day, holiday.
July 18, Saturday.—Masters' theses are due.
July 24, Friday.—Graduation exercises at 8 p. m. for those receiving degrees at end of Summer School.
July 25, Saturday.—Summer School closes at 5 p. m.
August 1, Saturday.—Reports of all grades for Summer School are due in registrar's office.

FIRST SEMESTER, 1936-1937

Sept. 11, Friday.—All members of the instructional force on duty.
Sept. 12, Saturday.—Meeting of assigners with committee on schedules at 2 p. m.
Sept. 12, Saturday.—Meeting of assigners with deans at 3 p. m.
Sept. 14, Monday.—Admission and registration of students begin at 7:45 a. m.
Sept. 14, Monday.—Examinations for students deficient in entrance subjects, 8 a. m. to 5 p. m.
Sept. 15, Tuesday.—Registration of students closes at 4 p. m.
Sept. 16, Wednesday.—*Classes meet according to schedule, beginning at 8 a. m.
Sept. 16, Wednesday.—Opening convocation at 11 a. m.
Sept. 18, Friday.—†All freshman students meet at 10 a. m.
Sept. 23, Wednesday.—†All freshman students meet at 9 a. m.
Sept. 24, Thursday.—†Aptitude tests for freshmen, 8 a. m. to 12 m.
Sept. 25, Friday.—Annual student-faculty informal reception at 8 p. m.
Oct. 10, Saturday.—Examinations to remove conditions.
Oct. 17, Saturday.—Scholarship deficiency reports to students and deans are due.
Nov. 14, Saturday.—Midsemester scholarship deficiency reports to students and deans are due.
Nov. 19, Thursday.—Preliminary reports on masters' theses are due.
Nov. 25, Wednesday.—Thanksgiving vacation begins at 12 m.
Nov. 28, Saturday.—Thanksgiving vacation closes at 6 p. m.
Dec. 12, Saturday.—Programs of study due from candidates for the master's degree in 1937.
Dec. 19, Saturday.—Christmas vacation begins at 6 p. m.
Jan. 2, 1937, Saturday.—Christmas vacation closes at 6 p. m.
Jan. 11, Monday.—Abstracts of masters' theses are due.
Jan. 22, Friday.—Masters' theses are due.
Jan. 26 to 30, Tuesday, 1 p. m., to Saturday, 12 m.—Examinations at close of semester.
Jan. 30, Saturday.—First semester closes at 12 m.
Jan. 30, Saturday.—Semester scholarship deficiency reports to students and deans are due not later than 6 p. m.

SECOND SEMESTER, 1936-1937

Feb. 1, Monday.—Meeting of assigners with committee on schedule at 2 p. m.
Feb. 1, Monday.—Examinations for students deficient in entrance subjects, 8 a. m. to 5 p. m.
Feb. 2, Tuesday.—Admission and registration of students begin at 7:45 a. m.
Feb. 3, Wednesday.—Registration closes at 4 p. m.
Feb. 4, Thursday.—*All classes meet according to schedule, beginning at 8 a. m.
Feb. 6, Saturday.—Reports of all grades for first semester due in registrar's office.
Feb. 9 to 12, Tuesday to Friday.—Farm and Home Week.
Feb. 16, Tuesday.—Founders' Day. The College was located at Manhattan on Feb. 16, 1863.
Feb. 22, Monday.—Washington's Birthday, holiday.
Feb. 27, Saturday.—Examinations to remove conditions.

* Students must be present at the first meeting of each class or render a reasonable excuse. Failure to take out an assignment is not accepted as an excuse for absence from classes. A fee of \$2.50 is charged those who are assigned after the time set for close of registration.

† Attendance of all freshmen required on each of the three days.

Mar. 6, Saturday.—Scholarship deficiency reports to students and deans are due.
 Mar. 19, Friday.—Preliminary reports on masters' theses are due.
 Mar. 25, Thursday.—Easter vacation begins at 6 p. m.
 Mar. 29, Monday.—Easter vacation closes at 6 p. m.
 April 3, Saturday.—Midsemester scholarship deficiency reports to students and deans are due.
 April 15, Thursday.—Announcement of elections of seniors to Phi Kappa Phi.
 May 10, Monday.—Abstracts of masters' theses are due.
 May 19 to 25, Wednesday to Tuesday.—Examinations for seniors graduating May 31.
 May 24, Monday.—Masters' theses are due.
 May 27 to 31, Thursday to Monday.—Examinations at close of semester.
 May 29, Saturday.—Alumni Day. Business meeting at 2 p. m., banquet at 6 p. m.
 May 30, Sunday.—Baccalaureate services at 8 p. m.
 May 31, Monday.—Seventy-fourth annual Commencement at 8 p. m.
 June 1, Tuesday.—Semester scholarship deficiency reports to students and deans are due not later than 6 p. m.
 June 7, Monday.—Reports of all grades for second semester due in registrar's office.

SUMMER SCHOOL, 1937

June 1, Tuesday.—Registration of students for nine-week Summer School begins at 8 a. m.
 June 1, Tuesday.—Examinations for students deficient in entrance subjects, 8 a. m. to 5 p. m.
 June 1 to July 31, Tuesday to Saturday.—Nine-week Summer School in session.
 June 7 to 11, Monday to Friday.—4-H Club Round-up.
 June 12, Saturday.—Preliminary reports on masters' theses are due.
 July 1, Thursday.—Scholarship deficiency reports to students and dean are due.
 July 5 to 31, Monday to Saturday.—Four-week Summer School in session.
 July 9, Friday.—Abstracts of masters' theses are due.
 July 24, Saturday.—Masters' theses are due.
 July 30, Friday.—Graduation exercises at 8 p. m. for those receiving degrees at end of Summer School.
 July 31, Saturday.—Summer School closes at 5 p. m.
 August 7, Saturday.—Reports of all grades for Summer School are due in registrar's office.

FIRST SEMESTER, 1937-1938

Sept. 13, Monday.—Admission and registration of students begin at 7:45 a. m.
 Sept. 13, Monday.—Examinations for students deficient in entrance subjects, 8 a. m. to 5 p. m.
 Sept. 14, Tuesday.—Registration of students closes at 4 p. m.

REGISTRATION AND ASSIGNMENT SCHEDULE

The following tabulation shows the schedule of hours for registration and assignment of students for the college year 1936-1937 arranged according to the initial letters of their last names:

FIRST SEMESTER

MONDAY, SEPTEMBER 14, 1936

<i>Hours</i>	<i>Initial letters</i>
7:45 to 9:30.....	E P O U W
10:00 to 11:15.....	B F T V
1:00 to 2:30.....	C I G R and any who failed to report during the two pre- vious periods.

TUESDAY, SEPTEMBER 15, 1936

7:45 to 9:30.....	A D H Y
10:00 to 11:15.....	J L M X
1:00 to 2:30.....	K N Q S Z
2:30 to 4:00.....	Special students and any students who failed to report during the period provided for their group. Late-assignment fee of \$2.50 in effect after this period.

SECOND SEMESTER

TUESDAY, FEBRUARY 2, 1937

7:45 to 9:30.....	K N Q S Z
10:00 to 11:15.....	A D H Y
1:00 to 2:30.....	J L M X and any who failed to report during the two pre- vious periods.

WEDNESDAY, FEBRUARY 3, 1937

7:45 to 9:30.....	B F T V
10:00 to 11:15.....	C I G R
1:00 to 2:30.....	E P O U W
2:30 to 4:00.....	Special students and any students who failed to report during the period provided for their group. Late-assignment fee of \$2.50 in effect after this period.

The State Board of Regents

Name and address	Term expires
C. M. HARGER, <i>Chairman</i> , Abilene.....	June 30, 1938
DUDLEY DOOLITTLE, Strong City.....	June 30, 1936
W. D. FERGUSON, Colby.....	June 30, 1937
FRED M. HARRIS, Ottawa.....	June 30, 1938
LESTER MCCOY, Garden City.....	June 30, 1939
DREW McLAUGHLIN, Paola.....	June 30, 1938
RALPH T. O'NEIL, Topeka.....	June 30, 1939
OSCAR STAUFFER, Arkansas City.....	June 30, 1937
BALIE P. WAGGENER, Atchison.....	June 30, 1936

BENJAMIN FRANKLIN, *Business Manager*
C. W. MYERS, *Assistant Business Manager*

Administrative Officers* of the College

President	F. D. FARRELL
College Historian	J. T. WILLARD
Dean of the Division of Agriculture, and Director of the Agricultural Experiment Station.....	L. E. CALL
Dean of the Division of Engineering, and Director of the Engineering Experiment Station.....	R. A. SEATON
Dean of the Division of General Science.....	R. W. BABCOCK
Dean of the Division of Home Economics, and Direc- tor of the Bureau of Research in Home Econom- ics	MARGARET M. JUSTIN
Dean of the Division of Veterinary Medicine.....	R. R. DYKSTRA
Dean of the Division of College Extension.....	H. J. UMBERGER
Dean of the Division of Graduate Study.....	J. E. ACKERT
Dean of Women.....	MARY P. VAN ZILE
Dean of the Summer School.....	E. L. HOLTON
Vice-president	S. A. NOCK
Registrar	JESSIE McD. MACHIR
Librarian	ARTHUR B. SMITH
Superintendent of Maintenance.....	G. R. PAULING

* Also included in the general alphabetical list.

Officers of Administration, Instruction and Research*

- NELLIE ABERLE, Assistant Professor of English (1921; Sept. 1, 1935).‡
B. S., K. S. C., 1912; M. S., *ibid.*, 1914. † A 53; 1442 Fairchild.
- ERWIN ABMEYER, Assistant Professor of Horticulture in Charge of North-eastern Kansas Experiment Fields (1934; Jan. 1, 1936).
B. S., K. S. C., 1933. Atchison, Kan.
- FULTON GEORGE ACKERMAN,¹ Soil Erosion Investigations, Fort Hays Branch Agricultural Experiment Station (1933, 1934).
B. S., K. S. C., 1931. Hays, Kan.
- JAMES EDWARD ACKERT, Dean of Division of Graduate Study (1931); Professor of Zoölogy (1913, 1918); Parasitologist, Agricultural Experiment Station (1913).
A. B., University of Illinois, 1909; A. M., *ibid.*, 1911; Ph. D., *ibid.*, 1918.
F 26; 1923 Leavenworth.
- FRANK MILTON ADAIR, Instructor in Machine Design (Sept. 1, 1935).
B. S., K. S. C., 1930; M. S., *ibid.*, 1932. E 209; 1911 Pierre.
- ANNA TESSIE AGAN, Instructor in Household Economics (1930).
B. S., University of Nebraska, 1927; M. S., K. S. C., 1930. L 64; 1201 Bertrand.
- MICHAEL FRANCIS AHEARN, Professor and Head of Department of Physical Education, and Director of Athletics (1904, 1920).
B. S., Massachusetts Agricultural College, 1904; M. S., K. S. C., 1913.
N 35; 104 N. Juliette.
- MARGARET AHLBORN, Professor of Food Economics and Nutrition (1923, 1933); Assistant Dean of Division of Home Economics (1929).
A. B., University of Kansas, 1906; M. S., K. S. C., 1924. L 38; 1503 Leavenworth.
- ROBERT WILHELM AHLQUIST, Assistant Professor of Electrical Engineering, University of Pittsburgh; Exchange Professor for the year 1935-'36.
B. S., Missouri School of Mines, 1924; M. S., University of Pittsburgh, 1935.
E 127; 1822 Poyntz.
- LOUIS CARLYLE AICHER, Jr., Graduate Research Assistant in Electrical Engineering (Sept. 1, 1935).
B. S. in E. E., K. S. C., 1935. E 24; 1626 Laramie.

* The staff of a department is listed under the department heading in the body of the Catalogue. See Table of Contents, page 3, *ante*, or Index at end of volume.

† The College buildings are designated by letters, as follows:

A—Anderson Hall (Administration)	M—Auditorium
Ag—Waters Hall (Agr., Chem., Physics)	N—Nichols Gymnasium
Bks—Barracks	(Phys. Ed., Mil. Sci., Music)
CH—College Hospital	P—Stock Judging Pavilion
D—Chemistry Annex No. 2	PP—Power, Heat and Service Building
E—Engineering Hall	R—Farm Machinery Hall
F—Fairchild Hall (Hist., Zoöl., Ent.)	S—Engineering Shops
G—Education Hall (Educ., Publ. Spkg.)	T—Thompson Hall (Cafeteria)
H—Dickens Hall (Hort., Botany)	V—Veterinary Hall (Vet. Med., Bact.)
I—Illustrations Hall	VH—Veterinary Hospital
K—Kedzie Hall (Printing)	VZ—Van Zile Hall (Girls' Dormitory)
L—Calvin Hall (Home Ec.)	W—Chemistry Annex No. 1
Li—Library	

‡ One date standing after the title shows when the office was assumed. In the case of two dates separated by a comma or semicolon, the first date indicates when services with the College began, the second when present office was assumed. Dates separated by a dash indicate time of assumption and termination, respectively, of the duties indicated in the title.

1. In coöperation with the U. S. Department of Agriculture.

LOUIS C. AICHER, Superintendent, Fort Hays Branch Agricultural Experiment Station (1921).

B. S. in Agr., K. S. C., 1910.

Hays, Kan.

HARRY WORKMAN AIMA, Assistant Professor of Woodwork (1918, 1925); on leave 1935-'36.

A. B., Oskaloosa College, 1921.

S 27A; 521 Osage.

ALFRED EVAN ALDOUS, Professor of Pasture Improvement (1926); Coöperative Agent (Agronomist), U. S. D. A.

B. S., Utah Agricultural College, 1910; Ph. D., University of Nebraska, 1934.

E. Ag 216; 200 N. 16th.

OSCAR WILLIAM ALM, Professor of Psychology (1929, 1933).

A. B., University of Nebraska, 1917; A. M., Columbia University, 1918; Ph. D., University of Minnesota, 1920.

G 30; 1615 Fairchild.

INEZ GERTRUDE ALSOP, Assistant Professor of History and Government (1923, 1927).

B. S., K. S. T. C., Emporia, 1916; M. S., University of Kansas, 1920.

F 63; 1429 Laramie.

EDGAR McCALL AMOS, Assistant Professor of Industrial Journalism and Printing (1920, 1924).

B. S., K. S. C., 1902.

K 29; 1015 Leavenworth.

WILLIAM GERALD AMSTEIN, Assistant Professor of Horticulture, Division of College Extension (Dec. 1, 1935).

B. S., Massachusetts Agricultural College, 1927; M. S., K. S. C., 1928.

A 3; 1715 Leavenworth.

GLYDE ESTELLA ANDERSON, (Temporary) Instructor in Foods and Nutrition, Division of College Extension (1931, 1934).

B. S., K. S. C., 1926.

A 62A; 1031 Fremont.

JOHN EDMOND ANDERSON, Instructor in Milling Industry (1932, 1933).

B. S., K. S. C., 1932; M. S., *ibid.*, 1933.

E. Ag 101; 216 S. 17th.

ARTHUR CLINTON ANDREWS, Instructor in Chemistry (1926).

B. S., University of Wisconsin, 1924; M. S., K. S. C., 1929.

D 28; 1417 Poyntz.

DOROTHY ARNOLD, Nurse, Department of Student Health (Feb. 1, 1936).

R. N., St. Mary's Hospital, Winfield, 1933.

College Hospital; 518 Leavenworth.

FLOYD WARNICK ATKESON, Professor and Head of Department of Dairy Husbandry (1935); Dairy Husbandman, Agricultural Experiment Station (1935).

B. S., University of Missouri, 1918; M. S., K. S. C., 1929.

W. Ag 128; 1734 Leavenworth.

CLIFF ERRETT AUBEL, Associate Professor of Animal Husbandry (1919, 1928).

B. S., Pennsylvania State College, 1915; M. S., K. S. C., 1917; Ph. D. University of Minnesota, 1935.

E. Ag 24; 323 N. 15th.

MADALYN AVERY, Assistant Professor of Physics (1928).

B. S., K. S. C., 1924; M. S., *ibid.*, 1932.

W. Ag. 134; 1425 Laramie.

JOHN CARR AYERS, (Temporary) Graduate Assistant in Zoölogy (Sept. 9, 1935).

A. B., Kalamazoo College, 1934.

F 36; 1430 Fairchild.

RODNEY WHITEMORE BABCOCK, Dean of Division of General Science (1930).

A. B., University of Missouri, 1912; A. M., University of Wisconsin, 1915; Ph. D., *ibid.*, 1924.

A 47; 1928 Leavenworth.

HARRY CHARLES BAIRD, Assistant Professor of Agricultural Extension, District Supervisor, Division of College Extension (1920, 1934).

B. S., K. S. C., 1914.

A 60; 1027 Houston.

GLADYS BAKER, Classifier in College Library (Sept. 1, 1935).

B. L. S., University of Illinois, 1924.

Li 52; 1704 Fairview.

WALTER BUSWELL BALCH, Associate Professor of Horticulture (1921, 1931); Greenhouse Foreman (1921).

B. S., Cornell University, 1919; M. S., K. S. C. 1925.

H 34; 1734 Fairchild.

DOROTHY BARFOOT, Professor and Head of Department of Art (1930; Sept. 1, 1935).

A. B., State University of Iowa, 1922; A. M., Columbia University, 1928.

A 68A; 1429 Laramie.

EDGAR LEE BARGER, Assistant Professor of Agricultural Engineering (1930; July 1, 1935).

B. S., K. S. C., 1929; M. S., *ibid.*, 1934.

E 216; 915 N. Juliette.

HAROLD NATHAN BARHAM, Associate Professor of Chemistry (1929, 1932).

A. B., Bethany College, 1921; M. S., Ohio State University, 1922; Ph. D., University of Kansas, 1928.

C 52; 820 Bluemont.

JANE WILSON BARNES, Secretary to the Dean, Division of Home Economics (1928).

B. S., K. S. C., 1912; M. S., *ibid.*, 1932.

L 29; 1211 Kearney.

ROBERT JOHN BARNETT, Professor and Head of Department of Horticulture (1920, 1930); Horticulturist, Agricultural Experiment Station (1920, 1930).

B. S., K. S. C., 1895; M. S. *ibid.*, 1911.

H 29; 1203 Thurston.

ELLEN MARGARET BATCHELOR, Instructor and District Home Demonstration Agent Leader, Division of College Extension (1917, 1921).

B. S., K. S. C., 1911.

A 63D; 1722 Humboldt.

JAMES CHARLES BATES, (Temporary) Instructor in Botany (Sept. 16, 1935).

A. B., University of Kansas, 1927; A. M., *ibid.*, 1934; Ph. D., *ibid.*, 1935.

H 53; 1643 Fairview.

LAURA FALKENRICH BAXTER, Assistant Professor of Home Economics Education (1927, 1934).

B. S., K. S. C., 1915; M. S., *ibid.*, 1930.

G 28; 601 Vattier.

MABEL GERTRUDE BAXTER, Assistant in Charge of Continuations, College Library (1916, 1918).

Li 26; 1620 Fairchild.

BUELL WESLEY BEADLE, Assistant Chemist, Agricultural Experiment Station (1935; Dec. 1, 1935).

B. S., K. S. C., 1935.

E. Ag 204A; 1104 Vattier.

THOMAS GILBERT BECKWITH, Graduate Assistant in Applied Mechanics (Sept. 1, 1935).

B. S., K. S. C., 1935.

E 112; 336 N. 15th.

RUSSELL JAMES BEERS, (Temporary) Instructor in Chemistry (Nov. 18, 1935).

B. S., University of Nebraska, 1933; M. S., *ibid.*, 1935.

W 29A; 1334 Fremont.

FLOYD WAYNE BELL, Professor of Animal Husbandry, in Charge of Advanced Judging (1918, 1921).

B. S., Cornell University, 1911.

E. Ag 12; 1736 Fairview.

ERWIN JOHN BENNE, Instructor in Chemistry (1930).

B. S., K. S. C., 1928; M. S., *ibid.*, 1931.

W 29A; 902 Ratone.

ADA GRACE BILLINGS, Associate Professor of History and Government, Home Study Service, Division of College Extension (1921, 1927).

B. S., K. S. C., 1916; M. S., *ibid.*, 1927.

A 5; 714 Moro.

JOHN ALEXANDER BIRD, Associate Professor of Industrial Journalism (Feb. 1, 1936).

B. S., K. S. C., 1932.

K'28C; 1206 Thurston.

FRANK OTTO BLECHA, Assistant Professor of Agricultural Extension; District Agricultural Agent, Division of College Extension (1919, 1923).

B. S., K. S. C., 1918; M. S., *ibid.*, 1926.

A 60; 1507 Leavenworth.

RALPH BOGART, Graduate Research Assistant in Genetics (1934).

B. S. in Agr., University of Missouri, 1934.

E. Ag 58; 1116 Bluemont.

WILLIAM RAYMOND BRACKETT, Associate Professor of Physics (1919, 1923).

A. B., University of Colorado, 1905.

W. Ag 31; 1824 Humboldt.

BOYD BERTRAND BRAINARD, Associate Professor of Mechanical Engineering (1923, 1929).

B. S. in M. E., University of Colorado, 1922; S. M., Massachusetts Institute of Technology, 1931.

E 109; 1209 Vattier.

CARL ALFRED BRANDLY, Assistant Professor of Bacteriology (1927).

D. V. M., K. S. C., 1923; M. S., *ibid.*, 1930.

V 53; 922 Bertrand.

GEORGE FRANCIS BRANIGAN, Instructor in Engineering Drawing and Descriptive Geometry (1927).

B. S. in C. E., University of Nebraska, 1927; M. S., K. S. C., 1933.

E 209; 1631 Humboldt.

AUGUSTIN WILBER BREEDEN, Associate Professor of English (1926).

Ph. B., University of Chicago, 1924; A. M., *ibid.*, 1925.

K 52; 1728 Laramie.

JESSE LAMAR BRENNEMAN, Professor of Electrical Engineering (1920, 1928).

B. S., University of Chicago, 1908; E. E., University of Wisconsin, 1913.

E 120; 820 Laramie.

HELEN VIRGINIA BREWER, Instructor in Foods and Nutrition, Division of College Extension (1932, 1934).

B. S., K. S. C., 1929; M. S., *ibid.*, 1932.

A 62A; 800 N. Manhattan.

LINDSEY ANDREW BROWN,¹ Agent, Bureau of Plant Industry, Division of Dry-land Agriculture, U. S. D. A.; Investigator in Dry-land Agriculture, Garden City Branch Agricultural Experiment Station (April 1, 1935).

B. S., University of Nebraska, 1930; M. S., *ibid.*, 1931; Ph. D., Pennsylvania State College, 1934.

Field Station, Garden City, Kan.

NINA MYRTLE BROWNING, Instructor in Food Economics and Nutrition (1930).

B. S., K. S. C., 1923; M. S., *ibid.*, 1927.

L 64; 908 Laramie.

HOWARD W. BRUBAKER, Professor of Chemistry (1913, 1922).

B. S., Carleton College, 1899; Ph. D., University of Pennsylvania, 1904.

D 3C; 1929 Leavenworth.

JASPER L. BRUBAKER, Instructor in Machine Design (Sept. 1, 1935).

B. S. in E. E., K. S. C., 1930; M. S., *ibid.*, 1932.

S 51A; 1031 Moro.

ESTHER BRUNER, Assistant Professor of Clothing and Textiles (1920, 1927); on leave Sept. 1 to Dec. 31, 1935.

B. S., K. S. C., 1920; M. S., *ibid.*, 1921.

L 68; 311 Denison

ARTHUR MAXWELL BRUNSON,¹ Agronomist, U. S. D. A.; Corn Breeder, Agricultural Experiment Station (1923).

B. S., University of Illinois, 1913; M. S., *ibid.*, 1919; Ph. D., Cornell University, 1923.

E. Ag 301; 1730 Fairview.

HARRY RAY BRYSON, Assistant Professor of Entomology (1924, 1929).

B. S., K. S. C., 1917; M. S., *ibid.*, 1924.

F. 54; 1821 Leavenworth.

1. In coöperation with the U. S. Department of Agriculture.

FRANK SHERMAN BURSON, Assistant Supervisor (AAA), Division of College Extension (Sept. 16, 1935); resigned Feb. 6, 1936.

B. S., K. S. C., 1934.

A 62; ———.

JAMES HENRY BURT, Professor and Head of Department of Anatomy and Physiology (1909, 1919).

V. S., Ontario Veterinary College, 1895; D. V. M., Ohio State University, 1905.

V 31; 800 Poyntz.

LELAND DAVID BUSHNELL, Professor and Head of Department of Bacteriology (1908, 1912); Bacteriologist, Agricultural Experiment Station (1908, 1912).

B. S., Michigan Agricultural College, 1905; M. S., University of Kansas, 1915; Ph. D., Harvard University, 1921.

V 56; 801 Osage.

FRANK BYRNE, Instructor in Geology (1930).

B. S., University of Chicago, 1927.

F 1A; 1116 Bluemont.

MARION JOHN CALDWELL, Instructor in Chemistry (1932, 1934).

B. S., K. S. C., 1931; M. S., *ibid.*, 1933.

W 29A; 1010 Laramie.

LELAND EVERETT CALL, Dean of Division of Agriculture (1907, 1925); Director of Agricultural Experiment Station (1907, 1925).

B. S. in Agr., Ohio State University, 1906; M. S., *ibid.*, 1912.

E. Ag 112; 223 N. 14th.

JAMES PHILLIP CALLAHAN, Associate Professor of English (1924, 1930).

B. S., Kansas State Teachers College, Hays, 1919; A. M., University of Kansas, 1926.

K 56; 1601 Pierre.

MILDRED CAMP, Head of Circulation Department, College Library (1927).

A. B., Eureka College, 1912; B. L. S., University of Illinois, 1924.

Li; 1213 Kearney.

WALTER WILLIAM CARLSON, Professor and Head of Department of Shop Practice (1910, 1917); Superintendent of Shops (1910, 1912); Industrial Engineer, Engineering Experiment Station (1913).

B. S., K. S. C., 1908; M. E., *ibid.*, 1916.

S 62; 1722 Laramie.

WILBUR JOHN CAULFIELD, Assistant Professor of Dairy Husbandry (1927, 1930).

B. S., University of Minnesota, 1924; M. S., Pennsylvania State College, 1926.

W. Ag 147; 1011 Moro.

GEORGE E. CAUTHEN, Technician and Instructor in Zoölogy (Sept. 16, 1935).

B. A., Austin College, 1928; M. S., K. S. C., 1931.

F 30; 818 Bertrand.

HARRY WINFIELD CAVE, Professor of Dairy Husbandry (1918, 1926).

B. S. A., Iowa State College, 1914; M. S., K. S. C., 1916.

W. Ag 128; 1638 Osage.

ERNEST KNIGHT CHAPIN, Associate Professor of Physics (1923, 1932).

A. B., University of Michigan, 1918; M. S., *ibid.*, 1923.

W. Ag 134A; 1119 Laramie.

IRA NICHOLS CHAPMAN, Associate Professor of Agricultural Economics, Division of College Extension (1916, 1925); on leave July 1, 1935, to June 30, 1936.

B. S., K. S. C., 1916; M. S., *ibid.*, 1926.

W. Ag 327; 1210 Thurston.

FRANCIS EUGENE CHARLES, Associate Professor of Industrial Journalism (1931); resigned Jan. 31, 1936.

B. S., K. S. C., 1924; M. S., *ibid.*, 1929.

K 28C; 1819 Leavenworth.

FRANK JACOBS CHEEK, JR., Associate Professor of Structural Design (1923, 1928).

A. B., Centre College, 1914; C. E., Rensselaer Polytechnic Institute, 1919; S. M., Massachusetts Institute of Technology, 1933.

E 223; 1109 Thurston.

ROBERT FREDERICK CHILDS,² Road Materials, Engineering Experiment Station (1931).

B. S., K. S. C., 1929.

E 204; 1618 Houston.

2. In coöperation with the Kansas State Highway Department.

HELEN LOUISE CHURCH, Graduate Research Assistant in Clothing and Textiles (Sept. 9, 1935).

A. B., College of Emporia, 1928.

L 51; 426 N. 17th.

ARNOLD JOSEPH CHURCHILL, (Temporary) Graduate Assistant in Mechanical Engineering (Sept. 1, 1935); resigned Feb. 8, 1936.

B. S., K. S. C., 1935.

E 109; 1409 Laramie.

ALFRED LESTER CLAPP, Associate Professor of Agronomy, in Charge of Coöperative Experiments (1920, 1934).

B. S., K. S. C., 1914; M. S., *ibid.*, 1934.

E. Ag 201; 1109 Kearney.

ROWLAND JESSE CLARK, Associate Professor of Milling Industry (Sept. 1, 1935).

B. S., University of Kansas, 1918.

E. Ag 111; 1715 Houston.

EUGENE ARTHUR CLEAVINGER, Assistant Professor of Farm Crops, Division of College Extension (1926, 1931).

B. S., K. S. C., 1925.

A 60; 345 N. 15th.

MAYNARD HENRY COE, Professor, State Club Leader, Division of College Extension (1922, 1927).

B. S., University of Minnesota, 1917.

A 35B; 336 N. 16th.

EMBERT HARVEY COLES,¹ Superintendent, Colby Branch Agricultural Experiment Station (1922, 1929).

B. S., K. S. C., 1922.

Colby, Kan.

CHARLES WILLIAM COLVER, Professor of Organic Chemistry (1919, 1925).

B. S., University of Idaho, 1909; M. S., *ibid.*, 1911; Ph. D., University of Illinois, 1919.

D 28; 1635 Fairchild.

LAURENCE L. COMPTON, Assistant Professor of Soils, Division of College Extension (1930; July 1, 1935).

B. S., K. S. C., 1930.

A 3; 919 N. Juliette.

WILLIAM EUGENE CONNELL, Assistant Professor of Animal Husbandry (1930; July 1, 1935); resigned Dec. 31, 1935.

B. S., Oklahoma A. and M. College, 1928; M. S., K. S. C., 1929.

E. Ag 6A; 1126 Thurston.

ROBERT WARREN CONOVER, Professor of English (1915, 1920).

A. B., Wesleyan University, 1911; A. M., *ibid.*, 1914.

K 53; 800 N. Manhattan.

LOWELL EDWIN CONRAD, Professor and Head of Department of Civil Engineering (1908, 1909); Civil Engineer, Engineering Experiment Station (1913).

B. S., Cornell College, 1904; C. E., *ibid.*, 1906; M. S., Lehigh University, 1908.

E 124; 317 N. 17th.

JOHN HERBERT COOLIDGE, Assistant Professor of Agricultural Economics, Division of College Extension (1931).

B. S., K. S. C., 1925; M. S., *ibid.*, 1932.

Farm Bureau Office, Kingman, Kan.

CHARLES MECLAIN CORRELL, Professor of History and Government (1922, 1934); Assistant Dean, Division of General Science (1927).

B. S., K. S. C., 1900; Ph. B., University of Chicago, 1907; Ph. M., *ibid.*, 1908.

F 61 and A 47A; 1621 Fairchild.

RICHARD THOMAS COTTON,³ Senior Entomologist, Bureau of Entomology and Plant Quarantine, U. S. D. A.; Investigator of Stored Grain and Flour-mill Insects; in charge of U. S. Entomological Laboratory (1934).

B. S., Cornell University, 1914; M. S., *ibid.*, 1918; Ph. D., George Washington University, 1924.

U. S. Lab., 1204 Fremont; 343 N. 14th.

1. In coöperation with the U. S. Department of Agriculture.

3. In coöperation with the Kansas Agricultural Experiment Station.

- INA FOOTE COWLES, Associate Professor of Clothing and Textiles (1902, 1918).
B. S., K. S. C., 1901; M. S., University of Wisconsin, 1931. L 68; 513 N. 16th.
- RUFUS FRANCIS COX, Associate Professor of Animal Husbandry (1930; July 1, 1935).
B. S., Oklahoma A. and M. College, 1923; M. S., Iowa State College, 1925.
E. Ag 8A; 1005 Thurston.
- PAUL CRAMER, (Temporary) Instructor in Mathematics (Oct. 7, 1935).
A. B., Illinois College, 1925; M. A., University of Illinois, 1926.
S 52; 1219 Poyntz.
- WILLIAM WESLEY CRAWFORD, Assistant Professor of Civil Engineering (1923, 1934).
A. B., State University of Iowa, 1912; B. S. in C. E., Iowa State College, 1917; M. Di., Iowa State Teachers College, 1908.
E 220; 721 Kearney.
- JOSEPH FRANKLIN CREED, (Temporary) Assistant in Physical Education (Sept. 1, 1935).
B. S., K. S. C., 1935. N 31A; 911 Vattier.
- CLARENCE EDWARD CREWS, Assistant Professor of Agronomy, South Central Kansas Experiment Fields (1928, 1932).
B. S., K. S. C., 1928; M. S., *ibid.*, 1930. 300 Ave. A West, Kingman, Kan.
- LEONARD ROSCOE CREWS, Maj., C. A. C.; Assistant Professor of Military Science and Tactics (1934).
Graduate, Battery Officers Course, Coast Artillery School, 1929. N 26; 815 Houston.
- CORNELIA WILLIAMS CRITTENDEN, Associate Professor of Modern Languages (1926, 1929).
A. B., University of Nebraska, 1918; A. M., *ibid.*, 1926. A 71; 1000 Moro.
- MARTHA REBECCA CULLIPHER, Assistant Loan Librarian (1928).
A. B., Indiana University, 1926; B. S. in L. S., University of Illinois, 1928.
Li 51; 312 N. 15th.
- GORDON DANKS, Assistant Professor of Surgery and Medicine (Sept. 1, 1934).
B. S., Pennsylvania State College, 1929; D. V. M., Cornell University, 1933.
52 VH; 1218 Kearney.
- ROSE MARIE DARST, Instructor in Art (1933; Sept. 1, 1935).
B. S., Ohio University, 1926; A. M., Columbia University, 1927.
A 68B; 1429 Laramie.
- ROBERT DODDS DAUGHERTY, Assistant Professor of Mathematics (1930, 1932).
Ph. B., Iowa Wesleyan College, 1910; M. S., State University of Iowa, 1930.
S 52; 615 Humboldt.
- ALLAN PARK DAVIDSON, Professor of Vocational Education (1919, 1930).
B. S., K. S. C., 1914; M. S., *ibid.*, 1925. G 29; 1600 Humboldt.
- FLOYD EWING DAVIDSON, Assistant in Agronomy, Southeastern Kansas Experiment Fields (1934).
B. S., K. S. C., 1933. R. F. D. 3, Parsons, Kan.
- CHARLES DEFOREST DAVIS, Assistant Professor of Farm Crops (1921).
B. S., K. S. C., 1921; M. S., *ibid.*, 1926. E. Ag. 305A; 1013 Laramie.
- ELIZABETH HAMILTON DAVIS, Reference Librarian (1920).
A. B., MacMurray College for Women, 1909; B. L. S., University of Illinois, 1914.
Li 51; 1224A Moro.
- HALLAM WALKER DAVIS, Professor of English (1913, 1918); Head of Department of English (1913, 1921).
A. B., Indiana University, 1909; A. M., Columbia University, 1913.
K 54; 1727 Fairview.

WILMER ESLA DAVIS, Professor of Plant Physiology (1909, 1927).

Graduate, Ohio Normal University, 1894; A. B., University of Illinois, 1903.
H 32; 1123 Thurston.

EARLE REED DAWLEY, Professor of Engineering Materials (1920, 1933); Assistant Engineer of Tests (1920).

B. S., University of Illinois, 1919; M. S., K. S. C., 1927. E 135; 1200 Kearney.

GEORGE ADAM DEAN, Professor and Head of Department of Entomology (1902, 1913); Entomologist, Agricultural Experiment Station (1902, 1913).

B. S., K. S. C., 1895; M. S., *ibid.*, 1905. F 51; 1725 Poyntz.

MAUDE ELIZABETH DEELY, Instructor and District Home Demonstration Agent Leader, Division of College Extension (1923, 1934).

B. S., K. S. C., 1923; A. M., Columbia University, 1932. A 62; 1649 Fairchild.

HERMANN CHARLES DEMPEWOLF, Maj., Inf., U. S. A.; Associate Professor of Military Science and Tactics (Sept. 1, 1935).

Graduate, Infantry School, 1925; Graduate, Chemical Warfare School, 1930.
N 26; 1314 Fremont.

PERCY LEROY DEPUY, (Temporary) Instructor in Zoölogy, Division of College Extension (1928; Dec. 20, 1935).

B. S., K. S. C., 1918; M. S., *ibid.*, 1923. A 3; 1725 Leavenworth.

GRACE EMILY DERBY, Associate Librarian (1911, 1918).

A. B., Western College for Women, 1905. Li 55; 1825 Leavenworth.

ARTHUR DEVOR, Graduate Assistant in Chemistry (Feb. 17, 1936).

B. S., McPherson College, 1935. W 29A; 1408 Laramie.

OSEE MAY DILL, Assistant College Physician (Jan. 3, 1935).

A. B., Indiana University, 1913; M. D., *ibid.*, 1915. A 58; 1223 Bluemont.

MERLE ALFRED DODGE, Graduate Assistant in Chemistry (Feb. 1, 1936).

B. S., K. S. C., 1935. W 29A; Rockhill.

RAYMOND JOSEPH DOLL, Instructor in Agricultural Economics (1935; March 1, 1936).

B. S., K. S. C., 1935. W. Ag 328; ———

LEILA MURILL DOMAN, Associate Professor of Household Economics (Sept. 1, 1935).

Ed. B., University of California at L. A., 1930; Ph. D., Cornell University, 1935.
L 65; 324 N. 15th.

CARL ALFRED DORF, (Temporary) Instructor in Chemistry (1931; Sept. 1, 1935).

A. B., Bethany College, 1920; M. S., K. S. C., 1932. W 26; 1011 Bluemont.

LYLE WAYNE DOWNEY, Associate Professor of Music and Director of the College Band and the College Orchestra (1928; Sept. 1, 1935).

A. B., James Milliken University, 1923; B. Mus., American Conservatory, 1928; M. S., K. S. C., 1932. M 30; 1840 Anderson.

RAYMOND RODNEY DRAKE,¹ Associate Agricultural Engineer, U. S. D. A.; Soil Erosion Investigations, Fort Hays Branch Agricultural Experiment Station (1929).

B. S. in A. E., K. S. C., 1929. Hays, Kan.

LESTER HENRY DRAYER, Chief Engineer, Heat and Power Department (1916, 1927).

E 3; 531 Moro.

MAURICE LELAND DUMARS, Assistant Extension Editor, Division of College Extension (Feb. 17, 1935).

B. S., K. S. C., 1933. A 4; 1301 Poyntz.

1. In coöperation with the U. S. Department of Agriculture.

HUGH DURHAM, Assistant Dean, Division of Agriculture (1915, 1927); Assistant to Director, Agricultural Experiment Station (1918); Associate Professor of Agricultural Education (1927).

Graduate, Kansas State Teachers College, Emporia, 1901; A. B., University of Kansas, 1909; A. M., *ibid.*, 1915. E. Ag. 105; 730 Osage.

MERRILL AUGUSTUS DURLAND, Professor of Machine Design (1919, 1928); Assistant Dean of Division of Engineering (1926).

B. S., K. S. C., 1918; M. E., *ibid.*, 1922; M. S., *ibid.*, 1923. E 116; 1300 Fremont.

EVELYN FLORENCE DUTTON, Instructor in Art (1932).

B. S., University of New Hampshire, 1922; A. M., Columbia University, 1932. A 68B; 924 Moro.

RALPH R. DYKSTRA, Dean of Division of Veterinary Medicine (1919); Professor of Surgery (1911, 1913).

D. V. M., Iowa State College, 1905. V 30; 607 Houston.

RALPH L. EDGEL, (Temporary) Instructor in Economics (Jan. 30, 1936).

A. B., University of Utah, 1932; M. B. A., Northwestern University, 1935. A 51A; 1800 Laramie.

HAL F. EIER, Instructor in Rural Engineering, Division of College Extension (1934; Dec. 23, 1935).

E 131; 1001 Osage.

HELEN ELIZABETH ELCOCK, Associate Professor of English (1920, 1926).

A. B., College of Emporia, 1907; A. M., University of Chicago, 1921. A 52; 426 N. 17th.

CARL G. ELLING, Associate Professor of Animal Husbandry, Division of College Extension (1918, 1921).

B. S., K. S. C., 1904. A 3; R. F. D. 1.

OTTO HERMAN ELMER, Assistant Professor of Botany and Plant Pathology (1927).

B. S., Oregon Agricultural College, 1911; M. S., *ibid.*, 1916; Ph. D., Iowa State College, 1924. H 56; 354 N. 15th.

LEONARD HUBERT ELWELL, Graduate Research Assistant in Zoölogy, Agricultural Experiment Station (Sept. 1, 1935).

A. B., Kalamazoo College, 1935. F 5; 1503 Fairchild.

WALTER TITUS EMERY,³ Assistant Entomologist, Bureau of Entomology and Plant Quarantine, U. S. D. A.; Investigator of Staple Crop Insects (1934).

A. B., Kansas University, 1911; A. M., *ibid.*, 1913. U. S. Lab., 1204 Fremont; 1729 Laramie.

ANDREW BRIAN ERHART, Assistant in Agronomy in charge of the Southwest Kansas Experiment Fields (1934; Feb. 1, 1936).

B. S., K. S. C., 1933. Meade, Kan.

FRED P. ESHBAUGH, Forest Nurseryman, Fort Hays Branch Agricultural Experiment Station (1934).

B. S., K. S. C., 1926; M. S., Purdue University, 1928. Hays, Kan.

MORRIS EVANS, Associate Professor of Agricultural Economics (1920, 1926); on leave April 1, 1935, to June 30, 1936.

B. S., K. S. C., 1920; M. S., *ibid.*, 1925. W. Ag 328; 1601 Poyntz.

LOUISE HELEN EVERHARDY, Associate Professor of Art (1919, 1920).

Graduate, New York School of Fine and Applied Art, 1916; B. S., Columbia University, 1925; A. M., *ibid.*, 1926. A 55A; 1104 Vattier.

3. In coöperation with the Kansas Agricultural Experiment Station.

WILLIAM LAWRENCE FAITH, Assistant Professor of Chemical Engineering (1933; Sept. 1, 1935).

B. S., University of Maryland, 1928; M. S., University of Illinois, 1929; Ph. D., *ibid.*, 1932. D 29; 1447 Anderson Ave.

HERMAN FARLEY, Assistant Professor of Pathology (1929).

D. V. M., K. S. C., 1926; M. S., *ibid.*, 1934.

V 2; 1407 Laramie.

FRANCIS DAVID FARRELL, President of the College (1918, 1925).

B. S., Utah Agricultural College, 1907; Agr. D., University of Nebraska, 1925.

A 30; President's House, College Campus.

JACOB OLIN FAULKNER, Professor of English (1922, 1927).

A. B., Washington and Lee University, 1907; A. M., Pennsylvania State College, 1920.

K 62; 1720 Fairview.

ARTHUR CECIL FAY, Professor of Bacteriology (1921, 1934).

B. S., University of Missouri, 1920; M. S., University of Wisconsin, 1921; Ph. D., Iowa State College, 1933.

V 28; 1621 Leavenworth.

HURLEY FELLOWS,¹ Associate Pathologist, U. S. D. A.; Cereal Investigations, Agricultural Experiment Station (1925).

B. S., Oregon State College, 1920; M. S., University of Wisconsin, 1921; Ph. D., *ibid.*, 1923.

H 2; 344 N. 15th.

FREDERICK CHARLES FENTON, Professor and Head of Department of Agricultural Engineering (1928).

B. S., Iowa State College, 1914; M. S., *ibid.*, 1930.

E 214; 322 N. 17th.

CHRIS HENRY FICKE,¹ Junior Pathologist, U. S. D. A.; Cereal Investigations, Agricultural Experiment Station (1930).

B. S., Iowa State College, 1925; M. S., K. S. C., 1927.

H 2; 1500 N. 9th.

GEORGE ALBERT FILINGER, Assistant Professor of Pomology (1931); Assistant Pomologist, Agricultural Experiment Station (1931).

B. S., K. S. C., 1924; M. S., *ibid.*, 1925; Ph. D., Ohio State University, 1931.

H 35; 209 N. Delaware.

EMORY D. FISHER, (Temporary) Instructor in Chemistry (Sept. 21, 1935).

B. S., Dakota Wesleyan University, 1931; Ph. D., University of Wisconsin, 1935.

W 29A; 608 Moro.

HELEN BERNICE FISHER, Instructor in Child Welfare and Euthenics (1932; Sept. 1, 1935).

A. B., DePauw University, 1932; M. S., K. S. C., 1933.

L 32B; 900 Bluemont.

BEATTY HOPE FLEENOR, Professor of Education, Home Study Service, Division of College Extension (1923, 1927).

B. S., K. S. C., 1919; M. S., *ibid.*, 1923; Ph. D., University of Missouri, 1931.

A 5; 1635 Osage.

ARTHUR ORAN FLINNER, Assistant Professor of Mechanical Engineering (1929, 1934).

B. S. in M. E., K. S. C., 1929; M. S., *ibid.*; 1933.

E 109; 1613 Humboldt.

ROWLAND WILLIAM FLOURNOY, (Temporary) Graduate Assistant in Chemistry (Sept. 23, 1935).

B. S., K. S. C., 1935.

W 29A; 1231 Vattier.

EUSTACE VIVIAN FLOYD, Professor of Physics (1911, 1921).

B. S., Earlham College, 1903.

W. Ag 228; 1417 Laramie.

VERNON DANIEL FOLTZ, Assistant Professor of Bacteriology (1927, 1932).

B. S., K. S. C., 1927; M. S., *ibid.*, 1929.

V 52; 1531 Leavenworth.

1. In coöperation with the U. S. Department of Agriculture.

CONIE CAROLINE FOOTE, Assistant Professor and Specialist in Foods and Nutrition, Division of College Extension (1924, 1932); on indefinite leave July 1, 1934.

B. S., K. S. C., 1921; A. M., Columbia University, 1931. A 62; 1429 Laramie.

MARJORIE B. FORCHEMER, Assistant in Physical Education for Women (Sept. 1, 1935).

B. S., Teachers College, Columbia University, 1921; M. A., *ibid.*, 1927. N 1; 1430 Laramie.

HELEN WHEELER FORD, Professor and Head of Department of Child Welfare and Euthenics (1926, 1928).

B. S., Rhode Island State College, 1914; Ph. D., Yale University, 1925. L 62; 1115 Bertrand.

KENNEY LEE FORD, Alumni Secretary (1928).

B. S., K. S. C., 1924; M. S., *ibid.*, 1932. A 38A; 1516 Leavenworth.

SINA FAYE FOWLER, Instructor in Institutional Management (July 1, 1935).

B. S., Northeast Missouri State Teachers College, 1927; M. S., K. S. C., 1933. T 28; 900 Bluemont.

GLENN SYLVESTER FOX, Instructor in Agricultural Economics (1933; Feb. 1, 1936).

B. S., K. S. C., 1933. W. Ag 330 B; 1116 Bluemont.

EDWARD RAYMOND FRANK, Professor of Surgery (1926; July 1, 1935).

B. S., K. S. C., 1918; D. V. M., *ibid.*, 1924; M. S., *ibid.*, 1929. VH 53; 1837 Anderson.

KARL C. FRANK, Capt., C. A. C., U. S. A.; Assistant Professor of Military Science and Tactics (Sept. 1, 1935).

N 26; 1416 Humboldt.

FORREST FAYE FRAZIER, Professor of Civil Engineering (1911, 1922).

C. E., Ohio State University, 1910. E 123; 1815 Leavenworth.

ALVA EVERETT FREEMAN, JR., Graduate Research Assistant in Zoölogy, Agricultural Experiment Station (Sept. 1, 1935).

B. S., University of Tulsa, 1935. F 36; 1745 Anderson.

EDWIN JACOB FRICK, Professor of Medicine (1919, 1926); Head of Department of Surgery and Medicine (July 1, 1935).

D. V. M., Cornell University, 1918. VH 54; 319 N. 16th.

WESLEY LEONARD FRY, Professor of Physical Education (1934; July 1, 1935).

LL. B., State University of Iowa, 1926. N 35; 321 N. Delaware.

MARGUERITE MORRISON FULKS, Graduate Assistant in Institutional Management (Sept. 1, 1935).

B. S. in Ed., Ohio University, 1935. T 28; 619 N. 11th.

MANFORD W. FURR, Professor of Civil Engineering (1917, 1927).

B. S., Purdue University, 1913; C. E., *ibid.*, 1925; M. S., K. S. C., 1926. E 122; 1426 Humboldt.

PERCY LEIGH GAINES, Professor of Bacteriology (1914, 1922); Soil Bacteriologist, Agricultural Experiment Station (1914).

B. Agr., North Carolina A. and M. College, 1908; M. S., *ibid.*, 1910; A. M., Washington University, 1911; Ph. D., *ibid.*, 1927. V 26; 1123 Houston.

JOSEPH LINCOLN GALE, Graduate Assistant in Agricultural Engineering (Sept. 1, 1935).

B. S., University of California, 1935. E 216; 600 N. Manhattan.

ANNABEL ALEXANDER GARVEY, Assistant Professor of English (1920, 1927).

A. B., Wellesley College, 1912; A. M., University of Kansas, 1914.

A 54; 1601 Fairchild.

FRANK CALEB GATES, Professor of Plant Taxonomy and Ecology (1919, 1928).

A. B., University of Illinois, 1910; Ph. D., University of Michigan, 1912.

H 76A; 1515 Humboldt.

EMMA LYNNETTE GATTEN, Graduate Assistant in Institutional Management (Sept. 1, 1935).

B. Sc., University of Nebraska, 1935.

T 28; 1000 Vattier.

HUGH GILBERT GAUCH, Graduate Research Assistant in Botany, Agricultural Experiment Station (July 1, 1935).

A. B., Miami University, 1935.

H 28; 920 Laramie.

STEPHEN ARNOLD GEAUQUE, Custodian (1918, 1926).

PP 35; 1014 Laramie.

GEORGE ALBERT GEMMELL, Professor of Education, in charge of Department of Home Study Service, Division of College Extension (1918, 1922).

B. S., Kansas State Teachers College, Pittsburg, 1917; B. S., K. S. C., 1920; M. S., *ibid.*, 1922; Ph. D., University of Missouri, 1930.

A 5; 411 N. 16th.

KATHERINE GEYER, Assistant Professor of Physical Education for Women (1927; Sept. 1, 1935).

Diploma, Sargent School of Boston University, 1925; B. S., Ohio State University, 1927; A. M., Columbia University, 1934.

N 3; 1531 Leavenworth.

WILLIAM EVERETT GIBSON,² Engineer of Tests, Kansas State Highway Commission; Road Materials, Engineering Experiment Station (1930).

B. S., K. S. C., 1927; M. S., *ibid.*, 1933; C. E., *ibid.*, 1933.

E 17; 219 N. 6th.

HENRY WILBUR GILBERT, Instructor in Landscape Gardening, Division of College Extension (Dec. 1, 1935).

B. S., K. S. C., 1931.

A 34; 822 Houston.

RANDOLPH FORNEY GINGRICH, Associate Professor of Engineering Drawing and Descriptive Geometry (1923, 1931); Assistant Superintendent of Maintenance (1933).

B. S. in C. E., University of Nebraska, 1923; M. S., K. S. C., 1929.

S 51; 1731 Humboldt.

CLARENCE LEE GISH, Superintendent of Poultry Farm (1934).

B. S., K. S. C., 1934.

Poultry Farm; R. F. D. 1.

KINGSLEY WALTON GIVEN, Associate Professor of Public Speaking (1930).

A. B., Park College, 1926; A. M., State University of Iowa, 1928.

G 55; 350 N. 15th.

JOHN SNELL GLASS, Assistant Professor of Rural Engineering, Division of College Extension (1928); resigned Dec. 26, 1935.

B. S., Iowa State College, 1917.

E 131; R. F. D. 1.

OTIS BENTON GLOVER, Assistant Professor of Agricultural Extension, District Supervisor, Division of College Extension (1929, 1934).

B. S., K. S. C., 1915.

A 62; 1031 Kearney.

DAVID GOLD, Graduate Research Assistant in Mechanical Engineering (Sept. 1, 1935).

B. S. in M. E., Purdue University, 1935; B. S. in E. E., *ibid.*, 1935.

E 109; 351 N. 15th.

2. In coöperation with the Kansas State Highway Department.

NEWELL E. GOOD,³ Assistant Entomologist, Bureau of Entomology and Plant Quarantine, U. S. D. A.; Investigator of Stored Grain and Flour-mill Insects (1934).

A. B., Heidelberg College, 1927; M. S., George Washington University, 1929; Ph. D., U. S. Lab., 1204 Fremont; 1409 Humboldt. ibid., 1935.

BONNIE VIRGINIA GOODMAN, Instructor in Household Management, Division of College Extension (1934).

B. S., Southwestern Texas State Teachers College, 1926; M. S., K. S. C., 1932.
A 62A; 1409 Laramie.

ARTHUR LEONARD GOODRICH, Jr., Instructor in Zoölogy (1929).

B. S., College of Idaho, 1928; M. S., University of Idaho, 1929. F 78; 1642 Laramie.

EUGENE CLAYTON GRAHAM, Associate Professor of Farm Shop Practice (1922, 1926).

B. S., Carleton College, 1898; B. S. in M. E., University of Minnesota, 1902.
S 37; 501 Sunset.

CLARENCE OWEN GRANDFIELD,¹ Assistant Agronomist, U. S. D. A.; Forage Crops, Agricultural Experiment Station (1927, 1929).

B. S., K. S. C., 1917; M. S., ibid., 1929. E. Ag 206A; 1634 Laramie.

EDWARD GRANT, Instructor in Foundry (1913); Foreman of Foundry (1913).

S 45; 1802 Anderson.

GEORGE WILLIAM GREENWOOD, Graduate Research Assistant in Zoölogy, Agricultural Experiment Station (Sept. 1, 1935).

B. S., Grove City College, 1935. Insectary; 1130 Vattier.

WALDO ERNEST GRIMES, Professor and Head of Department of Agricultural Economics (1913, 1921).

B. S., K. S. C., 1913; Ph. D., University of Wisconsin, 1923.
W. Ag 330A; 203 N. Delaware.

HAZLEY THOMAS GROODY, Assistant Physician, Department of Student Health (1925).

B. S., Valparaiso University, 1909; M. D., Chicago College of Medicine and Surgery, 1913.
A 59; 514 N. Juliette.

HILDA ROSE GROSSMANN, Assistant Professor of Voice (1927, 1932).

B. Mus., Chicago Musical College, 1925; B. S. in Music Ed., K. S. C., 1932.
N 76B; 1425 Laramie.

JESSIE GULICK, Acting Cataloguer in Library (1907, 1923).

Li 52; 1514 Humboldt.

MYRTLE ANNICE GUNSELMAN, Assistant Professor of Household Economics (1926, 1927).

B. S., K. S. C., 1919; A. M., University of Chicago, 1926. T 54; 1111 Bertrand.

RUTH HAINES, Secretary of the Young Women's Christian Association (1934).

A. B., University of Denver, 1931; A. M., ibid., 1933. A 36; 222 S. 17th.

EVERETT RAYMOND HALBROOK, Assistant Professor of Poultry Husbandry, Division of College Extension (1934).

B. S. in Agr., University of Missouri, 1930. 230 W. Ag; 930 Ratone.

JOSEPH LOWE HALL, Assistant Professor of Chemistry (1922, 1923).

B. S., University of Illinois, 1919; M. S., ibid., 1921; Ph. D., ibid., 1922.
D 27A; 511 N. 14th.

1. In coöperation with the U. S. Department of Agriculture.

3. In coöperation with the Kansas Agricultural Experiment Station.

- LAWRENCE LEENER HALL, Assistant Professor of Vocational Education (1929, 1931).
B. S., K. S. C., 1923; M. S., *ibid.*, 1927. G 28; 116 N. Delaware.
- MINA GOEHRING HALL, (Temporary) Research Assistant in Clothing and Textiles (1933; Sept. 1, 1935); resigned Jan. 31, 1936.
B. S., University of Nebraska, 1928; M. S., State University of Iowa, 1929; Ph. D., *ibid.*, 1931. L 68; 511 N. 14th.
- ALANSON LOLA HALLSTED,¹ Associate Agronomist, Bureau of Plant Industry, U. S. D. A.; Investigator in Dry-land Agriculture, Fort Hays Branch Agricultural Experiment Station (1909).
B. S., K. S. C., 1903. Hays, Kansas.
- JOHN ORR HAMILTON, Professor and Head of Department of Physics (1901, 1908); Physicist, Engineering Experiment Station (1913).
B. S., University of Chicago, 1900. W. Ag 225; 331 N. 14th.
- FLOYD JOSEPH HANNA, College Photographer (1922, 1930).
I; 1612 Leavenworth.
- EARL D. HANSING, Graduate Assistant in Botany (July 1, 1935).
B. S., University of Minnesota, 1933. H 56; 1213 Bluemont.
- MURVILLE JENNINGS HARBAUGH, Assistant Professor of Zoölogy (1929, 1930).
A. B., University of Montana, 1926; A. M., *ibid.*, 1930. F 37; 904 Bertrand.
- ELISABETH PERRY HARLING, Seed Analyst, Department of Agronomy (1912, 1917).
A 77; 628 Fremont.
- MARY THERESA HARMAN, Professor of Zoölogy (1912, 1921).
A. B., Indiana University, 1907; A. M., *ibid.*, 1909; Ph. D., *ibid.*, 1912.
F 39; 1821 Poyntz.
- FLORENCE LAVINA HAROLD, Graduate Assistant in Institutional Management (Sept. 1, 1935).
B. S., K. S. C., 1930. Van Zile Hall.
- VIDA AGNES HARRIS, Assistant Professor of Art (1927, 1931).
B. S., K. S. C., 1914; A. M., University of Chicago, 1927. A 55A; 1429 Laramie.
- STELLA MAUDE HARRISS, Assistant Professor of Chemistry (1917, 1927).
Graduate, (Peru) Nebraska State Normal School, 1908; B. S., K. S. C., 1917; M. S., *ibid.*, 1919. W 26; 311 Denison.
- LAWRENCE WILLIAM HARTEL, Assistant Professor of Physics (1920).
A. B., Central Wesleyan College, 1911; B. S., *ibid.*, 1912; B. S. in Ed., University of Missouri, 1915; M. S., K. S. C., 1924. W. Ag 130; 1802 Anderson.
- RUTH HARTMAN, Assistant Professor of Music (1924).
Graduate in Public School Music, Iowa State Teachers College, 1912; Two-year Certificate, Northwestern University, 1923. M 56; 1508 Humboldt.
- EFFIE LOVISA HASTINGS, Second Assistant to the Registrar (1927, 1928).
A 29; 122 S. Manhattan.
- WARD HILLMAN HAYLETT, Instructor in Physical Education for Men (1928, 1931).
A. B., Doane College, 1926. N 33; 1414 Humboldt.
- HERBERT HENLEY HAYMAKER, Professor of Plant Pathology (1917, 1927).
B. S., K. S. C., 1915; M. S., University of Wisconsin, 1916; Ph. D., *ibid.*, 1927.
H 54; 315 N. 16th.

1. In coöperation with the U. S. Department of Agriculture.

- HENRY MILES HEBERER, Associate Professor of Public Speaking (1925, 1930).
A. B., University of Illinois, 1922. G 55; 1715 Laramie.
- LINN HELANDER, Professor and Head of Department of Mechanical Engineering (1935); Mechanical Engineering, Engineering Experiment Station (1935).
B. S. in M. E., University of Illinois, 1915. E 109; 1430 Laramie.
- JOHN FREDERICK HELM, JR., Associate Professor of Free-Hand Drawing and Painting (1924, 1931).
B. D., Syracuse University, 1924. E 305; 1508 Humboldt.
- HOMER JAY HENNEY, Assistant Professor of Agricultural Economics (1927, 1928).
B. S., K. S. C., 1921; M. S., *ibid.*, 1928. W. Ag 330B; 1723 Leavenworth.
- JOHN VERN HEPLER,¹ Assistant Professor of Agricultural Extension, District Agricultural Agent, Division of College Extension (1921, 1930).
B. S., K. S. C., 1915. A 60; 701 Poyntz.
- EARL H. HERRICK, Associate Professor of Zoölogy; Mammalogist, Agricultural Experiment Station (June 1, 1935).
B. S., K. S. C., 1926; M. S., *ibid.*, 1927; Ph. D., Harvard, 1929. F 5; 1441 Laramie.
- KATHERINE JANE HESS, Associate Professor of Clothing and Textiles (1925, 1931).
B. S., K. S. C., 1900; M. S., *ibid.*, 1926. L 53; 601 Fremont.
- JOHN CLIFFORD HIDE, Instructor in Soils (Sept. 1, 1935).
B. Sc., University of Alberta; M. S., University of Minnesota, 1932; Ph. D., *ibid.*, 1935. E. Ag 207; 1116 Bluemont.
- HOWARD TEMPLETON HILL, Professor and Head of Department of Public Speaking (1920, 1922).
B. S., Iowa State College, 1910; J. D., University of Chicago, 1917. G 55; 1622 Leavenworth.
- RANDALL CONRAD HILL, Professor of Sociology (1929; July 1, 1935).
B. S., K. S. C., 1924; M. S., *ibid.*, 1927; Ph. D., University of Missouri, 1929. A 51A; 1902 Anderson.
- LORA VALENTINE HILYARD, Instructor in Junior Extension, Assistant State Club Leader, Division of College Extension (1930).
B. S., K. S. C., 1930. A 35B; 1649 Fairchild.
- ROLLAND THEODORE HINKLE, Graduate Assistant in Mechanical Engineering (Feb. 9, 1936).
B. S., K. S. C., 1935. E 109; 1326 Fremont.
- JULIAN ADAIR HODGES, Assistant Professor of Agricultural Economics (1923, 1926).
B. S. in Agr., University of Kentucky, 1917; M. S., *ibid.*, 1923. W. Ag 328; 108 N. 17th.
- MARY ELIZABETH HOFF, Head of Documents Department, College Library (1928).
A. B., Friends University, 1925; B. S. in L. S., University of Illinois, 1928. Li 26; 511 N. 14th.
- GARLAND CLARENCE HOGLUND, Moorman Research Fellow in Chemistry (1935; Feb. 1, 1936).
B. S., K. S. C., 1935. W 29A; 1642 Leavenworth.
- INA EMMA HOLROYD, Assistant Professor of Mathematics (1900, 1929).
B. S., K. S. C., 1915; B. S., Kansas State Teachers College, Emporia, 1916; A. M., Columbia University, 1929. S 53; 1001 Moro.

1. In coöperation with the U. S. Department of Agriculture.

EDWIN LEE HOLTON, Professor and Head of Department of Education (1910, 1913); Dean of Summer School (1910, 1918).

A. B., Indiana University, 1904; Ph. D., Columbia University, 1927.

G 27; 217 N. 14th.

ADRIAN AUGUSTUS HOLTZ, Men's Adviser and Secretary of Young Men's Christian Association (1919); Associate Professor of Sociology (1929; July 1, 1935).

A. B., Colgate University, 1909; Ph. M., University of Chicago, 1910; B. D., *ibid.*, 1911; Ph. D., *ibid.*, 1914.

A 43; 419 Denison.

ABRAM ELDRED HOSTETTER, (Temporary) Instructor in Chemistry (1930, 1934).

B. S., McPherson College, 1925; M. S., K. S. C., 1932.

D. 28; 1104 Bluemont.

HELEN PANSY HOSTETTER, Assistant Professor of Industrial Journalism and Printing (1932).

A. B., University of Nebraska, 1917; M. S., Northwestern University, 1926.

K 28; 514 N. 17th.

HAROLD HOWE, Professor of Agricultural Economics (1925, 1934); on sabbatic leave Feb. 1 to June, 1936.

B. S., K. S. C., 1922; M. S., University of Maryland, 1923.

W. Ag 325A; 1206 Thurston.

HAZEL DELL HOWE, (Temporary) Instructor in Clothing and Textiles (Feb. 1, 1936).

B. S., K. S. C., 1921; M. S., *ibid.*, 1935.

L 51; 1627 Anderson.

LEO EVERETT HUDIBURG, Assistant Professor of Physics (1930).

B. S., Kansas State Teachers College, Pittsburg, 1923; M. S., K. S. C., 1930.

W. Ag 130; 1624 Osage.

JOSIAH SIMSON HUGHES, Professor of Chemistry (1910, 1920).

B. S., Ohio Wesleyan University, 1908; M. S., *ibid.*, 1909; A. M., Ohio State University, 1910; Ph. D., *ibid.*, 1917.

D 28; 333 N. 15th.

ORVILLE DON HUNT, Associate Professor of Electrical Engineering (1923; Sept. 1, 1935); Exchange Professor for the year 1935-'36 at the University of Pittsburgh.

B. S. in E. E., Washington State College, 1923; M. S., K. S. C., 1930.

E 127; 1822 Poyntz.

MYRON WILLIAMS HUSBAND, College Physician and Head of Department of Student Health (Sept. 1, 1935).

B. A., University of Kansas, 1921; B. S., University of Minnesota, 1925; M. D., *ibid.*, 1928.

A 65; 1733 Laramie.

EMMA HYDE, Associate Professor of Mathematics (1920, 1926).

A. B., University of Kansas, 1912; A. M., University of Chicago, 1916.

S 56; 320 N. 15th.

HEMAN LAURITZ IBSEN, Professor of Genetics (1919, 1934).

B. S., University of Wisconsin, 1912; M. S., *ibid.*, 1913; Ph. D., *ibid.*, 1916.

E. Ag. 58; 1631 Osage.

IVOR VICTOR ILES, Professor of History and Government (1911, 1920).

A. B., University of Kansas, 1905; A. M., *ibid.*, 1905.

F 57; 325 N. 17th.

CLARENCE ROY JACCARD,¹ Assistant Professor of Agricultural Extension, District Agricultural Agent, Division of College Extension (1922, 1928).

B. S., K. S. C., 1926.

A 60; 208 S. 17th.

ELDEN VALORIUS JAMES, Professor of History and Government (1912, 1924).

A. B., Marietta College, 1901; A. B., University of Michigan, 1905; A. M., Marietta College, 1908.

F 64; 1723 Fairview.

1. In coöperation with the U. S. Department of Agriculture.

FLORENCE ELIZABETH JAMES, Director of the Cafeteria, Instructor in Institutional Economics (1934).

B. S., K. S. C., 1931; M. A., Mills College, 1932.

T 28; 1447 Anderson.

WILLIAM CHARLES JANES, Assistant Professor of Mathematics (1922, 1926).

B. S., Northwestern University, 1919; A. M., University of Nebraska, 1922.

S. 52; 1115 Thurston.

ALICE CLAYPOOL JEFFERSON, Assistant Professor of Piano (1925, 1927).

Graduate, American Conservatory of Music, 1921; B. Mus., *ibid.*, 1929.

N 76D; 1519 Fairchild.

RICHARD ROSLYN JESSON, Assistant Professor of Music (1929, 1931).

B. Mus., Oberlin College, 1929.

M 54; 1116 Bluemont.

JOHN HAROLD JOHNSON, Instructor in Junior Extension, Assistant State Club Leader, Division of College Extension (1927; Nov. 1, 1935).

B. S., K. S. C., 1927.

A 35A; 1727 Humboldt.

CHARLES OTIS JOHNSTON,¹ Associate Pathologist, U. S. D. A.; Cereal Investigations, Agricultural Experiment Station (1919).

B. S., K. S. C., 1918; M. S., *ibid.*, 1924.

H. 53; 1323 Laramie.

EDWARD C. JONES, Assistant Professor of Machine Tool Work (1916, 1920).

B. M. E., Iowa State College, 1905; M. E., *ibid.*, 1922; M. S., K. S. C., 1934.

S 32; R. F. D. 1.

ELMER THOMAS JONES,³ Assistant Entomologist, Bureau of Entomology and Plant Quarantine, U. S. D. A.; Investigator of Staple Crop Insects (1934).

B. S., Missouri University, 1924; A. M., *ibid.*, 1925.

U. S. Lab., 1204 Fremont; 210 S. 17th.

LOUIS MARK JORGENSEN, Associate Professor of Electrical Engineering (1925; Sept. 1, 1935).

B. S., K. S. C., 1907; M. S., *ibid.*, 1930.

E 127; 730 Laramie.

MARGARET M. JUSTIN, Dean of Division of Home Economics (1923).

B. S., K. S. C., 1909; B. S. in Educ., Teachers College, Columbia University, 1915; Ph. D., Yale University, 1923.

L 29; 531 N. Manhattan.

JULIUS ERNEST KAMMEYER, Professor and Head of Department of Economics (1903, 1904); deceased Jan. 11, 1936.

A. B., Central Wesleyan College, 1886; A. M., *ibid.*, 1889; LL. D., Kansas City University, 1912.

A 75A; 1212 Thurston.

EDGAR TALBERT KEITH, Professor of Industrial Journalism and Printing (1912, 1925).

B. S., K. S. C., 1912.

K 26A; 1741 Fairview.

ERNEST BAKER KEITH, Associate Professor of Chemistry (1918, 1927).

B. S., K. S. C., 1913; Ph. D., University of Chicago, 1924.

W 27; 1719 Fairchild.

LEONE BOWER KELL, Instructor in Child Welfare and Euthenics (1927, 1929).

B. S., K. S. C., 1923; M. S., *ibid.*, 1928.

L 33A; 727 Leavenworth.

AMY KELLY, Professor, State Home Demonstration Leader, Division of College Extension (1923); resigned Feb. 15, 1936.

B. S., South Dakota State College, 1908.

A 63A; 1508 Humboldt.

EDWARD GUERRANT KELLY, Professor of Entomology, Division of College Extension (1918, 1922).

B. S., University of Kentucky, 1903; M. S., *ibid.*, 1904; Ph. D., Iowa State College, 1927.

F 69; 1621 Humboldt.

1. In coöperation with the U. S. Department of Agriculture.

3. In coöperation with the Kansas Agricultural Experiment Station.

SAMUEL GREENBERG KELLY,⁴ Agent for Xanthium Research for the Commonwealth of Australia, Division of Economic Entomology; Cocklebur Control Investigations, Agricultural Experiment Station (1929).

B. S., K. S. C., 1929; M. S., *ibid.*, 1930.

F 80; 1026 Bertrand.

RUSSELL MARION KERCHNER, Professor of Electrical Engineering (1922, 1934).

B. S., University of Illinois, 1922; M. S., K. S. C., 1927.

E 121; 1730 Poyntz.

MARY KIMBALL, First Assistant to the Registrar (1918).

B. S., K. S. C., 1907.

A 29; 1311 Laramie.

HERBERT HIRAM KING, Professor and Head of Department of Chemistry (1906, 1918); Chemist, Agricultural Experiment Station (1918); Chemist, Engineering Experiment Station (1909, 1918).

B. S., Ewing College, 1904; A. M., *ibid.*, 1906; M. S., K. S. C., 1915; Ph. D., University of Chicago, 1918.

D 29; 1711 Fairchild.

EUNICE LEOLA KINGSLEY, (Temporary) Instructor in Botany and Plant Pathology (1929; Sept. 16, 1935).

B. S., North Dakota Agricultural College, 1926; M. S., K. S. C., 1931.

H 32; 909 Thurston.

CHARLES HOWARD KITSELMAN, Professor of Pathology (1919, 1933).

V. M. D., University of Pennsylvania, 1918; M. S., K. S. C., 1927.

VH 71; 1810 Laramie.

ROYCE GERALD KLOEFFLER, Professor and Head of Department of Electrical Engineering (1916, 1927).

B. S. in E. E., University of Michigan, 1913; S. M., Massachusetts Institute of Technology, 1930.

E 120; Blue River Lodge.

LOUIS MEYERS KNIGHT, Assistant Professor of Agricultural Extension, District Supervisor, Division of College Extension (1923, 1934).

B. S., K. S. C., 1923.

A 60; 215 S. 17th.

KATHLEEN KNITTLE, Assistant to the Dean of Women (1931).

B. S., K. S. C., 1923.

A 42; 726 Leavenworth.

LESTER HENRY KOENITZER, Assistant Professor of Applied Mechanics (1929, 1934).

B. S., Iowa State College, 1926; M. S., *ibid.*, 1929; C. E., *ibid.*, 1930.

E 14; 1610 Humboldt.

MARTHA MORRISON KRAMER, Professor of Food Economics and Nutrition (1922, 1925); on leave, July 11 to Sept. 10, 1934.

B. S., University of Chicago, 1916; A. M., Columbia University, 1920; Ph. D., *ibid.*, 1922.

L 28; 426 N. 17th.

DOROTHEA ROSALIE KRAUSHAAR, (Temporary) Instructor in Piano (Sept. 7, 1935); first semester, 1935-'36.

B. S. in Ed., Ohio State University, 1935; Graduate of Cosmopolitan School of Music, 1918.

N 76E; 1601 Fairchild.

BERNICE LYDIA KUNERTH, Technician, Department of Food Economics and Nutrition (1932, 1933).

B. S., Iowa State College, 1932; M. S., K. S. C., 1933.

L 13; 1212 Fremont.

JOSEPH BENJAMIN KUSKA,¹ Associate Agronomist, Bureau of Plant Industry, U. S. D. A.; Investigator in Dry-land Agriculture, Colby Branch Agricultural Experiment Station (1914).

B. S., University of Nebraska, 1913.

Colby Branch Station; Colby, Kan.

1. In coöperation with the U. S. Department of Agriculture.

4. In coöperation with the Division of Economic Entomology, Commonwealth of Australia.

- RUSSELL LAMAN, (Temporary) Instructor in English (Sept. 20, 1935).
B. S., K. S. C., 1931; M. A., State University of Iowa, 1932.
K 56; 913 Humboldt.
- PAUL GRIFFITH LAMERSON, Assistant in Entomology (1933; Jan. 1, 1936).
B. S., K. S. C., 1927; M. S., *ibid.*, 1931.
Wathena, Kan.
- ROY CLINTON LANGFORD, Assistant Professor of Psychology (1925, 1933).
B. S., K. S. C., 1925; M. S., *ibid.*, 1926; Ph. D., Leland Stanford, Jr., University, 1934.
G 32D; 325 N. 17th.
- ELMER LARSON, Staff Sergt., D. E. M. L., U. S. A.; Instructor in Military Science and Tactics (1933).
N 26; 1430 Laramie.
- MENDEL ELMER LASH, Assistant Professor of Chemistry (1929).
A. B., Ohio State University, 1920; M. S., *ibid.*, 1922; Ph. D., *ibid.*, 1928.
W 27; 819 Kearney.
- RALPH RICHARD LASHBROOK, Instructor in Industrial Journalism and Printing (1934; June 1, 1935).
B. S., K. S. C., 1929.
K 28B; 1000 N. Manhattan.
- ALPHA CORINNE LATZKE, Professor and Head of Department of Clothing and Textiles (1929; Sept. 1, 1935).
B. S., K. S. C., 1919; M. S., *ibid.*, 1928.
L 55; 1527 Humboldt.
- HILMER HENRY LAUDE, Professor of Farm Crops (1920, 1931).
B. S., K. S. C., 1911; M. S., Texas A. and M. College, 1918.
E. Ag 208; 321 Denison.
- ELDEN EMANUEL LEASURE, Professor of Physiology (1926; July 1, 1935).
D. V. M., K. S. C., 1923; M. S., *ibid.*, 1930.
V 34; 1510 Leavenworth.
- CAMILLE LEON LEFEBVRE, Assistant Professor of Botany (1932).
B. S., University of Minnesota, 1929; A. M., Harvard University, 1931; Ph. D., *ibid.*, 1932.
H 54; 1116 Bluemont.
- EDWARD HENRY LEKER, Assistant Professor of Plant Pathology, Division of College Extension (1929).
B. S., University of Missouri, 1917; M. S., K. S. C., 1927.
H 53; 357 N. 14th.
- ELLIS PIERSON LEONARD, Instructor in Surgery and Medicine (Sept. 1, 1935).
B. S., Rutgers University, 1929; D. V. M., Cornell University, 1934.
V H 53; 1531 Leavenworth.
- CLARENCE FLAVIUS LEWIS, Associate Professor of Mathematics (1920, 1926).
A. B., University of Denver, 1913; M. S., K. S. C., 1925.
E 105; 1615 Humboldt.
- HERBERT FREDERICK LIENHARDT, Professor and Head of Department of Pathology (1917, 1920).
V. M. D., University of Pennsylvania, 1916.
V 60; 1118 Bertrand.
- LOUIS HENRY LIMPER, Professor of Modern Languages (1914, 1926).
A. B., Baldwin Wallace College, 1907; A. M., University of Wisconsin, 1914; Ph. D., State University of Iowa, 1931.
A 71; 1324 Laramie.
- WILLIAM LINDQUIST, Professor and Head of Department of Music (1925, 1927).
B. Mus., Cosmopolitan School of Music and Dramatic Art, Chicago, 1925.
M 33; 202 S. 17th.
- ROGER P. LINK, Instructor in Anatomy and Physiology (Aug. 1, 1935).
D. V. M., Iowa State College, 1935.
V 34; Vet. Hospital, 57.
- JAMES WALTON LINN, Associate Professor of Dairy Husbandry, Division of College Extension (1923, 1927).
B. S., K. S. C., 1915.
W. Ag 125; 117 N. 14th.

HENRY LEWIS LOBENSTEIN, Assistant Professor of Horticulture, Division of College Extension (1928, 1929); on leave Nov. 11, 1935, to June 30, 1936.

B. S., K. S. C., 1926.

A 3; 1127 Kearney.

LEROY HENRY LOHMANN, Major, C. A. C., U. S. A.; Associate Professor of Military Science and Tactics (1933).

Graduate, U. S. Military Academy, 1917; Graduate, Battery Officers Course, Coast Artillery School, 1924; Graduate, Command and General Staff School, 1933.

N 26; 727 Humboldt.

EVELYN E. LONGREN, Laboratory Technician, Department of Student Health (Oct. 1, 1935); resigned Feb. 29, 1936.

A 64; College Hospital.

LISLE LESLIE LONGSDORF, Extension Editor and Radio Program Director, Division of College Extension (1927).

B. S., University of Wisconsin, 1925; M. S., *ibid.*, 1926.

A 4; 825 Bertrand.

HENRY WILBERT LOY, JR., Assistant Chemist, Agricultural Experiment Station (1930); resigned Nov. 30, 1935.

B. S., K. S. C., 1930; M. S., *ibid.*, 1933.

E. Ag 204A; 1426 Laramie.

JOHN WALLACE LUMB, Associate Professor of Veterinary Medicine, Division of College Extension (1924, 1931).

D. V. M., K. S. C., 1910; M. S., *ibid.*, 1930.

V 32; 1631 Leavenworth.

JACOB LUND, Superintendent of Heat and Power, Emeritus (1883, 1925); Custodian of Buildings and Grounds, Emeritus (1883, 1925).

B. S., K. S. C., 1883; M. S., *ibid.*, 1886.

E 26B; 1414 Fairchild.

DANIEL EMMETT LYNCH, Assistant Professor of Forging (1914, 1920); Foreman of Blacksmith Shop (1914).

S 41; 1528 Pierre.

HAZEL ALMA LYNESS, Instructor in Home Economics Education (1930, 1932); Itinerant Teacher of Adult Home-making Education (1930); resigned Aug. 31, 1935.

B. S., K. S. C., 1922; M. S., *ibid.*, 1932.

G 28.

ERIC ROSS LYON, Associate Professor of Physics (1921, 1928).

A. B., Phillips University, 1911; M. S., *ibid.*, 1923.

W. Ag 225; Baltimore Hotel.

WALDO HIRAM LYONS, Associate Professor of Mathematics (1924, 1926).

A. B., University of Denver, 1912; A. M., *ibid.*, 1916.

S 52; 816 Leavenworth.

JESSIE McDOWELL MACHIR, Registrar (1913).

A 29; 1641 Fairchild.

ALBERT JOHN MACK, Professor of Mechanical Engineering (1917, 1928).

B. S., K. S. C., 1912; M. E., *ibid.*, 1921.

E 109; 1619 Osage.

DAVID LESLIE MACKINTOSH, Associate Professor of Animal Husbandry (1921; July 1, 1935).

B. S., University of Minnesota, 1920; M. S., K. S. C., 1926.

E. Ag 9; 1425 Humboldt.

HUBERT WHATLEY MARLOW, Assistant Professor of Chemistry (1925, 1932).

B. S., North Texas Teachers College, 1925; M. S., University of Chicago, 1928; Ph. D., *ibid.*, 1931.

W 29A; 917 Fremont.

MAX RULE MARTIN, Assistant Professor of Violin, Viola, and Reed Instruments (1929).

Graduate in Violin, William A. Bunzen; Graduate in Orchestra, Sander Harmati; Graduate in Musical Composition, R. Cuscaden.

N 76A; 1413 Laramie.

WILLARD HUNGATE MARTIN, Professor of Dairy Husbandry (1925, 1928).

B. S., Purdue University, 1918; M. S., Pennsylvania State College, 1922.

W. Ag 128C; 1615 Osage.

WILLMIMA PEARL MARTIN, Instructor in Home Health and Sanitation, Division of College Extension (1919).

R. N., Christ's Hospital, Topeka.

A 62A; 930 Osage.

JAMES WARREN MATHER, Instructor in Agricultural Economics, Division of College Extension (Feb. 1, 1936).

B. S., K. S. C., 1934; M. S., *ibid.*, 1936.

W Ag 329; 1116 Bluemont.

CHARLES WALTON MATTHEWS, Professor of English (1920, 1925).

B. S., Kansas State Teachers College, Pittsburg, 1918; A. M., University of Chicago, 1923.
K 55; 1718 Fairview.

GEORGE WILLARD MAXWELL, Assistant Professor of Physics (1927, 1928).

A. M., University of Michigan, 1920.

W. Ag 134A; 1324 Laramie.

NELLIE MAY, Postmistress (1911).

A 44; R. F. D. 1.

LORRAINE MAYTUM, Instructor in Physical Education for Women (1933).

B. S., University of Wisconsin, 1926.

N 1; 1212 Fremont.

CHARLES WILBUR McCAMPBELL, Professor and Head of Department of Animal Husbandry (1910, 1918); Animal Husbandman, Agricultural Experiment Station (1910, 1918).

B. S., K. S. C., 1906; D. V. M., *ibid.*, 1910; B. S., in Agr., *ibid.*, 1918.

E. Ag 9A; 121 N. Juliette.

LULU BELLE McCLUSKEY, Housekeeper, College Hospital (March 1, 1935); resigned Oct. 31, 1935.

Kansas State Teachers College, Emporia, 1903.

College Hospital.

STERLING McCOLLUM, Instructor in Shop Practice (1930).

S 34; 905 Pierre.

CLIFFORD DALE McDONALD, Sergt., D. E. M. L., U. S. A., Instructor in Military Science and Tactics (1933).

N 26; 1201 Moro.

MAYNARD LEE McDOWELL, Instructor in Chemistry (1926).

A. B., Central College, 1924; A. M., University of Missouri, 1926; Ph. D., State University of Iowa, 1934.

W 29A; 1638 Laramie.

LORETTA McELMURRY, Instructor in Clothing and Textiles, Division of College Extension (1927); resigned Dec. 31, 1935.

B. S., South Dakota State College, 1901.

A 62; 514 N. 17th.

HIRAM TEMPLE McGEHEE, (Temporary) Instructor in Chemistry (1931; Sept. 1, 1935); resigned Nov. 16, 1935.

B. S., K. S. C., 1931; M. S., *ibid.*, 1932.

W 29 A; 615 N. 11th.

WILLIAM MAX McLEOD, Professor of Anatomy and Physiology (1919, 1933).

D. V. M., Iowa State College, 1917.

V 33; 1016 Vattier.

EVA MYRTLE McMILLAN, Instructor in Food Economics and Nutrition (1930).

Ph. B., University of Chicago, 1918; M. S., *ibid.*, 1929.

L. 7; 908 Laramie.

CHARLES DEAN McNEAL, Instructor in Agricultural Economics (1934; Dec. 1, 1935); resigned Jan. 31, 1936.

B. S., K. S. C., 1934.

W. Ag 330B; 1116 Bluemont.

LEO EDWARD MELCHERS, Professor and Head of Department of Botany and Plant Pathology (1913, 1919); Plant Pathologist, Agricultural Experiment Station (1913).

B. S., Ohio State University, 1912; M. S., *ibid.*, 1913.

H 58; 1931 Leavenworth.

ALICE MAUDE MELTON, Assistant to the Dean, Division of General Science (1909, 1919).

B. S., K. S. C., 1898.

A 47; 804 Moro.

JOSEPH FARRINGTON MERRILL, Assistant Chemist, Agricultural Experiment Station (1921).

B. S., University of Maine, 1907.

E. Ag 204A; 318 N. 16th.

WILLIAM HAROLD METZGER, Assistant Professor of Soils (1932).

B. S., Purdue University, 1922; M. S., K. S. C., 1927; Ph. D. Ohio State University, 1931.

E. Ag 207A; 809 N. 11th.

EDWIN CYRUS MILLER, Professor of Plant Physiology (1910, 1919).

A. B., Lebanon College, 1906; A. B., Yale University, 1907; Ph. D., *ibid.*, 1910.

H 27; 211 N. 18th.

LEONARD FRED MILLER, (Temporary) Assistant in Agricultural Economics (Feb. 1, 1936).

B. S., K. S. C., 1936.

W. Ag 327; 1126 Bluemont.

MAURICE CHARLES MOGGIE, Instructor in Education (1933).

B. S., K. S. C., 1929; M. S., *ibid.*, 1931.

G 27; 915 Kearney.

CONRAD STEPHEN MOLL, Instructor in Physical Education for Men (1929); on sabbatic leave 1935-'36.

Graduate, Concordia College, Fort Wayne, Ind., 1918; B. P. E., George Williams College, 1925; M. S., K. S. C., 1933.

N 31A; College Heights.

GEORGE MONTGOMERY, Assistant Professor of Agricultural Economics (1925, 1930), on leave Oct. 1, 1934, to August 31, 1935.

B. S., K. S. C., 1925; M. S., *ibid.*, 1927.

W. Ag 329; 325 N. 17th.

FRITZ MOORE, Professor and Head of Department of Modern Languages (1934).

B. A., University of Akron, 1927; M. A., University of Illinois, 1930; Ph. D., *ibid.*, 1932.

A 69; 804 Moro.

LEO ALBERT MOORE, (Temporary) Instructor in Shop Practice (Sept. 1, 1935).

B. S., K. S. C., 1925.

S 29; 526 Moro.

CHARLES L. MORGAN, Associate Professor of Architecture (1934).

B. S. in Arch., University of Illinois, 1914.

E 223; 318 S. 17th.

CHARLES CLEON MORRILL, Assistant Professor of Pathology (Aug. 1, 1935).

D. V. M., Michigan State College, 1933; M. S., *ibid.*, 1935.

V 57A; 1430 Poyntz.

MARIA MORRIS, Assistant Professor of Art (1925, 1932).

B. S., K. S. C., 1911; Graduate, New York School of Fine and Applied Art, 1924; M. S., K. S. C., 1927.

A 68A; 816 N. Juliette.

REED FRANKLIN MORSE, Assistant Professor of Civil Engineering (1929, 1934).

A. B., Cornell College, 1921; B. S., Iowa State College, 1923; M. S., K. S. C., 1933.

E 220; 930 Laramie.

THIRZA ADALINE MOSSMAN, Assistant Professor of Mathematics (1922, 1926).

A. B., University of Nebraska, 1916; A. M., University of Chicago, 1922.

S 53; 1601 Fairchild.

JEPHTHA JERRY MOXLEY, Assistant Professor of Animal Husbandry, Division of College Extension (1925, 1927).

B. S. in Agr., K. S. C., 1922.

A 34; 1030 Thurston.

ANNA NEAL MULLER, Class Reserves Assistant in Library (1929).

B. S., K. S. C., 1921.

Li 1; 1218 Bertrand.

WILLIAM A. MURPHY, Assistant Professor of Economics (1933, 1934); on leave 1935-'36.

B. S., University of Kansas, 1928; M. B. A., *ibid.*, 1930.

A 74; 1210 Vattier.

FRANK LEWIS MYERS, Assistant to the Director of Physical Education (1926).

B. Mus., K. S. C., 1925.

N 35; 1715 Poyntz.

HAROLD EDWIN MYERS, Assistant Professor of Soils (1929, 1931).

B. S., K. S. C., 1928; M. S., University of Illinois, 1929.

E. Ag 207; 800 Vattier.

ROBERT KIRKLAND NABOURS, Professor and Head of Department of Zoölogy (1910, 1913); Zoölogist, Agricultural Experiment Station (1910, 1913); Curator of Natural History Museum (1910).

Ed. B., University of Chicago, 1905; Ph. D., *ibid.*, 1911.

F 29; 401 Denison.

CARL LEROY NELSON, Assistant Professor of Economics and Accounting (Sept. 1, 1935).

B. B. A., University of Minnesota, 1931.

A 74; 1433 Anderson.

MARGARET ALICE NEWCOMB, Assistant Professor of Botany (1925; Sept. 1, 1935).

B. S., K. S. C., 1925; M. S., *ibid.*, 1927.

H 32; 1227 Bluemont.

SAMUEL ALBERT NOCK, Vice-president of the College (Jan. 1, 1936).

B. A., Haverford College, 1921; M. A., Carleton College, 1927; Ph. D., University of Tartu (Estonia), 1929.

A 46B; 1819 Leavenworth.

GEORGE DAVID OBERLE, (Temporary) Graduate Assistant in Horticulture (Sept. 1, 1935).

B. S., K. S. C., 1931.

H 4; 907 Osage.

ALLEN LESLIE OLSEN, (Temporary) Instructor in Chemistry (Sept. 18, 1935).

B. A., St. Olaf College, 1929; M. Sc., University of Nebraska, 1931; Ph. D., *ibid.*, 1934.

D 28; 331 N. 17th.

JOHN CARL OLSEN, Instructor in Machine Drawing and Design (1927); resigned Sept. 1, 1935.

B. S., Colorado Agricultural College, 1925; M. S., K. S. C., 1931.

E 209; 431 Bluemont.

CHARLES K. OTIS, Instructor in Agricultural Engineering (March 1, 1936).

B. S. in Agr., University of Wisconsin, 1932; B. S. in M. E., University of Wisconsin, 1933.

E 216; ———.

CLARICE MARIE PAINTER, Assistant Professor of Piano (1924).

Diploma in Piano, Hardin College, 1919; Diploma, New England Conservatory of Music, 1932.

M 51; 1649 Fairchild.

REGINALD HENRY PAINTER, Associate Professor of Entomology (1926, 1930).

A. B., University of Texas, 1922; A. M., *ibid.*, 1924; Ph. D., Ohio State University, 1926.

F 77; 1021 Kearney.

HARRIET SHIPLEY PARKER, Assistant Professor of English (1924, 1927).

A. B., University of Kansas, 1909; A. M., Washington University, 1912.

A 52; 1615 Fairchild.

JOHN HUNTINGTON PARKER,¹ Professor of Crop Improvement (1917, 1921); Agronomist, U. S. D. A.; Plant Breeder, Agricultural Experiment Station (1917).

B. S. in Agr., University of Minnesota, 1913; M. S., Cornell University, 1916; Ph. D., Cambridge University, 1928.

E. Ag 304A; 1728 Fairview.

RALPH LANGLEY PARKER, Professor of Apiculture and Entomology (1925, 1930); State Apiarist (1925).

B. S., Rhode Island State College, 1915; Sc. M., Brown University, 1917; M. S., Iowa State College, 1922; Ph. D., Cornell University, 1925.

F 82; 1809 Leavenworth.

FRED LOUIS PARRISH, Professor of History and Government (1927; Sept. 1, 1935).

A. B., Northwestern University, 1917; B. D., Garrett Biblical Institute, 1920; A. M., Northwestern University, 1922.

F 61; 727 Sunset.

FRANK GEORGE PARSONS, Assistant in Coöperative Experiments in Department of Agronomy (July 1, 1935).

B. S., K. S. C., 1935.

E. Ag 201; 1425 Laramie.

1. In coöperation with the U. S. Department of Agriculture.

FRANKLIN LEONARD PARSONS, Assistant Professor of Agricultural Economics (July 1, 1935).

B. S., K. S. C., 1932; M. S., *ibid.*, 1934.

W. Ag 330B; R. F. D. 1.

LEROY CLAY PASLAY, Assistant Professor of Electrical Engineering (1931; July 1, 1935).

B. S., K. S. C., 1930; M. S., *ibid.*, 1934.

E 24; 1641 Anderson.

BUEL ROREX PATTERSON, Assistant in Physical Education (1933).

B. S., Oklahoma A. & M. College, 1934.

N 32; 1429 Laramie.

FLOYD PATTISON, Professor of Mechanical Engineering, Home-Study Service, Division of College Extension (1919, 1927).

B. S., K. S. C., 1912; M. S., Massachusetts Institute of Technology, 1929.

A 5; 805 Kearney.

LEONARD WILLIAM PATTON, (Temporary) Assistant Professor of Horticulture, Division of College Extension (1933; Nov. 11, 1935).

B. S., K. S. C., 1933.

A 3; 607 N. Juliette.

GEORGE RICHARD PAULING, Superintendent of Maintenance, in Charge of Buildings and Repairs, Custodian, and Heat and Power Departments (1913, 1925).

PP 28; 1217 Kearney.

LOYAL FREDERICK PAYNE, Professor and Head of Department of Poultry Husbandry (1921, 1922); Poultry Husbandman, Agricultural Experiment Station (1921, 1922).

B. S., Oklahoma A. & M. College, 1912; M. S., K. S. C., 1925.

W. Ag 227 A; 4 College Heights Road.

CLINTON ELLICOTT PEARCE, Professor and Head of Department of Machine Design (1917, 1922).

S. B., Massachusetts Institute of Technology, 1913.

E 210; 316 Denison.

RUTH JEANETTE PECK, Instructor in Home Furnishings, Division of College Extension (1928, 1934).

B. S., K. S. C., 1928.

A 62; 1212 Fremont.

FREDERICK ADAMS PEERY, (Temporary) Instructor in English (Sept. 20, 1935).

B. S., K. S. C., 1933.

K 53; 805 Poyntz.

WALTER EUGENE PEERY, Radio Operator, Division of College Extension (1933).

N 79; 805 Poyntz.

MARION HERFORT PELTON,* Assistant Professor of Piano (1928, 1931).

B. Mus., University of Wisconsin, 1927; B. S., K. S. C., 1932.

N 76E; 1649 Fairchild.

ROYCE OWEN PENCE, Assistant Professor of Milling Industry (1927; July 1, 1935).

B. S. in F. M. E., K. S. C., 1924; M. S., *ibid.*, 1930; F. M. S., *ibid.*, 1935.

E. Ag 101; 917 Kearney.

ALFRED THOMAS PERKINS, Associate Professor of Chemistry (1925, 1933).

B. S., Pennsylvania State College, 1920; M. S., Rutgers College, 1922; Ph. D., *ibid.*, 1923.

W. Ag 204; 1616 Humboldt.

EMILIE FIDELIA PERLE, (Temporary) Instructor in Art (Oct. 7, 1935).

A. B., University of California, 1930; M. A., *ibid.*, 1932.

A 86; 311 N. 14th.

MILFRED JOHN PETERS, Military Property Custodian, Department of Military Science and Tactics (July 1, 1935).

B. S., K. S. C., 1934.

N 29; 816 Leavenworth.

* On sabbatic leave first semester of 1935-'36.

JOHN CHRISTIAN PETERSON, Professor of Psychology (1917, 1926).

A. B., University of Utah, 1913; Ph. D., University of Chicago, 1917.

G 30; 1330 Laramie.

WALTER JOHN PETERSON, Instructor in Chemistry (Sept. 1, 1935).

B. S., Michigan State College, 1930; M. S., *ibid.*, 1933; Ph. D., University of Iowa, 1935.

W 26; 926 Humboldt.

DOROTHY BRANFORD PETTIS, Assistant Professor of Modern Languages (1927, 1928).

A. B., University of Nebraska, 1919; A. M., *ibid.*, 1924.

A 70; 515 N. 14th.

HAZEL ELIZABETH TAYLOR PFUETZE, Secretary, Department of Education (1925).

G 27; 1724 Fairchild.

GERALD PICKETT, Assistant Professor of Applied Mechanics (1929; Sept. 1, 1934).

B. S., Oklahoma A. and M. College, 1927; M. S., K. S. C., 1931.

E 113; 1421 Poyntz.

WILLIAM FRANCIS PICKETT, Associate Professor of Horticulture (1917, 1931).

B. S., K. S. C., 1917; M. S., *ibid.*, 1923; Ph. D., Michigan State College, 1935.

H 33; 1119 Thurston.

WILFRED HAROLD PINE, Instructor in Agricultural Economics (1934; Dec. 1, 1935).

B. S., K. S. C., 1934.

W. Ag 327; 1116 Bluemont.

MARTHA S. PITTMAN, Professor and Head of Department of Food Economics and Nutrition (1919, 1922).

B. S., K. S. C., 1906; B. S., Columbia University, 1916; A. M., *ibid.*, 1918; Ph. D., University of Chicago, 1930.

L 39; 1909 Poyntz.

CLARENCE OSBORN PRICE, Assistant to the President (1920).

A 30; 501 Bluemont.

RALPH RAY PRICE, Professor and Head of Department of History and Government (1903).

A. B., Baker University, 1896; A. M., University of Kansas, 1898.

F 56; 615 Humboldt.

ELIZABETH QUINLAN, Associate Professor of Clothing and Textiles (1925; Sept. 1, 1935).

B. S., K. S. C., 1917; M. A., Columbia University, 1924.

L 53; 1519 Fairchild.

LEON REED QUINLAN, Professor of Horticulture, in Charge of Landscape Gardening (1927, 1931).

B. S., Colorado Agricultural College, 1920; M. L. A., Harvard University, 1925.

H 8; 919 Thurston.

DRYDEN MARIE QUIST, Assistant in Education and Institutional Management (1931, 1932).

B. S., Iowa State College, 1924; M. S., K. S. C., 1932.

T 56; 1617 Leavenworth.

GEORGE ELLSWORTH RABURN, Professor of Physics (1910, 1920); on leave Feb. 1, 1935, to May 31, 1936.

A. B., University of Michigan, 1907; M. S., *ibid.*, 1913.

W. Ag 225; College Heights.

GLEN BRADSHAW RAILSBACK, Instructor in Agricultural Economics, Division of College Extension (1933; July 18, 1935).

B. S., K. S. C., 1925.

Farm Bureau; Clay Center, Kan.

SARAH RATZLOFF, Nurse, Department of Student Health (1934).

R. N., Halstead Hospital, 1925.

College Hospital.

GEORGE NATHAN REED, Instructor in Chemistry (1929).

B. S., Oklahoma A. and M. College, 1922; M. S., University of Oklahoma, 1924.

D 27A; 1447 Anderson.

LAWRENCE REED, Assistant to the Superintendent, Fort Hays Branch Agricultural Experiment Station (1934).

B. S., K. S. C., 1933.

Hays, Kan.

WILLIAM FRED REHM, Maj., Inf., U. S. A.; Assistant Professor of Military Science and Tactics (1932).

Graduate, Concordia College, Ft. Wayne, Ind., 1915; Graduate, Company Officers Course, Ft. Benning, 1924; Graduate, Advanced Course, Ft. Benning, 1932.

N 26; 210 S. 10th.

WILLARD MALCOLM REID, Graduate Research Assistant in Zoölogy, Agricultural Experiment Station (Sept. 1, 1935).

B. S., Monmouth College, 1932.

1614 Humboldt.

THOMAS RUSSELL REITZ, Assistant Professor of Horticulture in Charge of Northeastern Kansas Experimental Fields (1931, 1932); on leave Dec. 16, 1934, to Dec. 31, 1935; resigned Dec. 31, 1935.

B. S., K. S. C., 1927.

R. F. D. 5; Atchison, Kan.

BENJAMIN LUCE REMICK, Professor and Head of Department of Mathematics (1900).

Ph. B., Cornell College, 1889; Ph. M., *ibid.*, 1892.

S 54; 613 Houston.

ADA RICE, Professor of English (1899, 1927).

B. S., K. S. C., 1895; M. S., *ibid.*, 1912.

A 61; 917 Osage.

WILLIAM HUGH RIDDELL, Associate Professor of Dairy Husbandry (1929, 1931).

B. S. A., University of British Columbia, 1922; M. S., University of Minnesota, 1924; Ph. D., *ibid.*, 1932.

W. Ag 125; 326 N. 16th.

JULES HENRY ROBERT, Professor of Applied Mechanics and Hydraulics (1916, 1925).

B. S., University of Illinois, 1914.

E 113; 1729 Fairchild.

JOHN BISSELL ROBERTS, Instructor in Agricultural Economics (1934; Dec. 1, 1935); resigned Feb. 29, 1936.

B. S., K. S. C., 1933; M. S., *ibid.*, 1935.

W. Ag 328; 1220 Vattier.

JUNE ROBERTS, Instructor in Agricultural Engineering (1934; July 1, 1935).

B. S., K. S. C., 1933; M. S., *ibid.*, 1934.

E 216; 1331 Poyntz.

MOTT LUTHER ROBINSON, Assistant Professor of Agricultural Extension, District Supervisor (Wheat), Division of College Extension (1923, 1934).

B. S., K. S. C., 1923.

Ext. Annex 201; 1737 Laramie.

NOBLE WARREN ROCKY, Professor of English (1921).

A. B., Ohio State University, 1905; A. M., *ibid.*, 1916.

K. 52; 1605 Leavenworth.

CHARLES ELKINS ROGERS, Professor and Head of Department of Industrial Journalism and Printing (1919, 1926); on leave Aug. 1, 1934, to Aug. 31, 1935.

A. B., University of Oklahoma, 1914; M. S., K. S. C., 1926; A. M., Stanford University, 1932.

K 30; 1740 Fairview.

FRANK PLETCHER ROOT, Assistant Professor of Physical Education and Athletics (1924).

B. S., K. S. C., 1914; M. S., *ibid.*, 1924.

N 34; 1429 Laramie.

PEARL ELZORA RORABAUGH, (Temporary) Instructor in Food Economics and Nutrition (Feb. 1, 1936).

B. S., K. S. C., 1929; M. S., *ibid.*, 1932.

L 64; 1601 Fairchild.

VANCE MATHER RUCKER, Assistant Professor of Agricultural Economics, Division of College Extension (1928, 1930).

B. S., K. S. C., 1928.

A 3; 1519 Humboldt.

LUCILE OSBORN RUST, Professor of Home Economics Education (1924, 1929).

B. S., Kansas State Teachers College, Pittsburg, 1921; M. S., K. S. C., 1925.

G 28; Tatarrax Apts.

IRA EDGAR RYDER, Maj., Inf., U.S. A., Assistant Professor of Military Science and Tactics (1930).

A. B., St. John's College, 1913.

N 26; 1102 Houston.

HELEN G. SAUM, Professor of Physical Education for Women (1928, 1931).

Diploma, Battle Creek School for Physical Education, 1919; B. S. in Ed., Ohio State University, 1927.

N 1; 1031 Fremont.

DAVID A. SAVAGE,¹ Assistant Agronomist, Bureau of Plant Industry, U.S.D. A.; Investigator in Forage Crops, Fort Hays Branch Agricultural Experiment Station (1929).

B. S., Montana State College, 1924.

Hays, Kan.

EDWIN DONALD SAYRE, Associate Professor of Voice (1925, 1934).

A. B., DePauw University, 1923; B. Mus., School of Music, *ibid.*, 1925; A. M., Columbia University, 1931.

N 76C; 1848 Anderson.

ALAN MAX SCHAIBLE, (Temporary) Graduate Assistant in Chemistry (Sept. 18, 1935).

B. S., K. S. C., 1935.

W 29A; 336 N. 15th.

JESSE MCKINLEY SCHALL, Assistant Professor of English, Home Study Service, Division of College Extension (1930, 1934).

A. B., Southeast Missouri State Teachers College, 1927; A. M., University of Missouri, 1930.

A 5; 1030 Kearney.

JEAN WILLARD SCHEEL, Extension Editor, Division of College Extension (1934, 1935).

B. S., K. S. C., 1934.

A4; 102 S. Manhattan.

EMMA SCHELBAR, Assistant to the Dean and Director of the Division of College Extension (Jan. 1, 1935).

Lawrence Business College, 1931.

A 33; 1031 Fremont.

CHARLES HENRY SCHOLER, Professor and Head of Department of Applied Mechanics (1920, 1922); Engineer of Tests in the Road Materials Laboratory (1920).

B. S., K. S. C., 1914.

E 11; 806 Bluemont.

ALBERT JOHN SCHOTH, Assistant Professor in Junior Extension, Assistant State Club Leader, Division of College Extension (1921; Oct. 15, 1935).

B. S., Oregon Agricultural College, 1918.

A 35A; 1116 Bluemont.

LUKE MICHAEL SCHRUBEN, Instructor in Agricultural Economics, Division of College Extension (1933; Nov. 10, 1935).

B. S., K. S. C., 1933.

W. Ag 327; 1723 Leavenworth.

FRED SCHUMANN, Instructor in Electrical Engineering (1933).

B. S. E., University of Michigan, 1931; M. S. E., *ibid.*, 1932.

E 19; 431 Leavenworth.

LOUISE SCHWENSEN, Secretary to the Dean, Division of Engineering (1915, 1918).

E 115; 1800 Leavenworth.

HAROLD MARTIN SCOTT, Associate Professor of Poultry Husbandry (1928, 1931).

B. S., Oregon Agricultural College, 1924; M. S., K. S. C., 1927.

W. Ag 230; 830 Bertrand.

JOSEPH PRESTWICH SCOTT, Professor of Pathology (1916, 1933); on leave April 21 to June 30, 1936.

B. S., Scientific Gymnasium, Lausanne, Switzerland, 1910; D. V. M., Ohio State University, 1914; M. S., K. S. C., 1924.

V 2; R. F. D. 8.

MYRA EDNA SCOTT, Instructor in English (1928, 1930).

B. S., K. S. C., 1921; A. M., Stanford University, 1928.

A 53; 924 Moro.

1. In cooperation with the U. S. Department of Agriculture.

DWIGHT M. SEATH, Assistant Professor of Dairy Husbandry, Division of College Extension (1930).

B. S., Iowa State College, 1926; M. S., K. S. C., 1930. W. Ag 125; 1601 Humboldt.

MARTINE A. SEATON, Assistant Professor of Poultry Husbandry, Division of College Extension (1928).

B. S. in Agr., University of Missouri, 1924. A 3; 501 Houston.

ROY ANDREW SEATON, Dean of Division of Engineering (1904, 1920); Director of the Engineering Experiment Station (1904, 1920).

B. S., K. S. C., 1904; M. S., *ibid.*, 1910; S. B., Massachusetts Institute of Technology, 1911. E 115; 722 Humboldt.

GABE ALFRED SELLERS, Professor of Metallurgy and Metallography (1919, 1928).

B. S., K. S. C., 1917; M. S., *ibid.*, 1929. S 30C; 927 Moro.

FREDERIC SENTI, Graduate Assistant in Chemistry (Dec. 1, 1935).

B. S., K. S. C., 1935. W 29A; 1215 Laramie.

FRED ALBERT SHANNON, Professor of History and Government (1926, 1934).

A. B., Indiana State Teachers College, 1914; A. M., Indiana University, 1918; Ph. D., State University of Iowa, 1924. F 59; 823 Bluemont.

JOHN HENRY SHENK, Instructor in Chemistry, (1929, 1930); on leave July 1, 1934, to June 30, 1936.

B. S., K. S. C., 1929; M. S., *ibid.*, 1931. W 30; 916 Osage.

CLARA MAGDALENE SIEM, Financial Secretary, Division of College Extension (1920, 1924).

A 33; 1430 Laramie.

CHARLES MOSES SIEVER, College Physician (1916); resigned Aug. 31, 1935.

Ph. G., Trinity University, 1903; M. D., *ibid.*, 1903; M. D., University of Kansas, 1907. A 65; 1721 Laramie.

EARL LeROY SITZ, Assistant Professor of Electrical Engineering (1927; Sept. 1, 1935).

B. S. in E. E., Iowa State College, 1927; M. S., K. S. C., 1932. E 24; 812 Moro.

ARTHUR BOURNE SMITH, College Librarian (1911).

Ph. B., Wesleyan University, 1900; B. L. S., University of Illinois, 1902. Li 31; 1213 Bluemont.

LLOYD FRANCIS SMITH, Associate Professor of Forestry (Sept. 1, 1935).

B. A., University of Kansas, 1930; M. F., Yale University, 1932. H 34; 1517 Leavenworth.

MABEL RACHEL SMITH, Instructor in Junior Extension, Assistant State Club Leader, Division of College Extension (1929, 1931).

B. S., K. S. C., 1926. A 35A; 1031 Fremont.

ROGER CLETUS SMITH, Professor of Entomology (1920, 1926).

A. B., Miami University, 1911; A. M., Ohio State University, 1915; Ph. D., Cornell University, 1917. F 54; 1801 Poyntz.

BENJAMIN LEVI SMITS, Assistant Professor of Chemistry (1926, 1932).

B. S., Michigan State College, 1924; M. S., *ibid.*, 1925; Ph. D., *ibid.*, 1926. W 29; 1210 Thurston.

GEORGIANA SMURTHWAITE, Assistant Professor and District Home Demonstration Agent Leader, Division of College Extension (1924, 1927).

B. S., Utah Agricultural College, 1911; M. S., K. S. C., 1931. A 63B; 1531 Leavenworth.

FLOYD ALONZO SMUTZ, Professor of Engineering Drawing and Descriptive Geometry (1918; Sept. 1, 1934).

B. S. in Arch., K. S. C., 1914. E 207; 1843 Anderson.

NORMAN JOHN SOLLENBERGER, Graduate Research Assistant in Applied Mechanics (Feb. 1, 1935); resigned Jan. 31, 1936.

B. S. in C. E., K. S. C., 1935.

E 135; 818 Bertrand.

HAROLD MONROE SPANGLER, (Temporary) Instructor in Anatomy and Physiology (Oct. 15, 1935).

D. V. M., Ohio State University, 1935.

V 33; 1116 Bluemont.

ARTHUR BRADLEY SPERRY, Professor of Geology (1921, 1927).

B. S., University of Chicago, 1919.

F 3A; 333 N. 18th.

FLORENCE MARGARET STEBBINS, Research Assistant in Genetics, Department of Zoölogy (1931).

B. S., K. S. C., 1923; M. S., *ibid.*, 1928.

Insectary; 312 N. 15th.

THEODORE CHRISTIAN STEBBINS, Graduate Assistant in Horticulture (Feb. 1, 1936).

B. S. in Educ., Kansas State Teachers College, Emporia, 1934; B. S., K. S. C., 1936.

H 35; 1627 Anderson.

NORA STEENBOCK, Head Hospital Nurse, Department of Student Health (1932); resigned Aug. 31, 1935.

R. N., Christ Hospital Training School, 1930.

College Hospital.

HARRY MARTIN STEWART, Associate Professor of Economics (1926, 1934).

A. B., University of Kansas, 1920; M. B. A., *ibid.*, 1926.

A 74; 1122 Vattier.

THOMAS BRUCE STINSON, Superintendent, Tribune Branch Agricultural Experiment Station (1924).

B. S., K. S. C., 1924.

Tribune, Kan.

HAROLD EARL STOVER, Instructor in Rural Engineering, Division of College Extension (Jan. 1, 1936).

B. S., K. S. C., 1929.

E 131; 1622 Leavenworth.

CHARLES WILLIAM STRATTON, Assistant Professor of Piano (1927, 1930).

B. Mus., K. S. C., 1926; M. S., *ibid.*, 1933.

M 55; 511 N. Sunset.

WILLIAM TIMOTHY STRATTON, Professor of Mathematics (1910, 1923).

A. B., Indiana University, 1906; A. M., *ibid.*, 1913; Ph. D., University of Washington, 1931.

E 105; 511 N. Sunset.

VIVAN LEWIS STRICKLAND, Professor of Education (1917, 1922).

A. B., University of Nebraska, 1906; A. M., *ibid.*, 1915; Ph. D., *ibid.*, 1925.

G 28; 1512 Leavenworth.

ANNA MARIE STURMER, Associate Professor of English (1920, 1926).

A. B., University of Nebraska, 1917; A. M., *ibid.*, 1920.

A 57; 1821 Laramie.

MILO J. STUTZMAN, Instructor in Shop Practice (Sept. 1, 1934).

A. B., McPherson College, 1920; M. S., University of Nebraska, 1922; Ph. D., Iowa State College, 1927.

S 30; 1029 Bertrand.

JOHN STEPHEN SULLIVAN, Lieut. Col., Inf., U. S. A.; Professor and Head of Department of Military Science and Tactics (1931).

Graduate, U. S. Military Academy, 1907; Graduate, Infantry School, Advanced Course, 1929; Graduate, Command and General Staff School, 1931.

N 27; 909 Humboldt.

HARRISON BOYD SUMMERS, Professor of Public Speaking (1923, 1930).

A. B., Fairmount College, Wichita University, 1917; A. M., University of Oklahoma, 1921; Ph. D., University of Missouri, 1931.

G 55; 1525 Humboldt.

ARTHUR FRITHIOF SWANSON,¹ Associate Agronomist, Bureau of Plant Industry, U. S. D. A.; Investigator in Cereal Crops, Fort Hays Branch Agricultural Experiment Station (1919).

B. S., K. S. C., 1919; M. S., University of Minnesota, 1923.

Hays, Kan.

1. In coöperation with the U. S. Department of Agriculture.

CHARLES OSCAR SWANSON, Professor and Head of Department of Milling Industry (1906, 1923).

A. B., Carleton College, 1899; M. Agr., University of Minnesota, 1905; Ph. D., Cornell University, 1922. Ag 110; 1640 Fairview.

LILLIAN JULIETTE SWENSON, Assistant Reference Librarian (1927).

A. B., Colorado College, 1924; B. S., Simmons College, 1927. Li 51; 1000 Vattier.

BRUCE ROSS TAYLOR, Assistant Professor of Animal Husbandry (1934; Feb. 1, 1936).

B. S., K. S. C., 1931; M. S., *ibid.*, 1934. W 6; 1116 Bluemont.

DELOS CLIFTON TAYLOR, Instructor in Applied Mechanics (1931).

B. S. in C. E., K. S. C., 1925. E 14; 1609 Humboldt.

EARL HICKS TEAGARDEN, Assistant Professor of Agricultural Extension, District Agent, Division of College Extension (1929, 1934).

B. S., K. S. C., 1920. A 60; 1010 Osage.

CHARLES RAY THOMPSON, Assistant Professor of Economics and Sociology (1929, 1931).

A. B., University of Kansas, 1927; A. M., *ibid.*, 1928. A 51A; 909 Thurston.

RAY IAMS THROCKMORTON, Professor and Head of Department of Agronomy (1911, 1925); Agronomist, Agricultural Experiment Station (1911, 1925).

B. S. in Agr., Pennsylvania State College, 1911; M. S., K. S. C., 1922. E. Ag 206B; 825 Houston.

FRANCIS LEONARD TIMMONS, Agent, Bureau of Plant Industry, U. S. D. A.; Investigator in Bindweed Control, Fort Hays Branch Agricultural Experiment Station (1928; July 1, 1935).

B. S., K. S. C., 1928; M. S., *ibid.*, 1932. Hays, Kan.

OLAF TORSTVEIT, (Temporary) Graduate Assistant in Zoölogy (Sept. 18, 1935).

B. A., Concordia College, 1934. F 5; 1201 Bluemont.

SUE TOWNSEND, Instructor in Modern Languages (Sept. 1, 1934).

B. S., K. S. T. C., Emporia, 1923; M. A., University of Colorado, 1927. A 70; 1429 Laramie.

DOROTHY TRIPLETT, Associate Professor of Child Welfare and Euthenics (1930, 1931).

B. S., Kansas State Teachers College, Emporia, 1924; A. M., State University of Iowa, 1927; Ph. D., *ibid.*, 1930. L 63; 619 N. 11th.

RUTH EMMA TUCKER, Assistant Professor of Food Economics and Nutrition (1925; Sept. 1, 1935).

A. B., University of Illinois, 1923; M. S., *ibid.*, 1925. L 43; 1503 Leavenworth.

ALONZO FRANKLIN TURNER,¹ Associate Professor, Field Agent, Division of College Extension (1917, 1920).

B. S., K. S. C., 1905. A 60; 810 Moro.

GRACE ELLEN UMBERGER, Head Nurse, Department of Student Health (1919).

B. S., K. S. C., 1905; R. N., Illinois Training School for Nurses, 1909. A 64; 1720 Poyntz.

HARRY JOHN CHARLES UMBERGER, Dean of Division of College Extension (1911, 1919); Director of College Extension (1911, 1919).

B. S., K. S. C., 1905. A 33; 1412 Leavenworth.

GLADYS ELLEN VAIL, Assistant Professor in Food Economics and Nutrition (1927; Sept. 1, 1935).

A. B., Southwestern College, 1924; M. S., University of Chicago, 1927. L 43; 511 N. 14th.

1. In coöperation with the U. S. Department of Agriculture.

WILLIAM ALEXANDER VAN WINKLE, Associate Professor of Chemistry (1922, 1931).

B. S., University of Michigan, 1911; M. S., University of Illinois, 1917; Ph. D., *ibid.*, 1920. D 28; 1110 Thurston.

MARY PIERCE VAN ZILE, Dean of Women (1908, 1918).

Diploma, Iowa State College, 1904; B. S., K. S. C., 1929. A 42; 800 Houston.

FAY ARTHUR WAGNER, Superintendent, Garden City Branch Agricultural Experiment Station (1919).

B. S. in Agr., New Mexico Agricultural College, 1916. Garden City, Kan.

GEORGE B. WAGNER,³ Assistant Entomologist, Bureau of Entomology and Plant Quarantine, U. S. D. A.; Investigator of Stored Grain and Flour Mill Insects (1934).

B. S., K. S. C., 1928; M. S., *ibid.*, 1929. U. S. Lab., 1204 Fremont; 400 S. Delaware.

HAROLD OSMOND WALES, Graduate Assistant in Dairy Husbandry (Sept. 1, 1935).

B. S., North Dakota Agricultural College, 1934. W. Ag 125; 1116 Bluemont.

HERBERT HALDEN WALKDEN,³ Assistant Entomologist, Bureau of Entomology and Plant Quarantine, U. S. D. A.; Investigator of Staple Crops Insects (1934).

B. S., Massachusetts Agricultural College, 1916. U. S. Lab., 1204 Fremont; 1741 Laramie.

CARROL KRAMER WARD, (Temporary) Instructor in Economics and Sociology (Sept. 1, 1935).

B. S., Kansas University, 1930. A 74; 1531 Leavenworth.

WALTER GILLING WARD, Professor in Charge of Rural Engineering, Division of College Extension (1920, 1925); on leave Dec. 15, 1934, to Aug. 31, 1935.

B. S. in Arch., K. S. C., 1912; Architect, *ibid.*, 1922; M. S., Iowa State College, 1931. E 131; 519 N. Manhattan.

JOSEPH THOMAS WARE, Assistant Professor of Architecture (1929; Sept. 1, 1935).

B. S., Georgia School of Technology, 1929. E 223; 1116 Bluemont.

EUGENE D. WARNER, Extension Architect, Division of College Extension (1935; Sept. 1, 1935).

B. S. in Arch., K. S. C., 1934. A 4; 1718 Fairview.

PAUL F. WARNER, Graduate Assistant in Chemistry (1934); resigned Aug. 31, 1935.

B. S., K. S. C., 1934. W 29A; 1126 Bluemont.

DON CAMERON WARREN, Professor of Poultry Husbandry (1923, 1929).

A. B., Indiana University, 1914; A. M., *ibid.*, 1917; Ph. D., Columbia University, 1923. W. Ag 229; 1616 Osage.

LOUIS PIERCE WASHBURN, Professor of Physical Education for Men (1926, 1931).

B. S., Carleton College, 1907; B. P. E., Springfield Y. M. C. A. College, 1911; M. P. E., *ibid.*, 1926. N 35; 1809 Poyntz.

ARTHUR D. WEBER, Professor of Animal Husbandry (1931).

B. S., K. S. C., 1922; M. S., *ibid.*, 1926. E. Ag 13; 359 N. 15th.

PAUL WEIGEL, Professor and Head of Department of Architecture (1921, 1924).

B. Arch., Cornell University, 1912; Architect, University of State of New York, 1920; Graduate, Buffalo Normal School, 1921. E 305; 1918 Leavenworth.

CLARA ELLEN WESCHE, Nurse, Department of Student Health (Sept. 1, 1935); resigned Jan. 31, 1936.

R. N., Christ Hospital, Topeka. College Hospital.

3. In coöperation with the Kansas Agricultural Experiment Station.

BESSIE BROOKS WEST, Professor and Head of Department of Institutional Economics (1928); Manager of Cafeteria (1928).

A. B., University of California, 1924; A. M., *ibid.*, 1928. T 52; 1617 Leavenworth.

ALFRED EVERETT WHITE, Professor of Mathematics (1909, 1918).

B. S., Purdue University, 1904; M. S., *ibid.*, 1909. A 72; 1743 Fairchild.

EDITH ZERILLA WHITE, Head Hospital Nurse, Department of Student Health (1932).

R. N., Christ Hospital Training School, 1918. College Hospital.

HATTIE HELEN WHITE, Secretary and Treasurer, Business Office (1912, 1925).

A 27; 717 Laramie.

LEON VINCENT WHITE, Associate Professor of Civil Engineering (1918, 1927).

B. S., K. S. C., 1903; C. E., *ibid.*, 1918; M. S., *ibid.*, 1927. E 122; 1832 Anderson.

JOHN HENDRICK WHITLOCK, Instructor in Pathology (1934; Aug. 1, 1935).

D. V. M., Iowa State College, 1934; M. S., K. S. C., 1935. V 57A; 1429 Laramie.

CARRELL HENRY WHITNAH, Assistant Professor of Chemistry and Associate Food Analyst (1929).

A. B., University of Nebraska, 1913; M. S., University of Chicago, 1917; Ph. D., University of Nebraska, 1925. W. Ag 127; 1815 Humboldt.

HENRY EVERT WICHES, Associate Professor of Rural Architecture (1924, 1934).

B. S. in Arch., K. S. C., 1924; M. S., *ibid.*, 1925; Architect, *ibid.*, 1930. E 224; R. F. D. 1.

MARY CHRISTINE WIGGINS, Instructor in Clothing and Textiles, Division of College Extension (1931, 1934).

B. S., K. S. C., 1929. A 62A; 1631 Osage.

DONALD ALDEN WILBUR, Assistant Professor of Entomology (1928).

B. S., Oregon State College, 1925; A. M., Ohio State University, 1927. F 83; 1100 Kearney.

MINNIE WILHITE, Housekeeper, College Hospital (Nov. 1, 1935).

College Hospital.

JULIUS TERRASS WILLARD, College Historian (1883; Jan. 1, 1936); Vice-president, 1918-Dec. 31, 1935; Dean, Division of General Science, 1901-1930; Professor of Chemistry, 1901-1918.

B. S., K. S. C., 1883; M. S., *ibid.*, 1886; Sc. D., *ibid.*, 1908. A 32; 1207 Houston.

CYRUS VANCE WILLIAMS, Professor of Vocational Education (1920).

B. Ed., (Peru) Nebraska State Teachers College, 1909; A. M., University of Nebraska, 1910; B. S. in Agr., *ibid.*, 1919; Ph. D., *ibid.*, 1925. G 28; 1735 Fairview.

DWIGHT WILLIAMS, Associate Professor of History and Government (1926).

A. B., University of Minnesota, 1916; LL. B., *ibid.*, 1918; A. M., *ibid.*, 1926. F 60; 701 Poyntz.

HARVEY O. WILLIAMS, Staff Sergt., D. E. M. L., U. S. A., Instructor in Military Science and Tactics (1932).

N 26; 112 S. 11th.

JENNIE WILLIAMS, Instructor in Child Welfare and Euthenics (1932).

B. S., K. S. C., 1910; R. N., University of Michigan Hospital, 1924; M. S., K. S. C., 1933. L 63; 511 N. 14th.

LOUIS COLEMAN WILLIAMS, Professor of Horticulture, Division of College Extension (1915, 1926).

B. S., K. S. C., 1912; B. S., *ibid.*, 1922. A 4; 520 N. 11th.

LUELLA WILLIAMS, Instructor in Education (Sept. 1, 1935).

B. S., Illinois State Normal University, 1928. Capitol, Topeka, Kan.

- STANLEY L. WILLIAMSON, Instructor in Physical Education (Sept. 1, 1935).
B. S. in Ed., University of Southern California, 1932. N 35; 1429 Laramie.
- LUTHER EARL WILLOUGHBY, Associate Professor of Farm Crops, Division of College Extension (1917, 1926).
B. S., K. S. C., 1912; B. S., in Agr., *ibid.*, 1916. E. Ag 250; 918 Thurston.
- ROY ELMER WILSON, Sergt., D. E. M. L., U. S. A., Instructor in Military Science and Tactics (1921).
N 26; 517 S. Manhattan.
- EDWARD JOSEPH WIMMER, Assistant Professor of Zoölogy (1928).
A. B., University of Wisconsin, 1925; A. M., *ibid.*, 1927; Ph. D., *ibid.*, 1928.
F 38; 1116 Bluemont.
- JANET ISABEL WOOD, Assistant in Physical Education for Women (1933); resigned Aug. 31, 1935.
A. B., University of Oregon, 1926; M. S., University of Wisconsin, 1933.
N 4; 1212 Fremont.
- LEVELLE WOOD, Assistant Professor of Institutional Economics (1928).
B. S., Oregon State College, 1921; M. S., Columbia University, 1928. Van Zile Hall.
- GENE NEILL WOODRUFF, Graduate Assistant in Chemistry (1934); resigned Feb. 15, 1936.
B. S., K. S. C., 1934. W 29A; 1215 Vattier.
- EARL BOOTH WORKING, Associate Professor of Milling Industry (1923).
A. B., University of Denver, 1917; A. M., *ibid.*, 1919; Ph. D., University of Arizona, 1922.
E. Ag 111; 918 N. 10th.
- BERNIE WILLIAM WRIGHT, Assistant Professor of Agricultural Economics, Division of College Extension (1929, 1934).
B. S., K. S. C., 1924. A 34; 1223 Poyntz.
- GLADYS WYCKOFF, Instructor in Education (Sept. 1, 1935).
B. S., Central Missouri State Teachers College, 1920; M. S., University of Missouri, 1928.
Capitol, Topeka, Kan.
- HARRY DASHIELD YOUNG,³ Associate Chemist, Bureau of Entomology and Plant Quarantine, U. S. D. A.; Investigator in Grain and Flour Fumigation (1934).
B. S., University of Nebraska, 1908. U. S. Lab., 1204 Fremont; 628 Houston.
- JAMES WALTER ZAHNLEY, Associate Professor of Farm Crops (1915, 1921).
B. S., K. S. C., 1909; M. S., *ibid.*, 1926. E. Ag 308; R. F. D. 1.
- MYRTLE EVELYN ZENER, Secretary to the Vice-president (1918).
A 46; 1104 Vattier.
- FRANKLIN JESSE ZINK, Associate Professor of Agricultural Engineering (1930); resigned Feb. 15, 1936.
B. S. in A. E., Iowa State College, 1924. E 216; 332 N. 15th.

COUNTY AGRICULTURAL AGENTS ¹

- HENRY JOSEPH ADAMS, Republic County Agricultural Agent, Division of College Extension (1934).
B. S., K. S. C., 1917. Belleville, Kan.
- ALBERT WILLIAM AICHER, Meade County Agricultural Agent, Division of College Extension (1934); resigned Aug. 15, 1935.
B. S., K. S. C., 1915. Meade, Kan.

1. In coöperation with the U. S. Department of Agriculture and the County Farm Bureaus of Kansas.

3. In coöperation with the Kansas Agricultural Experiment Station.

DALE ALLEN, Assistant County Agricultural Agent, Division of College Extension (Nov. 19, 1935).

B. S., K. S. C., 1922.

Manhattan, Kan.

GEORGE SMITH ATWOOD, Hodgeman County Agricultural Agent, Division of College Extension (1926).

B. S., K. S. C., 1924.

Jetmore, Kan.

CLEMENT HENRY AULT, Kingman County Agricultural Agent, Division of College Extension (1934); resigned Sept. 12, 1935.

B. S., University of Idaho, 1930; M. S., K. S. C., 1932.

Kingman, Kan.

MILBURNE CLINTON AXELTON, Jackson County Agricultural Agent, Division of College Extension (1929; May 28, 1935).

B. S., K. S. C., 1928.

Holton, Kan.

WALTER W. BABBIT, Assistant County Agricultural Agent, Division of College Extension (Dec. 1, 1935).

Manhattan, Kan.

KIMBALL LINCOLN BACKUS, Wyandotte County Agricultural Agent, Division of College Extension (1932).

B. S., K. S. C., 1931.

Kansas City, Kan.

R. E. BAUSMAN, Assistant County Agricultural Agent, Division of College Extension (Dec. 24, 1935).

Manhattan, Kan.

JOHN GREGORY BELL, Norton County Agricultural Agent, Division of College Extension (1933; Dec. 1, 1935).

B. S., K. S. C., 1932.

Norton, Kan.

HERMAN ALBERT BISKIE, Franklin County Agricultural Agent, Division of College Extension (1928).

B. S., University of Nebraska, 1917.

Ottawa, Kan.

EARL CLARENCE BORGELT, Assistant County Agricultural Agent, Division of College Extension (Aug. 26, 1935).

B. S., K. S. C., 1935.

Manhattan, Kan.

DANIEL MATTHEW BRAUM, Allen County Agricultural Agent, Division of College Extension (1930); resigned Dec. 6, 1935.

B. S., K. S. C. 1924.

Iola, Kan.

WILLIAM JACOB BRAUN, Assistant County Agricultural Agent, Division of College Extension (Oct. 1, 1935); resigned Jan. 5, 1936.

B. S., K. S. C., 1931.

Manhattan, Kan.

LEE JUSTIN BREWER, Assistant County Agricultural Agent, Division of College Extension (Sept. 1, 1935).

B. S., K. S. C., 1935.

Manhattan, Kan.

ALBERT BROWN, Bourbon County Agricultural Agent, Division of College Extension (1934).

B. S., K. S. C., 1929.

Fort Scott, Kan.

FRANK SHERMAN BURSON, Chase County Agricultural Agent, Division of College Extension (1935; Feb. 7, 1936).

B. S., K. S. C., 1934.

Cottonwood Falls, Kan.

RICHARD HENRY CAMPBELL, Assistant County Agricultural Agent, Division of College Extension (Sept. 17, 1935).

B. S., K. S. C., 1935.

Manhattan, Kan.

- SYLVESTER ULRIC CASE, Crawford County Agricultural Agent, Division of College Extension (1934).
B. S., K. S. C., 1923. Girard, Kan.
- FRANCIS WILLARD CASTELLO, Ellsworth County Agricultural Agent, Division of College Extension (1935; June 11, 1935).
B. S., K. S. C., 1933. Ellsworth, Kan.
- RALPH BOYD CATHCART, Kingman County Agricultural Agent, Division of College Extension (1935; Jan. 1, 1936).
B. S., K. S. C., 1933; M. S., University of Nebraska, 1934. Kingman, Kan.
- HERBERT WILLIAM CLUTTER, Finney County Agricultural Agent, Division of College Extension (1935; July 1, 1935).
B. S., K. S. C., 1933. Garden City, Kan.
- EUGENE FREDERICK COLLINS, Assistant County Agricultural Agent, Division of College Extension (Dec. 14, 1935).
B. S., K. S. C., 1934. Manhattan, Kan.
- CARL CLARENCE CONGER, Stafford County Agricultural Agent, Division of College Extension (1934; Feb. 1, 1936).
B. S., K. S. C., 1933. St. John, Kan.
- WILLIAM JOSEPH CONOVER, Ellis County Agricultural Agent, Division of College Extension (1934).
B. S., K. S. C., 1932. Hays, Kan.
- EARL CLARK COULTER, Assistant County Agricultural Agent, Division of College Extension (Nov. 17, 1935).
B. S., K. S. C., 1933. Manhattan, Kan.
- VERNON SIMPSON CRIPPEN, Logan County Agricultural Agent, Division of College Extension (1934).
B. S., K. S. C., 1920. Oakley, Kan.
- FRED CROMER, Assistant County Agricultural Agent, Division of College Extension (Feb. 3, 1936).
B. S., K. S. C., 1916. Manhattan, Kan.
- HAROLD AMOS DAILY, Haskell County Agricultural Agent, Division of College Extension (1935; Jan. 1, 1936).
B. S., K. S. C., 1933. Sublette, Kan.
- WALTER JONES DALY, Linn County Agricultural Agent, Division of College Extension (1925, 1927).
B. S., K. S. C., 1925. Mound City, Kan.
- LAURENCE ROBERT DANIELS, Rooks County Agricultural Agent, Division of College Extension (1934).
B. S., K. S. C., 1933. Stockton, Kan.
- JOHN WILLIAM DECKER, Wabaunsee County Assistant Agricultural Agent, Division of College Extension (Feb. 20, 1935).
B. S., K. S. C., 1930. Manhattan, Kan.
- JOHN RAYMOND DICKEN, Assistant County Agricultural Agent, Division of College Extension (Feb. 18, 1936).
B. S., K. S. C., 1936. Manhattan, Kan.
- TOM DAVID DICKEN, Pawnee County Agricultural Agent, Division of College Extension (1933).
B. S., K. S. C., 1932. Larned, Kan.

RAYMOND JOSEPH DOLL, Assistant County Agricultural Agent, Division of College Extension (July 22, 1935); resigned March 1, 1936.

B. S., K. S. C., 1935.

Manhattan, Kan.

KEITH BARBER DUSENBURY, Stanton County Agricultural Agent, Division of College Extension (1934).

B. S., K. S. C., 1932.

Johnson, Kan.

CARL EMMERT ELLING, Scott County Agricultural Agent, Division of College Extension (1934).

B. S., K. S. C., 1932.

Scott City, Kan.

KERMIT VERNON ENGLE, Assistant County Agricultural Agent, Division of College Extension (Feb. 12, 1936).

B. S., K. S. C., 1931.

Manhattan, Kan.

ANDREW BRIAN ERHART, Hamilton County Agricultural Agent, Division of College Extension (1934); resigned Jan. 31, 1936.

B. S., K. S. C., 1933.

Syracuse, Kan.

PAUL EVANS, Ottawa County Agricultural Agent, Division of College Extension (1930).

B. S., K. S. C., 1923.

Minneapolis, Kan.

WAYNE EWING, Osborne County Agricultural Agent, Division of College Extension (1935).

B. S., K. S. C., 1932.

Osborne, Kan.

JUNIUS WARREN FARMER, Greenwood County Agricultural Agent, Division of College Extension (1923).

B. S., K. S. C., 1923.

Eureka, Kan.

GERALD A. FINCH, Assistant County Agricultural Agent, Division of College Extension (Jan. 17, 1936).

Manhattan, Kan.

ROBERT WHITSEL FORT, Saline County Agricultural Agent, Division of College Extension (Dec. 26, 1935).

B. S., K. S. C., 1926.

Salina, Kan.

RALPH FRIEDLEY GERMANN, Assistant County Agricultural Agent, Division of College Extension (Dec. 26, 1935).

B. S., K. S. C., 1931.

Manhattan, Kan.

JOE MYRON GOODWIN, Lyon County Agricultural Agent, Division of College Extension (1919, 1934).

Emporia, Kan.

ELMER OSCAR GRAPER, Smith County Agricultural Agent, Division of College Extension (1929).

B. S., K. S. C., 1913.

Smith Center, Kan.

RAY LEIGHTON GRAVES, Saline County Agricultural Agent, Division of College Extension (1923, 1930); resigned Oct. 29, 1935.

B. S., K. S. C., 1912.

Salina, Kan.

ODGEN WORLEY GREENE, Dickinson County Agricultural Agent, Division of College Extension (1929, 1932).

B. S., K. S. C., 1929.

Abilene, Kan.

WILLIAM ELLSWORTH GREGORY, Harper County Agricultural Agent, Division of College Extension (1934; Jan. 1, 1936).

B. S., K. S. C., 1929.

Anthony, Kan.

PAUL WILSON GRIFFITH, Assistant County Agricultural Agent, Division of College Extension (Sept. 28, 1935).

B. S., K. S. C., 1934.

Manhattan, Kan.

- PAUL BERNARD GWIN, Geary County Agricultural Agent, Division of College Extension (1921, 1925).
B. S., K. S. C., 1916. Junction City, Kan.
- ROY ELMER GWIN, Wichita County Agricultural Agent, Division of College Extension (1921, 1934).
B. S., K. S. C., 1914. Leoti, Kan.
- FRANK ALEXANDER HAGANS, Marion County Agricultural Agent, Division of College Extension (1930).
B. S., K. S. C., 1925. Marion, Kan.
- PRESTON ORIN HALE, Shawnee County Agricultural Agent, Division of College Extension (1929, 1934).
B. S., K. S. C., 1916. Topeka, Kan.
- CHARLES TOMAS HALL, Jefferson County Agricultural Agent, Division of College Extension (1934).
B. S., K. S. C., 1932. Oskaloosa Kan.
- THOMAS ELLIOT HALL, Seward County Agricultural Agent, Division of College Extension (1934); resigned Feb. 15, 1936.
B. S., K. S. C., 1932. Liberal, Kan.
- JOHN HAMON, Wilson County Agricultural Agent, Division of College Extension (1934).
B. S., K. S. C., 1933. Fredonia, Kan.
- JOHN BONAR HANNA, Elk County Agricultural Agent, Division of College Extension (March 9, 1935).
B. S., K. S. C., 1932. Howard, Kan.
- LEONARD BEATH HARDEN, Johnson County Agricultural Agent, Division of College Extension (1928, 1934).
B. S., K. S. C., 1926. Olathe, Kan.
- CLIFFORD LORRAINE HARDING, Assistant County Agricultural Agent, Division of College Extension (Oct. 1, 1935); resigned Dec. 31, 1935.
B. S., K. S. C., 1935. Manhattan, Kan.
- HAROLD BYRON HARPER, Harvey County Agricultural Agent, Division of College Extension (1932, 1933).
B. S., K. S. C., 1932. Newton, Kan.
- EDWIN HEDSTROM, Clay County Agricultural Agent, Division of College Extension (Aug. 1, 1935).
B. S., K. S. C., 1924. Clay Center, Kan.
- JOHN ALBERT HENDRICKS, Anderson County Agricultural Agent, Division of College Extension (1920, 1924).
B. S. A., Iowa State College, 1913. Garnett, Kan.
- SHERMAN STANLEY HOAR, Barton County Agricultural Agent, Division of College Extension (1929).
B. S., K. S. C., 1928. Great Bend, Kan.
- RAY MITCHELL HOSS, Woodson County Agricultural Agent, Division of College Extension (1935; June 1, 1935).
B. S., K. S. C., 1930. Yates Center, Kan.
- CARL LEWIS HOWARD, Lyon County Agricultural Agent, Division of College Extension (1920, 1926); on leave July 1, 1934, to Dec. 31, 1935.
B. S., K. S. C., 1920. Emporia, Kan.
- DONALD WALTER INGLE, Reno County Agricultural Agent, Division of College Extension (1930, 1934).
B. S., University of Missouri, 1929. Hutchinson, Kan.

GLENN CHARLES ISAAC, Miami County Agricultural Agent, Division of College Extension (1930).

B. S., K. S. C., 1930.

Paola, Kan.

JOHN HAROLD JOHNSON, Sedgwick County Club Agent, Division of College Extension (1927); resigned Oct. 31, 1935.

B. S., K. S. C., 1927.

Wichita, Kan.

OLIVER WILLARD KERSHAW, Washington County Club Agent, Division of College Extension (1935; Feb. 3, 1936).

B. S., K. S. C., 1935.

Washington, Kan.

CLAUDE LEWIS KING, Shawnee County Club Agent, Division of College Extension (1934; Jan. 1, 1936).

B. S., K. S. C., 1932.

Topeka, Kan.

TERRELL WEAVER KIRTON, Sumner County Agricultural Agent, Division of College Extension (1931, 1934).

B. S., K. S. C., 1929.

Wellington, Kan.

ARTHUR WILLIAM KNOTT, Montgomery County Agricultural Agent, Division of College Extension (1927).

B. S., University of Wisconsin, 1917.

Independence, Kan.

BEN C. KOHRS, Sedgwick County Club Agent, Division of College Extension (1935; Nov. 1, 1935).

B. S., K. S. C., 1935.

Wichita, Kan.

REUBEN CARL LIND, Lincoln County Agricultural Agent, Division of College Extension (1933).

B. S., K. S. C., 1923.

Lincoln, Kan.

HAROLD CLYDE LOVE, Meade County Agricultural Agent, Division of College Extension (Sept. 1, 1935).

B. S., K. S. C., 1933.

Meade, Kan.

JAMES NOEL LOWE, Harper County Agricultural Agent, Division of College Extension (1930); resigned Dec. 24, 1935.

B. S., Oklahoma A. and M. College, 1924.

Anthony, Kan.

CHARLES ENOCH LYNESS, Doniphan County Agricultural Agent, Division of College Extension (1923).

B. S., K. S. C., 1912.

Troy, Kan.

WILLIAM JOSEPH MATTHIAS, Lane County Agricultural Agent, Division of College Extension (1934).

B. S., K. S. C., 1925.

Dighton, Kan.

LYLE MAYFIELD, Clark County Agricultural Agent, Division of College Extension (1928); resigned Aug. 31, 1935.

B. S., K. S. C., 1928.

Ashland, Kan.

VERL EPHRIAM MCADAMS, Barber County Agricultural Agent, Division of College Extension (1934).

B. S., K. S. C., 1928.

Medicine Lodge, Kan.

RALPH WALDO MCBURNEY, Mitchell County Agricultural Agent, Division of College Extension (1930).

B. S., K. S. C., 1927.

Beloit, Kan.

FRANCES DEAN MCCAMMON, Ford County Agricultural Agent, Division of College Extension (1934; Feb. 1, 1936).

B. S., K. S. C., 1932.

Dodge City, Kan.

GEORGE LESTER MCCOLM, Assistant County Agricultural Agent, Division of College Extension (Nov. 23, 1935).

B. S., K. S. C., 1935.

Manhattan, Kan.

DEWEY ZOLLIE MCCORMICK, Morris County Agricultural Agent, Division of College Extension (1925).

B. S., K. S. C., 1921.

Council Grove, Kan.

ALLEN W. MCGINNESS, Assistant County Agricultural Agent, Division of College Extension (Dec. 1, 1935).

Manhattan, Kan.

ERNEST LEE MCINTOSH, Osage County Agricultural Agent, Division of College Extension (1920, 1923).

B. S., K. S. C., 1920.

Lyndon, Kan.

ROBERT FRED McNITT, Pottawatomie County Agricultural Agent, Division of College Extension (1934; July 5, 1935).

B. S., K. S. C., 1933.

Westmoreland, Kan.

EARL THOMAS MEANS, Allen County Agricultural Agent, Division of College Extension (1935; Feb. 1, 1936).

B. S., K. S. C., 1922.

Iola, Kan.

WILLIAM HENRY MEISSINGER, Rawlins County Agricultural Agent, Division of College Extension (1934).

B. S., K. S. C., 1931.

Atwood, Kan.

WILMER ABELE MEYLE, Atchison County Agricultural Agent, Division of College Extension (1934).

B. S., K. S. C., 1931.

Effingham, Kan.

KENNETH B. MIDDLETON, Assistant County Agricultural Agent, Division of College Extension (Feb. 1, 1936).

Manhattan, Kan.

JOHN ORVILLE MILLER, Assistant County Agricultural Agent, Division of College Extension (Nov. 17, 1935).

B. S., K. S. C., 1934.

Manhattan, Kan.

JOHN DELMONT MONTAGUE, Sedgwick County Agricultural Agent, Division of College Extension (1926, 1930).

B. S., K. S. C., 1920.

Wichita, Kan.

LAWRENCE DALE MORGAN, Sherman County Agricultural Agent, Division of College Extension (1933).

Goodland, Kan.

CLAIRE W. MUNGER, Wallace County Agricultural Agent, Division of College Extension (1934).

B. S., K. S. C., 1932.

Sharon Springs, Kan.

CHARLES ERNEST MURPHEY, Assistant County Agricultural Agent, Division of College Extension (June 1, 1935); resigned Aug. 31, 1935.

B. S., K. S. C., 1935.

Manhattan, Kan.

HAROLD LEWIS MURPHEY, Greeley County Agricultural Agent, Division of College Extension (1930).

B. S., K. S. C., 1928.

Tribune, Kan.

LEONARD NEFF, Washington County Agricultural Agent, Division of College Extension (1925, 1930).

B. S. A., Purdue University, 1922.

Washington, Kan.

NEVLYN RICHARD NELSON, Assistant County Agricultural Agent, Division of College Extension (Sept. 25, 1935).

B. S., K. S. C., 1934.

Manhattan, Kan.

- RUSSELL C. NELSON, Assistant County Agricultural Agent, Division of College Extension (Jan. 1, 1936).
Manhattan, Kan.
- MARION BURNS NOLAND, Riley County Agricultural Agent, Division of College Extension (1935; Nov. 15, 1935).
B. S., K. S. C., 1935. Manhattan, Kan.
- WILLIAM O'CONNELL, Marshall County Agricultural Agent, Division of College Extension (1924).
B. S., K. S. C., 1916. Marysville, Kan.
- VERLE ROOSEVELT OLINE, Gray County Agricultural Agent, Division of College Extension (1935; Feb. 1, 1936).
B. S., K. S. C., 1935. Cimarron, Kan.
- MERTON LOUIS OTTO, Leavenworth County Agricultural Agent, Division of College Extension (1934).
B. S., K. S. C., 1921. Leavenworth, Kan.
- ROBERT THOMAS PATTERSON, Cherokee County Agricultural Agent, Division of College Extension (1928).
B. S., K. S. C., 1924. Columbus, Kan.
- ALBERT ARNOLD PEASE, Assistant County Agricultural Agent, Division of College Extension (Nov. 25, 1935).
B. S., K. S. C., 1932. Manhattan, Kan.
- ALLISON GLEN PICKETT, Kiowa County Agricultural Agent, Division of College Extension (1935; Aug. 20, 1935).
B. S., K. S. C., 1935. Greensburg, Kan.
- GLEN BRADSHAW RAILSBACK, Kiowa County Agricultural Agent, Division of College Extension (1933); resigned July 17, 1935.
B. S., K. S. C., 1925. Greensburg, Kan.
- ROBERT LOUIS RAWLINS, Nemaha County Agricultural Agent, Division of College Extension (1931).
B. S., K. S. C., 1929. Seneca, Kan.
- OSCAR EARL REECE, Rice County Agricultural Agent, Division of College Extension (1935).
B. S., K. S. C., 1931. Lyons, Kan.
- ROGER ELI REGNIER, Russell County Agricultural Agent, Division of College Extension (1934).
B. S., K. S. C., 1924; M. S., *ibid.*, 1932. Russell, Kan.
- CECIL E. RICHARDS, Assistant County Agricultural Agent, Division of College Extension (Dec. 16, 1935).
Manhattan, Kan.
- HUGH KENNETH RICHWINE, Assistant County Agricultural Agent, Division of College Extension (Sept. 1, 1935); resigned Sept. 30, 1935.
B. S., K. S. C., 1929. Manhattan, Kan.
- CARL HAURY RUPP, Assistant County Agricultural Agent, Division of College Extension (Jan. 25, 1936).
B. S., K. S. C., 1935. Manhattan, Kan.
- LUKE MICHAEL SCHRUBEN, Riley County Agricultural Agent, Division of College Extension (1933); resigned Nov. 9, 1935.
B. S., K. S. C., 1933. Manhattan, Kan.

LESTER SHEPARD, Neosho County Agricultural Agent, Division of College Extension (1928).

A. B., University of Iowa, 1913; B. S., Iowa State College, 1916. Erie, Kan.

GEORGE W. SIDWELL, Edwards County Agricultural Agent, Division of College Extension (1913, 1928).

A. B., Fairmount College, 1915. Kinsley, Kan.

HARRY GRANT SITLER, Assistant County Agricultural Agent, Division of College Extension (Jan. 1, 1936).

B. S., K. S. C., 1935. Manhattan, Kan.

DEAL D. SIX, Douglas County Agricultural Agent, Division of College Extension (1935).

B. S., K. S. C., 1922. Lawrence, Kan.

JOSEPH DANIEL SMERCHEK, Pratt County Agricultural Agent, Division of College Extension (1933).

B. S., K. S. C., 1932. Pratt, Kan.

ALVIN HOWARD STEPHENSON, Sheridan County Agricultural Agent, Division of College Extension (1935; Dec. 1, 1935).

B. S., K. S. C., 1932. Hoxie, Kan.

HAROLD CALVIN STEVENS, Assistant County Agricultural Agent, Division of College Extension (Jan. 1, 1936).

B. S., K. S. C., 1933. Manhattan, Kan.

HARVEY J. STEWART, Cheyenne County Agricultural Agent, Division of College Extension (1929).

B. S., K. S. C., 1928. St. Francis, Kan.

SAMUEL ROGER STEWART, Stevens County Agricultural Agent, Division of College Extension (1934).

B. S., K. S. C., 1930. Hugoton, Kan.

HOMER JOHN STOCKWELL, Assistant County Agricultural Agent, Division of College Extension (Dec. 1, 1935).

B. S., K. S. C., 1933. Mhanhattan, Kan.

RAYMOND LUTHER STOVER, Brown County Agricultural Agent, Division of College Extension (1927, 1930).

B. S., K. S. C., 1924; M. S., Oregon Agricultural College, 1927. Hiawatha, Kan.

VICTOR FRED STUEWE, Jewell County Agricultural Agent, Division of College Extension (1934).

B. S., K. S. C., 1915. Mankato, Kan.

RICHARD WILLIAM STUMBO, Stafford County Agricultural Agent, Division of College Extension (1931, 1934); resigned Jan. 10, 1936.

B. S., K. S. C., 1931. St. John, Kan.

FRED JAMES SYKES, Norton County Agricultural Agent, Division of College Extension (1926, 1930); resigned Nov. 14, 1935.

B. S., K. S. C., 1926. Norton, Kan.

BRUCE ROSS TAYLOR, Comanche County Agricultural Agent, Division of College Extension (1934); resigned Jan. 31, 1936.

B. S., K. S. C., 1931; M. S., *ibid.*, 1934. Coldwater, Kan.

JOHN EDWARD TAYLOR, Grant County Agricultural Agent, Division of College Extension (1930).

B. S., K. S. C., 1930. Ulysses, Kan.

LOT FORMAN TAYLOR, Chautauqua County Agricultural Agent, Division of College Extension (1935).

B. S., K. S. C., 1931. Sedan, Kan.

MERRILL MEDSGAR TAYLOR, Thomas County Agricultural Agent, Division of College Extension (1931, 1935).

B. S., K. S. C., 1930.

Colby, Kan.

CHESTER GORDON THOMPSON, Assistant County Agricultural Agent, Division of College Extension (Feb. 4, 1936).

B. S., K. S. C., 1932.

Manhattan, Kan.

PENN THOMPSON, Cloud County Agricultural Agent, Division of College Extension (1934).

B. S., K. S. C., 1933.

Concordia, Kan.

ARTHUR CHASE THOMSON, Washington County Assistant Agricultural Agent, Division of College Extension (1933); resigned Nov. 17, 1935.

B. S., K. S. C., 1933.

Washington, Kan.

A. B. THUT, Assistant County Agricultural Agent, Division of College Extension (Jan. 6, 1936).

Manhattan, Kan.

OBED LEE TOADVINE, JR., Ness County Agricultural Agent, Division of College Extension (1934).

B. S., K. S. C., 1932.

Ness City, Kan.

JAMES FREDERICK TRUE, JR., Coffey County Agricultural Agent, Division of College Extension (1935; May 26, 1935).

B. S., K. S. C., 1929.

Burlington, Kan.

ROBERT SAMUEL TRUMBULL, Ford County Agricultural Agent, Division of College Extension (1929); resigned Jan. 4, 1936.

B. S., Nebraska Wesleyan University, 1907; A. M., University of Nebraska, 1908.

Dodge City, Kan.

VIRGIL ARVID UNRUH, Kearny County Agricultural Agent, Division of College Extension (1935; Feb. 1, 1936).

B. S., K. S. C., 1935.

Lakin, Kan.

HOWARD VICTOR VERNON, Graham County Agricultural Agent, Division of College Extension (1934).

B. S., K. S. C., 1928.

Hill City, Kan.

EARL LAVERNE WIER, McPherson County Agricultural Agent, Division of College Extension (1934).

B. S., K. S. C., 1931.

McPherson, Kan.

CARL WILLIAMS, Clark County Agricultural Agent, Division of College Extension (1935; Sept. 15, 1935).

B. S., K. S. C., 1932.

Ashland, Kan.

WILLIAM ALEXANDER WISHART, Assistant County Agricultural Agent, Division of College Extension (Sept. 26, 1935).

B. S., K. S. C., 1935.

Manhattan, Kan.

MAURICE IVAN WYCKOFF, Labette County Agricultural Agent, Division of College Extension (1935; July 22, 1935).

B. S., K. S. C., 1935.

Altamont, Kan.

THEODORE FRANKLIN YOST, Cowley County Agricultural Agent, Division of College Extension (1927, 1934).

B. S., K. S. C., 1920.

Winfield, Kan.

WALTER WILLIAM ZECKSER, Butler County Agricultural Agent, Division of College Extension (1935; July 1, 1935).

B. S., K. S. C., 1933.

El Dorado, Kan.

FRANK ZITNIK, Rush County Agricultural Agent, Division of College Extension (1931, 1934).

B. S., K. S. C., 1931.

La Crosse, Kan.

HOME DEMONSTRATION AGENTS ¹

GERTRUDE EDNA ALLEN, Lyon County Home Demonstration Agent, Division of College Extension (1929); resigned Sept. 7, 1935.

B. S., University of Minnesota, 1929.

Emporia, Kan.

MARIE ANTRIM, Wyandotte County Home Demonstration Agent, Division of College Extension (1935; July 1, 1935).

B. S., K. S. C., 1934.

Kansas City, Kan.

NORA ELIZABETH BARE, Butler County Home Demonstration Agent, Division of College Extension (1927).

B. S., K. S. C., 1925.

El Dorado, Kan.

ELLEN BLAIR, Cloud County Home Demonstration Agent, Division of College Extension (1935; Oct. 11, 1935).

B. S., K. S. C., 1934.

Concordia, Kan.

MARY ELSIE BORDER, Johnson County Home Demonstration Agent, Division of College Extension (1929, 1931).

B. S., Ohio State University, 1926.

Olathe, Kan.

VIRA BROWN, Washington County Home Demonstration Agent, Division of College Extension (1935; Jan. 15, 1936).

B. S., K. S. C., 1925.

Washington, Kan.

RUTH ESTHER CRAWFORD, Harper County Home Demonstration Agent, Division of College Extension (1934).

B. S., K. S. C., 1932.

Anthony, Kan.

ETHYL ADELINE DANIELSON, Barton County Home Demonstration Agent, Division of College Extension (1931, 1934).

B. S., K. S. C., 1925.

Great Bend, Kan.

VERNETTA FAIRBAIRN, Montgomery County Home Demonstration Agent, Division of College Extension (1928).

A. B., University of Kansas, 1927.

Independence, Kan.

LEOLA MAUD GASTON, Allen County Home Demonstration Agent, Division of College Extension (1933, 1934); resigned Nov. 30, 1935.

B. S., K. S. C., 1908.

Iola, Kan.

MAE GORDON, Assistant Home Demonstration Agent, Division of College Extension (Sept. 16, 1935).

B. S., K. S. C., 1934.

Manhattan, Kan.

IVA LUELLA HOLLADAY, Leavenworth County Home Demonstration Agent, Division of College Extension (1929).

B. S., K. S. C., 1929.

Leavenworth, Kan.

RUTH KATHRINA HUFF, Pratt County Home Demonstration Agent, Division of College Extension (1931).

B. S., K. S. C., 1924.

Pratt, Kan.

MARY FRANCES HURLEY, Assistant Home Demonstration Agent, Division of College Extension (Sept. 20, 1935).

B. S., K. S. C., 1935.

Manhattan, Kan.

1. In coöperation with the U. S. Department of Agriculture and the County Farm Bureaus of Kansas.

- VELMA GOOD HUSTON, Edwards County Home Demonstration Agent, Division of College Extension (1935; Jan. 1, 1936).
B. S., K. S. C., 1931. Kinsley, Kan.
- OLGA CHRISTENE LARSEN, Labette County Home Demonstration Agent, Division of College Extension (1934).
B. S., K. S. C., 1934. Altamont, Kan.
- ESTHER EMMA LOBENSTEIN, Comanche County Home Demonstration Agent, Division of College Extension (1934).
B. S., K. S. C., 1931. Coldwater, Kan.
- RUTH LOHMANN, Franklin County Home Demonstration Agent, Division of College Extension (June 1, 1935), resigned Sept. 14, 1935.
B. S., University of Minnesota, 1934. Ottawa, Kan.
- RACHEL MARKWELL, Crawford County Home Demonstration Agent, Division of College Extension (1929, 1934).
B. S., Oklahoma A. & M. College, 1926. Girard, Kan.
- MIRIAM MARSH, Franklin County Home Demonstration Agent, Division of College Extension (1935; Nov. 1, 1935).
B. S., K. S. C., 1930. Ottawa, Kan.
- CARRIE MARSHALL, Bourbon County Home Demonstration Agent, Division of College Extension (1935; Jan. 13, 1936).
B. S., K. S. C., 1935. Fort Scott, Kan.
- ELLA MABEL MEYER, Rice County Home Demonstration Agent, Division of College Extension (1932).
B. S., K. S. C., 1907. Lyons, Kan.
- GLADYS MYERS, Reno County Home Demonstration Agent, Division of College Extension (1930).
B. S., K. S. C., 1930. Hutchinson, Kan.
- EULA MAY NEAL, Neosho County Home Demonstration Agent, Division of College Extension (1930; May 13, 1935).
B. S., State Teachers College, Kirksville, Mo., 1927. Erie, Kan.
- LOIS MARIE OBERHELMAN, Harvey County Home Demonstration Agent, Division of College Extension (1934).
B. S., K. S. C., 1930. Newton, Kan.
- EDITH ALICE PAINTER, Greenwood County Home Demonstration Agent, Division of College Extension (1933; Feb. 15, 1936).
B. S., K. S. C., 1931. Eureka, Kan.
- MARGARET PATTERSON, Assistant Home Demonstration Agent, Division of College Extension (July 13, 1935); resigned July 27, 1935.
B. S., K. S. C., 1934. Manhattan, Kan.
- MINNIE BELLE PEEBLER, Ford County Home Demonstration Agent, Division of College Extension (1932, 1934).
B. S., University of Oklahoma, 1924; M. S., University of Colorado, 1929. Dodge City, Kan.
- SARAH HELEN ROBERTS, Bourbon County Home Demonstration Agent, Division of College Extension (1934; March 18, 1935); resigned Dec. 31, 1935.
B. S., K. S. C., 1928; M. S., *ibid.*, 1933. Fort Scott, Kan.
- MYRA MAY ROTH, Rawlins County Home Demonstration Agent, Division of College Extension (1935; April 16, 1935).
B. S., K. S. C., 1935. Atwood, Kan.

CHRISTIANA MARIE SHIELDS, Lyon County Home Demonstration Agent, Division of College Extension (1931; Feb. 1, 1936).

B. S., K. S. C., 1929.

Emporia, Kan.

BERNIECE ETHEL SLOAN, Pawnee County Home Demonstration Agent, Division of College Extension (Dec. 1, 1935).

B. S., K. S. C., 1928.

Larned, Kan.

BLANCHE LOUISE TOMSON, Greenwood County Home Demonstration Agent, Division of College Extension (1934); resigned Jan. 12, 1936.

B. S., K. S. C., 1933.

Eureka, Kan.

DOROTHY WASHINGTON, Assistant Home Demonstration Agent, Division of College Extension (Feb. 1, 1936).

B. S., K. S. C., 1936.

Manhattan, Kan.

ANNA WILSON, Assistant Home Demonstration Agent, Division of College Extension (Jan. 13, 1936).

B. S., K. S. C., 1931.

Manhattan, Kan.

LAURA WINTER, Sedgwick County Home Demonstration Agent, Division of College Extension (1925).

Wichita, Kan.

MARY DUNLAP ZIEGLER, Shawnee County Home Demonstration Agent, Division of College Extension (1928, 1930).

B. S., K. S. C., 1916.

Topeka, Kan.

Standing Committees of the Faculty

ADMISSION: Jessie McD. Machir, B. L. Remick, Ina Holroyd, J. O. Hamilton, H. L. Ibsen, Geo. A. Dean, W. T. Stratton, S. A. Nock.

ADVANCED CREDIT: S. A. Nock, L. D. Bushnell, R. R. Price, H. H. King, H. W. Davis, R. R. Dykstra, L. F. Payne, M. A. Durland, Ruth Tucker.

ASSIGNMENT: Jessie McD. Machir, A. E. White, C. H. Scholer, W. E. Grimes, J. H. Robert, C. V. Williams, Margaret Ahlborn.

ATHLETIC COUNCIL: H. H. King, F. D. Farrell, M. F. Ahearn, E. L. Holton, R. A. Seaton, R. I. Throckmorton, G. A. Dean, R. W. Babcock.

CALENDAR: Mary P. Van Zile, J. C. Peterson, M. F. Ahearn, H. T. Hill, S. A. Nock, William Lindquist, John A. Bird.

CATALOGUE: I. V. Iles, J. O. Faulkner, S. A. Nock.

COMMUNITY CHEST EXECUTIVE: F. L. Parrish, H. T. Hill, Mary P. Van Zile, F. D. Farrell, A. A. Holtz, Jessie McD. Machir, Ruth Haines.

CONTROL: I. V. Iles, Margaret M. Justin, R. A. Seaton, R. R. Dykstra, Mary P. Van Zile, R. J. Barnett.

EXAMINATIONS: A. E. White, C. W. Colver, R. A. Seaton.

FACULTY LOAN FUND: R. R. Dykstra, Mary P. Van Zile, L. E. Call, R. A. Seaton, Jessie McD. Machir.

GRADUATE COUNCIL: J. E. Ackert, L. E. Conrad, L. E. Call, H. H. King, L. D. Bushnell, J. H. Burt, Martha M. Kramer.

HONORARY DEGREES: R. W. Babcock, Margaret M. Justin, L. E. Call.

MAJOR MUSICAL AND DRAMATIC ENTERTAINMENTS: J. C. Peterson, William Lindquist, H. T. Hill, H. W. Bouck, R. H. Brown, Mrs. E. L. Holton.

PUBLIC EXERCISES: H. W. Davis, E. L. Holton, William Lindquist, A. C. Fay, C. H. Scholer, S. A. Nock.

REINSTATEMENT: R. I. Throckmorton, Elizabeth Quinlan, W. M. McLeod, J. H. Robert, E. C. Miller.

RELATIONS WITH JUNIOR COLLEGES AND ARTS COLLEGES: George Gemmell, R. R. Dykstra, M. A. Durland, F. L. Parrish, Margaret Ahlborn, G. A. Filingier.

SCHEDULE OF CLASSES: A. E. White, W. T. Stratton, L. E. Conrad, W. E. Grimes, Martha Pittman, R. W. Babcock.

SCHOLASTIC ELIGIBILITY: Mary P. Van Zile, W. H. Riddell, Emma Hyde, R. M. Kerchner, Gladys E. Vail, W. M. McLeod.

SELECTION OF VETERINARY STUDENTS: R. R. Dykstra, S. A. Nock, J. H. Burt, H. F. Lienhardt, E. J. Frick.

STUDENT AFFAIRS: Mary P. Van Zile, A. A. Holtz, L. E. Conrad, R. I. Throckmorton, Grace E. Derby, Harold Howe, F. P. Root, LeVelle Wood.

STUDENT HEALTH: L. E. Conrad, L. D. Bushnell, Mary P. Van Zile, M. F. Ahearn, M. W. Husband.

STUDENT HONORS: J. O. Hamilton, R. W. Conover, B. L. Remick, M. W. Furr, L. E. Conrad.

VOCATIONAL GUIDANCE: Mary P. Van Zile, R. A. Seaton, R. R. Dykstra, E. L. Holton, Margaret M. Justin, L. E. Call, R. W. Babcock.

The Kansas State College of Agriculture and Applied Science

HISTORY AND LOCATION

The Kansas State Agricultural College was established under the authorization of an act of congress, approved by Abraham Lincoln, July 2, 1862, the provisions of which were accepted by the state February 3, 1863. By act of the legislature, effective March 9, 1931, the name was changed to Kansas State College of Agriculture and Applied Science.

Under the enabling act the College received an endowment of 90,000 acres of land, and its leading object as stated by law is—

“Without excluding other scientific and classical studies and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.”

The College was located at Manhattan February 16, 1863, partly in order to receive as a gift the land, building, library and equipment of Bluemont Central College, an institution that was chartered by a group of cultured pioneers February 9, 1858. The Bluemont College building was erected in 1859.

The Agricultural College opened September 1, 1863, in the Bluemont College building. Most of the work of the College was moved to the present site in 1875. This location is adjacent to Manhattan, a city which has a residential population of ten thousand, and is unsurpassed for wholesomeness of influence by any other city in the state.

The fertile valleys of the Kansas and the Blue rivers meet here, and these, with their borders of hilly upland drained by many small wooded streams, create a natural environment which is unusually attractive.

Manhattan is reached by the Union Pacific and Rock Island railways, by U. S. highways 40 and 24, with frequent motor-bus service, and by state highways 13 and 29. There is taxi service between railway stations and the College. Practically all of the streets are paved, and an ample supply of pure water is provided.

The residents of Manhattan give most cordial support to the College and do all that could be desired to make students feel welcome, and to support them in their legitimate undertakings. The members of the student body respond by conducting themselves habitually in an orderly and law-abiding manner.

AIMS AND PURPOSES

The Kansas State College has three chief aims: To give to the young men and women of Kansas a high standard of collegiate training in agriculture, engineering, home economics, general science, and veterinary medicine; to investigate, through its experiment stations, the agricultural and industrial problems of Kansas; and by means of its extension division, to carry the full benefits of the College to the remotest parts of the state.

In all the collegiate curricula particular pains are taken that each student, in connection with the scientific and technical instruction necessary to his vocation, be given thorough training in fundamental cultural subjects which promote sound thinking and good citizenship. The College aims to turn back to

the state the type of citizen who is straight-thinking in all lines and a particularly valuable leader in some definite field of human activity. Its chief aim is the development of intelligent, effective leadership.

The second important aim of the Kansas State College is to serve the state by investigating in a scientific manner the state's problems in agriculture and the industries. This work is accomplished through the various agricultural and engineering experiment stations. All investigational work is directly connected with the educational work of the College, so that the students are given the widest opportunity for appreciating the true value of scientific investigation. Many opportunities in the United States Department of Agriculture and in the various experiment stations of the country are thus opened to such students as show interest and skill in investigational work.

In addition to the regular instructional work conducted on the campus, the College realizes its third important aim through the Division of College Extension. This is a highly organized system of agricultural education and service carried directly to the homes of the farmers. The work has been so highly developed that the College has come to look upon the whole state as its campus. In addition to the regular staff of the Division of College Extension, many members of the College board of instruction and the staff of the experiment stations give several weeks of each year to this public work among the people of the state.

Buildings and Grounds

The College campus occupies a commanding and attractive site upon an elevation adjoining the western limits of the city of Manhattan. The grounds are tastefully laid out according to the designs of a landscape architect, and are extensively planted with a great variety of beautiful and interesting trees, arranged in picturesque groups, masses, and border plantings, varied by banks of shrubbery and interspersed with extensive lawns, gardens, and experimental fields. Broad, well-shaped, macadamized avenues lead to all parts of the grounds. Cement walks connect the buildings with one another and with the entrances. Including the campus of 155 acres, the College owns 1,428.7 acres of land at Manhattan valued at \$415,093. Outside the campus proper, all of the land is devoted to educational and experimental work in agriculture. Within the College grounds, much of the space not occupied by buildings and needed for drives and ornamental plantings is devoted to orchards, forest and fruit nurseries, vineyards, and gardens.

The more important buildings of the College are harmoniously grouped and are constructed of a fine quality of limestone obtained in part from the College quarries. These buildings are listed below, and have a total value of \$2,894,000.

ANDERSON HALL. Named in honor of John Alexander Anderson (1834-1891), second president of the College, 1873-1879. Erected, 1879, 1883, and 1885; cost, \$79,000; dimensions, 152 x 250 feet; two stories and basement. Contains the offices of administration of the College, a social center hall, the College post office, offices of the Division of College Extension and of the Department of Student Health, and offices and classrooms of the Departments of Applied Art, Economics, English, Mathematics, and Modern Languages. It also contains the alumni and stadium offices.

ANIMAL HUSBANDRY BARN. Erected, 1914; cost, \$25,000; dimensions, 80 x 160 feet; two stories and basement. Consists of three sections, arranged like the letter H, and a glazed tile silo of 200 tons capacity. The west wing contains nine box stalls and twenty-six single stalls, equipped with sanitary feed mangers and racks, and is designed especially for the housing of horses. The east wing contains twelve box stalls and thirty single stalls for the breeding cattle and the show herd. The central section has an office, feed rooms, a washing floor, and a basement containing the engine room. The loft, to which a driveway leads, has storage space for ten carloads of grain and 100 tons of hay and straw and contains the grinding apparatus. The barn is used by the Department of Animal Husbandry.

AUDITORIUM. Erected, 1904; cost, \$40,000; dimensions, 113 x 125 feet. Has a large stage with drop curtain and scenery. Seating capacity, 2,300. Contains also the offices and music rooms of the Department of Music.

CALVIN HALL. Named in honor of Frances Henrietta Willard Calvin (1865—), librarian of the College, 1901-1903; professor of domestic science, 1903-1908. Erected, 1908; cost, \$70,000; dimensions, 92 x 175 feet; two stories and basement. The first floor and basement are occupied by the laboratories, classrooms, and offices of the Department of Food Economics and Nutrition, and Household Economics; the second floor is occupied by the laboratories, classrooms, and offices of the Department of Clothing and Textiles.

CHEMISTRY ANNEX No. 1. Erected, 1876; cost, \$8,000; dimensions, 35 x 110 feet and 46 x 175 feet, in the form of a cross. Originally erected as a chemical laboratory. Reconstructed at a cost of \$5,000 after fire in 1900. The building was used from 1902 to 1911 as a woman's gymnasium; since 1911, used by the Department of Chemistry.

CHEMISTRY ANNEX No. 2. Erected, 1904; cost, \$15,000; dimensions, 72 x 103 feet; one story and basement. Occupied by the Department of Dairy Husbandry from the time of its erection till the fall of 1923, since which time it has been used by the Department of Chemistry.

DAIRY BARN. Erected, 1933; cost, \$45,000; dimensions, central portion, 41 x 215 feet, and two wings, each 30 x 35 feet; two stories. Connected with the barn are a milk house, which contains, in addition to ordinary facilities for handling milk, an office, sleeping rooms for student caretakers, a milk-testing laboratory, and a locker-room with shower baths. Back of the main barn is the feed-storage room consisting of four 16 x 40 foot cement-stave silos, eleven bins for grain, and a feed elevator, grinder, and mixer. Mow space is available for 200 tons of loose hay and 100 tons of baled straw. The barn is designed to provide facilities for the College dairy herd and for experimental work with dairy cattle.

DENISON HALL. Named in honor of Joseph Denison (1815-1900), first president of the College, 1863-1873. Erected, 1902; cost, \$70,000; dimensions, 96 x 166 feet; two stories and basement. While occupied throughout by the laboratories, classrooms, and offices of the Departments of Chemistry and Physics, it was destroyed by fire, August 3, 1934.

DICKENS HALL. Named in honor of Albert Dickens (1867-1930), assistant in horticulture, 1899-1901; professor of horticulture, 1901-1930. Erected, 1907; cost, \$50,000; dimensions, 72 x 116 feet; two stories and basement. This building is used by the Departments of Botany and Plant Pathology, and Horticulture. Its classrooms, laboratories, museums, and equipment are modern and ample.

EDUCATION HALL. Erected, 1900; cost, \$25,000; dimensions, 90 x 95 feet; two stories and basement. Occupies original site of the president's house, destroyed by lightning in 1896. Formerly housed the Departments of Agronomy and Animal Husbandry, later the Vocational School. The abolition of the latter brought change of name in the summer of 1924. Contains classrooms and offices of the Departments of Education and Public Speaking.

ENGINEERING HALL. Erected, east wing, 1909; main portion, 1921. Cost, \$270,000. Dimensions: Main portion 60 x 236 feet, east wing, 113 x 200 feet. Three stories in height, but much of the east wing is built on the gallery plan rather than by complete floor separation into different stories. This building contains the general offices and library of the Division of Engineering, and the offices, drafting rooms, and laboratories of the Departments of Agricultural Engineering, Applied Mechanics, Architecture, Civil Engineering, Electrical Engineering, Machine Design, and Mechanical Engineering.

ENGINEERING SHOPS. These consist of several connected structures, erected 1875, 1890, 1900, and 1905. The original building, now used as the metallographic laboratory and part of the woodworking shop, was erected in 1875; a series of additions having later been successively made, the present group is the result. Cost of the group, \$35,000. A portion of the building is two stories high. On the upper floor, which has a floor area of 9,260 square feet, are the classrooms, drafting rooms, pattern storage room and offices of the Departments of Machine Design, Shop Practice, and Mathematics. The woodworking shop (35 x 160 feet) is equipped with bench tools and woodworking machinery. The metallographic work occupies rooms on the first floor totaling 3,200 square feet and has modern equipment for the study of metals. Adjoining is the machine shop (40 x 170 feet) amply equipped with modern machine tools. The blacksmith shop (50 x 100 feet) contains 20 forges of modern type, connected with power blast and down-draft exhaust. The iron foundry (27 x 100 feet) and brass foundry (24 x 34 feet) are well supplied with the necessary equipment. The wash and locker room contains 250 steel lockers. A general supply room (22 x 24 feet) is conveniently located for storing small supplies.

One room is fitted up as a model farm shop and is used in the training of teachers for rural communities in accordance with the Smith-Hughes requirements.

FAIRCHILD HALL. Named in honor of George Thompson Fairchild (1833-1901), third president of the College, 1879-1897. Erected, 1894; enlarged, 1903; remodeled, 1927; cost, \$91,750; dimensions, 100 x 140 feet; two stories, basement, and attic. Occupied by offices, classrooms, and laboratories of the Departments of Entomology, Zoölogy, and History and Government. The museums of natural history also are housed here. For many years, till the fall of 1927, the major part of this building was occupied by the College library.

FARM MACHINERY HALL. Erected, 1873; cost, \$11,250; dimensions, 46 x 95 feet; two stories. This was the first building erected by the state on the present campus. It was originally erected as one wing of the College barn, and first used for that purpose. It has been used as a general College building, and successively by the Department of Botany and the Department of Veterinary Medicine. The first floor, a large hall, was used for many years as an armory by the Department of Military Science. The entire building is now used by the Department of Agricultural Engineering, and contains modern types of farm machinery.

HEAT, POWER, AND SERVICE BUILDING. Erected, 1928; cost, with plant equipment, \$375,000; dimensions, 122 x 210 feet; three stories high. The building houses the Departments of Heat and Power, and Building and Repair, and the offices of the custodian and superintendent of maintenance. The heat and power plant furnishes steam for the heating system and power and light for the entire campus. The plant has a rated boiler capacity of 1,900 horsepower and an engine capacity of 1,125 kilowatts. A complete system of underground tunnels connects the main buildings, and through these tunnels are carried the steam and electric energy to the different parts of the campus.

HORTICULTURE BARN. Erected, 1917; cost, \$1,500; dimensions, 38 x 55 feet; two stories, first story stone, second frame. This building is located one mile west of the College campus.

ILLUSTRATIONS HALL. Erected, 1876; cost, \$4,000; dimensions, 32 x 80 feet; one story and basement. At an early period used as a horticultural hall; later the headquarters for general College repairs; since the summer of 1919 used by the Department of Illustrations. The west wing is used by the student pastors and student groups in their religious work.

INFIRMARY. Erected, previous to 1871; remodeled and enlarged, 1919; cost, \$6,500; dimensions, 34 x 34 feet; two stories. Originally a farm house, later used as dwelling by the president, the professor of agriculture, and more recently by the custodian; has served its present use since 1919. Contains separate wards for men and women; capacity, 35 beds.

KEDZIE HALL. Named in honor of Nellie Sawyer Kedzie Jones (1858—), teacher of household economy and hygiene, superintendent of sewing, 1882-1884; teacher of household economy and hygiene, 1884-1885; instructor in household economy and hygiene, 1885-1887; professor of household economy and hygiene, 1887-1897. Erected, 1898; cost, \$16,000; dimensions, 70 x 84 feet; two stories and basement. Used from its erection till 1908 by the Departments of Domestic Science and Domestic Art. Basement occupied by the printing plant; first floor taken up by the Department of Industrial Journalism and Printing; second floor divided into general classrooms and offices used by the Department of English.

LIBRARY. Erected, 1927; cost, \$250,000; three stories and basement. The floor plan is of "T" shape, with dimensions of 183 x 46 feet and 107 x 64 feet. Three large reading rooms are provided, each 176 x 40 feet, the class reserve reading room being in the basement, the periodical room on the first floor, and

the main reading room on the second floor, extending through the second and third stories. The remainder of the building is devoted to stack rooms, seminar rooms, offices, working quarters, and an exhibition gallery.

MEMORIAL STADIUM. West wing erected, 1922; east wing erected, 1924; back wall of the east wing built in 1928; cost of portion now completed, \$260,000; cost of entire structure when completed as planned, \$400,000. The seating decks are constructed of reinforced concrete. The end walls and the east wall are built of limestone; the south entrance and wall and the west wall will be of the same material. Capacity of the seating decks now standing, 15,000; capacity of the completed structure will be 22,500. The stadium is being built as a memorial to alumni, students, former students, and faculty of the College who participated in the World War. The cost is met entirely from funds raised by popular subscription.

NICHOLS GYMNASIUM. Named in honor of Ernest Reuben Nichols (1858—), instructor in physics, 1890-1891; professor of physics, 1891-1900; acting president, 1899-1900; fifth president of the College, 1900-1909. Erected, 1911; cost, \$122,000; dimensions, 102 x 221 feet; three stories and basement. The building consists of a main section and two wings. The main section (85 x 141 feet), consisting of two stories and a basement, is used as a men's gymnasium and armory, and contains a running track, sixteen laps to the mile. The east half of the basement of the main section contains a swimming pool, baths, rest rooms, etc., for women; the west half contains a swimming pool and baths for men. The east wing (40 x 102 feet) contains the women's gymnasium, classrooms and offices of the Department of Military Science, studios for the Department of Music, and two literary society halls. The west wing (40 x 102 feet) contains the offices of the director of athletics and physical education, a large locker room for men, literary society halls, and the radio broadcasting studio. This building is constructed on the old armory-castle type and is modern in every respect.

NURSES' QUARTERS. Erected, 1888; cost, \$5,000; dimensions, 30 x 30 feet; one story and basement. Used for years by Departments of Horticulture and Entomology, later by the state dairy commissioner and assistants, now as quarters for nurses connected with the Department of Student Health.

PRESIDENT'S RESIDENCE. Erected, 1923; cost, \$31,000; three stories and basement; built from funds bequeathed by Mehitable Calef Copenhagen Wilson in memory of her husband, Davies Wilson.

THOMPSON HALL. Named in honor of Helen Bishop Thompson (1875—), assistant in preparatory department, 1903-1907; professor of nutrition and dietetics, 1918-1922; professor of food economics and nutrition, 1922-1923; dean of the Division of Home Economics, 1918-1923. Erected, 1922; cost, \$125,000; dimensions, 138 x 60 feet and 38 x 24 feet; two stories and basement. Basement occupied by receiving and storage rooms for the cafeteria, dish-washing room, refrigeration machinery room, pipe room, locker rooms, and bakery. The first floor is devoted to the cafeteria, including kitchen, dining room, two offices, and lobbies. On the second floor are a tea room, with a main dining room, kitchen, three alcoves, receiving room, serving room, lobby and coat room, an office, a classroom, and the household-management laboratory.

VAN ZILE HALL. Named in honor of Mary Pierce Van Zile (1874—), professor of domestic science, 1908-1918; dean of the Division of Home Economics, 1912-1918; dean of women, 1918—. Erected, 1927; cost, \$70,000; dimensions, 169 x 85 feet; three stories and basement. The building contains bedrooms, dining hall, kitchen facilities, and social quarters for 125 women students, besides rooms for guests, matron, and social director.

VETERINARY HALL. Erected, 1908; cost, \$70,000; dimensions, 133 x 155 feet; two stories and basement. Occupied by the laboratories, demonstration and

dissecting rooms, classrooms, and offices of the Departments of Anatomy and Physiology, Bacteriology, Pathology, and Surgery and Medicine, and by the offices of the dean of the Division of Veterinary Medicine.

VETERINARY HOSPITAL. Erected, 1923. Contract price, \$118,000. The building is of stone and of fireproof construction throughout, with general dimensions of 145 x 146 feet. It consists of a central portion and two wings, and is two stories and an attic in height, with a basement under one of the wings. The building is used exclusively for the teaching of the practical phases of veterinary medicine and surgery. It is equipped for housing sick animals of all species, such as horses, cattle, sheep, swine, poultry, dogs, and cats. Its equipment includes an hydraulic elevator, large and small animal operating tables, cattle and horse stocks, dog kennels, operating rooms, laboratories for the diagnosis of animal diseases, etc. In addition there are well-equipped rooms for senior students in veterinary medicine, together with a reception room for visitors, and offices for members of the veterinary clinical teaching staff.

WATERS HALL. Named in honor of Henry Jackson Waters (1865-1925), sixth president of the College, 1909-1917. East wing erected, 1913; west wing erected, 1923; cost of portions now completed, \$500,000; cost of building when developed and completed as planned, \$1,000,000. Each of the wings now completed is 80 feet wide and 169 feet long and four stories high. An 80 x 50 foot one-story annex on the east wing serves as a meats laboratory, and a similar annex on the west wing serves as a creamery. A stock-judging pavilion (115 x 100 feet) is located between the two wings and is divided into two large stock-judging rooms, each having a seating capacity of 475. The two wings and the stock-judging pavilion are used by the Departments of Agricultural Economics, Agronomy, Animal Husbandry, Dairy Husbandry, Milling Industry, and Poultry Husbandry, and the general offices of the Agricultural Experiment Station and of the Division of Agriculture. The equipment includes an electrically operated flour mill capable of manufacturing 75 barrels of flour a day, a modern creamery, a well-equipped meats laboratory, and modern laboratories for instructional and investigative work in seed testing, market milk, soils, field crops, farm organization, grain grading, etc. On account of the burning of Denison Hall, the Department of Physics and part of the Department of Chemistry are temporarily housed here.

In addition to the substantial stone buildings mentioned above, the College has a number of other buildings, among them the following:

EXPERIMENT STATION BUILDING. Erected, 1918; dimensions, 40 x 176 feet; two stories. Built as barracks No. 4 for the Students' Army Training Corps, now used by the Agricultural Experiment Station.

GENERAL-PURPOSE BUILDING. Erected, 1918; dimensions, 40 x 80 feet; two stories. Built as barracks No. 6 for the Students' Army Training Corps. This building is used by the Department of Electrical Engineering and as a hospital for patients with contagious diseases. A portion of this building is used as a wash and locker room by the Department of Shop Practice.

GREENHOUSE. Erected, 1910; cost, \$10,000; dimensions, 114 x 150 feet. Contains six sections used by the various departments as follows: Horticulture, three; Botany, one; Agronomy, one; Entomology and Zoölogy, one.

NEW GREENHOUSE. Erected, 1927; cost, \$10,000; dimensions, 29 x 100 feet; occupied by the Departments of Agronomy and Botany.

PLANT MUSEUM. Erected, 1907; cost, \$2,500; dimensions, 20 x 100 feet. Used by the Department of Horticulture. Contains a large number of rare growing plants, including many subtropical species.

PUMP HOUSE. The waterworks pump house contains electric motor-driven pumps of an aggregate capacity of 600 gallons per minute. Cast-iron water

mains distribute this over the campus, and a steel tank of 110,000 gallons capacity supported on a steel tower provides a reserve supply.

SHEEP BARN. Erected, 1927; cost, \$10,000; dimensions: main structure, 43 x 51 feet, and wings, 32 x 90 feet. Situated north of the main campus.

SHOP WAREHOUSE. Erected, 1918; moved to present location in 1927; dimensions, 30 x 75 feet, two stories high. This building is part of the structure erected for the Students' Army Training Corps as mess hall (barracks No. 5). The building is used for storage of general shop supplies.

TRACTOR LABORATORIES. Erected, 1918. These are two frame buildings on concrete foundations, built originally as barracks Nos. 2 and 3 for the Students' Army Training Corps.

VETERINARY RESEARCH LABORATORY BUILDINGS. Located three fourths of a mile north of the College campus are: a two-story brick structure; erected, 1914; cost, \$7,000; dimensions, 20 x 60 feet; and a one-story barn of wood and concrete; erected, 1914; cost, \$3,000; dimensions, 92 x 96 feet.

Admission

Correspondence regarding the admission of undergraduate students should be addressed to the vice-president of the College.

REQUIREMENTS FOR ADMISSION

The entrance requirements of the College are made broad and flexible, only fundamental subjects being definitely required. Those requirements are made upon the supposition that high schools are local institutions in which the courses should be adapted to the needs of the individual localities, and the College-entrance requirements should be such as to take the output of the high schools, rather than to determine the nature of the work offered in them.

Any person who has completed a four-year course of study in any high school or academy accredited by the State Board of Education will be admitted to the freshman class.

As enrollment in the four professional years in the curriculum in Veterinary Medicine is limited, persons desiring admission to that curriculum should read the statement entitled, "Veterinary Enrollment Limited," on page 291.

In order to carry the several curricula successfully the following subjects must have been completed:

ENGLISH, 3 UNITS; ALGEBRA, 1 UNIT; GEOMETRY, 1 UNIT; SCIENCE, PHYSICAL OR BIOLOGICAL, 1 UNIT

- Agriculture (4 years)
- Agricultural Administration (4 years)
- Animal Husbandry and Veterinary Medicine (6 years)
- Applied Music (4 years)
- Home Economics (4 years)
- Home Economics with special training in Art (4 years)
- Home Economics with special training in Institutional Management and Dietetics (4 years)
- Home Economics with special training in Journalism (4 years)
- Home Economics and Nursing (5 years)
- Industrial Journalism (4 years)
- Music Education (4 years)
- Physical Education for Men (4 years)
- Physical Education for Women (4 years)
- Veterinary Medicine (5 years)

ENGLISH, 3 UNITS; ALGEBRA, 1½ UNITS; GEOMETRY, 1 UNIT; SCIENCE, 1 UNIT

- Commerce (4 years)
- Commerce with special training in Accounting (4 years)
- General Science (4 years)
- General Science and Veterinary Medicine (6 years)
- Landscape Gardening (4 years)
- Pre-Medical and Pre-Pharmaceutical (2 years)
- Milling Industry (4 years)

ENGLISH, 3 UNITS; ALGEBRA, 1½ UNITS; GEOMETRY, 1½ UNITS; SCIENCE, 1 UNIT

- Agricultural Engineering (4 years)
- Architecture (4 years)
- Architectural Engineering (4 years)
- Chemical Engineering (4 years)
- Civil Engineering (4 years)
- Electrical Engineering (4 years)
- Industrial Chemistry (4 years)
- Landscape Architecture (4 years)
- Mechanical Engineering (4 years)

The above curricula were formulated on the assumption that high-school subjects named will be offered for admission. A graduate of an accredited high school who in accordance with a state law is admitted as a freshman without all of the high-school subjects that are prerequisite to carry the curriculum chosen will be assigned, if necessary, to a five-hour course in college algebra instead of the regular three-hour course, and to a two-hour course in solid geometry, and may be allowed College credit toward graduation for the extra

hours. A student lacking the required unit of high-school science is held for four hours of college physical or biological science in addition to any science required by his college curriculum, but may be allowed elective credit toward graduation on such science.

A student without high-school credit in one unit of algebra and one unit of geometry is not permitted to register for an engineering curriculum, the curriculum in industrial chemistry, the curriculum in general science, the curricula in commerce, or the curriculum in milling industry, until those fixed entrance requirements are completed. Algebra, one unit, and geometry, one unit, are offered each semester in classes provided by the Department of Home Study. A student without high-school credit in one unit of algebra is required to enroll in the algebra class mentioned above, the first semester of attendance. A student with one unit of algebra, but without one unit of geometry, should enroll in the geometry class the first semester of attendance; such a student must complete this requirement in geometry by the close of the third semester of attendance. *A student will not be advanced in classification until these required units are completed.*

A person who is not a graduate of an accredited high school or academy will be admitted to the freshman class if he has completed fifteen acceptable units of high-school work, including the fixed requirements. (A unit is defined to be the work in an accredited high school or academy in five recitation periods a week for one school year.) One who offers fourteen such units will be admitted as a freshman, but will be conditioned in one unit. Such deficiency (whether fixed or optional requirement) must be made up the first year that the student is in attendance. If the optional requirement is not made up within that time, College credits are taken in its place.

Subjects acceptable for entrance, arranged in eight groups, together with the number of units that may be offered, are shown as follows:

GROUP I	English, three to four units
ENGLISH	Journalism, one half or one unit
	Public speaking, one half or one unit
GROUP II	French, one to four units
FOREIGN	German, one to four units
LANGUAGES	Greek, one to four units
	Latin, one to four units
	Spanish, one to four units
GROUP III	Elementary algebra, one or one and one half units
MATHEMATICS	Plane geometry, one unit
	Advanced algebra, one half unit
	Solid geometry, one half unit
	Plane trigonometry, one half unit
GROUP IV	*Botany, one half or one unit
NATURAL	*Chemistry, one unit
SCIENCES	*General biology, one half or one unit
	*General science, one half or one unit
	Physical geography, one half or one unit
	*Physics, one unit
	*Physiology, one half or one unit
	*Zoölogy, one half or one unit
GROUP V	American history, one unit
HISTORY AND	Civics, one half or one unit
SOCIAL SCIENCES	Constitution, one half unit
	Economics, one half or one unit
	English history, one unit
	Greek and Roman history, one unit
	Medieval and modern history, one unit
	Sociology, one half unit
	International relations, one half unit
GROUP VI	Higher arithmetic, one half unit
NORMAL TRAINING	Methods and management, one half unit
SUBJECTS	*Music, one unit
	Psychology, one half unit
	Reviews
	Grammar, geography, and reading } twelve weeks each, or } 1 unit two of these, eighteen weeks each }

* In courses consisting of laboratory work, wholly or in part, two periods of laboratory work are to be considered the equivalent of one recitation period.

GROUP VII	*Agriculture, one half to four units
INDUSTRIAL	*Domestic art, one half, one, or two units
SUBJECTS	*Domestic science, one half, one, or two units
	*Drawing, one half or one unit
	*Forging, one half or one unit
	*Printing, one half, one, or two units
	*Woodwork, one half, one, or two units
GROUP VIII	Bookkeeping, one half or one unit
COMMERCIAL	Commercial geography, one half unit
SUBJECTS	Commercial law, one half unit
	Salesmanship, one half unit
	*Shorthand and typewriting, one half or one unit each

METHODS OF ADMISSION

ADMISSION BY CERTIFICATE. The applicant is required to submit to the Committee on Admission a certificate of the high-school or academy credit properly certified to by the authorities of the institution in which the work was done. Blanks will be furnished by the College for this purpose.

It is greatly to the advantage of the prospective student to see to it that this blank, properly filled out and *indicating the curriculum in which he wishes to enroll*, be sent to the College as soon as possible after graduation. A permit to register will then be sent him by the registrar before the first of September. This permit *cannot be sent* unless the prospective student furnishes the information as to curriculum. This will greatly facilitate the work of admission. The student will present this permit at the registration room in Nichols Gymnasium, and will not be compelled to wait for his turn to meet the Committee on Admission. High-school transcripts received later than one week prior to enrollment cannot be acted upon before the opening days of College.

ADMISSION BY EXAMINATION. Examinations for admission will be held at the College on the dates stated in the College calendar (see page 7 of this catalogue). These examinations are given for the benefit of those students who need some additional high-school credits to qualify them for admission to the freshman class. Applications for these examinations should be made in advance to the registrar.

ADMISSION AS SPECIAL STUDENTS. In recognition of the fact that experience and maturity tend to compensate, in a measure at least, for the lack of scholastic attainment, the College admits as special students persons over twenty-one years of age who are unable to meet the regular entrance requirements. For admission as special students in Veterinary Medicine, applicants must have completed at least fifteen units of high-school work. The age limit is not applied to special students in music.

Students who are able to meet the regular entrance requirements may also be permitted for sufficient reason to register as special students for work toward definite ends not provided for by the regular curricula. This classification does not, however, include students who merely fulfill curricular requirements irregularly in respect to weight or content of assignments, or who take approved courses in addition to those provided for in their curricula.

An applicant for admission as a special student must secure a permit from the dean of the division in which the major work is to be done, and this dean approves each assignment. Such a permit is good for one semester only but may be renewed in succeeding semesters.

Special students must present certificates of their preliminary training, and must give evidence of satisfactory preparation for the courses they wish to pursue. They are subject to all the general regulations and requirements of regular students, such as assignments to physical education and military training, payment of fees, regular attendance at classes, and maintenance of satisfactory scholastic standing.

* In courses consisting of laboratory work, wholly or in part, two periods of laboratory work are to be considered the equivalent of one recitation period.

ADMISSION WITH ADVANCED CREDIT. Students who present certificates showing credits for college work done in other acceptable institutions are allowed hour-for-hour credit on courses in this College insofar as they may be directly applied or can be accepted as substitutes or electives. Candidates must present their high-school and college credits certified to by the proper authorities. It is requested, also, that a *college catalogue covering the period of attendance be furnished with college credentials*. In cases in which it is impossible for one to furnish an acceptable certificate concerning work upon which advanced credit is asked, examinations are given, if the subject has been studied under competent instruction.

It is strongly urged that persons entering with advanced credit send certified transcripts of their work at other colleges at least two or three weeks in advance of entrance. Transcripts received later than one week prior to enrollment cannot be acted upon completely before the opening days of College.

Matriculated students may secure advanced credit in certain subjects of freshman rank by examination on account of surplus high-school units over and above the fifteen acceptable units required for admission. The registrar, on request, will furnish a statement of such surplus units to the Committee on Advanced Credit, and that committee will conduct the examination within the first thirty days of the semester or summer school. Examinations, however, which affect the assignment of a semester or summer school will be given the first Saturday of that semester or summer school. After the expiration of the thirty-day period such examinations are authorized by the students' dean.

If the work of the student shows that advanced credits have been wrongly allowed, such credit will be revoked.

JUNIOR COLLEGES

Every junior college student who expects to continue his education at this College is urged to model his course in junior college in such a way as to meet all of the requirements for the particular curriculum which he expects to pursue here. Different curricula have different prerequisites; but admission to advanced standing in the College is reasonably flexible, hour-for-hour credit being given for two years' work wherever the work done in an accredited junior college can be directly applied or can be accepted as substitutions or electives in the curriculum chosen. If the work done in junior college has been carefully selected with regard to the curriculum to be pursued here, the average junior college graduate carrying the maximum assignment can usually complete the requirements for the degree of Bachelor of Science in two additional years.

Detailed statements as to the requirements for graduation in each of the several curricula at the College may be found in other sections of this catalogue.

KANSAS JUNIOR COLLEGES IN FULLY ACCREDITED RELATIONS WITH THE COLLEGE

PUBLIC

Arkansas City Junior College, Arkansas City
Coffeyville Junior College, Coffeyville
El Dorado Junior College, El Dorado
Fort Scott Junior College, Fort Scott
Garden City Junior College, Garden City
Hutchinson Junior College, Hutchinson
Independence Junior College, Independence
Iola Junior College, Iola
Kansas City Junior College, Kansas City
Parsons Junior College, Parsons

PRIVATE

Central Academy and College, McPherson
College of Paola, Paola
Northeast Kansas Junior College, Highland
St. John's College, Winfield
St. Joseph's College, Hays

LATE ADMISSION

A student is not admitted to the College later than ten days after the opening of a semester, except by special permission of his dean, and a fee of \$2.50 is charged those who are assigned after the time set for the close of registration (see the College calendar). *There is no exception to this rule.*

Undergraduate Degrees

For graduation one must complete one of the four-year curricula as shown elsewhere. These are believed to provide for the necessities of most students who seek an institution of this kind, and departures from the specified work are not encouraged. Under special conditions, however, such substitutions are allowed as the interests of the student demand. The total requirement, including military science or physical training, or both, is about 120 to 140 semester hours, according to the four-year curriculum taken. (A semester hour is one hour of recitation or lecture work, or three hours of laboratory a week, for one semester of eighteen weeks. When no possible ambiguity is involved, the term "hour" is used for "semester hour" in this catalogue.)

A student, to be considered as a candidate for an undergraduate degree, must have completed in residence twenty of his last thirty undergraduate hours with not less than thirty hours of undergraduate work at this institution. Resident work is interpreted to include all regularly scheduled class or laboratory instruction given by the regular College faculty, exclusive of Extension courses. In special cases candidates will be considered who have completed three full years of work in this institution and have taken their last year of work in an institution approved by the faculty.

Seniors meeting the graduation requirement in hours but failing to meet it in points are required to take further courses designated by the dean of the division in which their major work lies, until the requirement in points is met.

No student is considered a candidate for graduation in the spring who, at the beginning of the first semester, is deficient more than nine hours in addition to his regular assignment for the year. Candidates desiring to be graduated must make application to the registrar at least thirty days before the date when graduation is expected. The responsibility rests with a candidate to see that he has complied with all the requirements.

Candidates for graduation are required to be present in person, unless arrangements have been made in advance for the conferring of the degree *in absentia*. Application for this privilege should be made to the student's dean. Degrees are conferred at mid-year, in the spring, and in the summer. Candidates for graduation are required to be present at the exercises of Baccalaureate Sunday, unless excused by the Council of Deans.

DEGREES

The following degrees are conferred on completion of four-year curricula:

- Bachelor of Science
- Bachelor of Science in Agriculture (Agriculture; Agricultural Administration; Landscape Gardening)
- Bachelor of Science in Agricultural Engineering
- Bachelor of Science in Architecture
- Bachelor of Science in Architectural Engineering
- Bachelor of Science in Chemical Engineering
- Bachelor of Science in Civil Engineering
- Bachelor of Science in Commerce (Commerce; Commerce and Accounting)
- Bachelor of Science in Electrical Engineering
- Bachelor of Science in Home Economics (Home Economics; Home Economics and Art; Home Economics and Institutional Management and Dietetics; Home Economics and Journalism)
- Bachelor of Science in Industrial Chemistry
- Bachelor of Science in Industrial Journalism
- Bachelor of Science in Landscape Architecture

Bachelor of Science in Mechanical Engineering
Bachelor of Science in Milling Industry
Bachelor of Music
Bachelor of Science in Music Education
Bachelor of Science in Physical Education

The degree of Bachelor of Science in Home Economics and Nursing is conferred upon those who complete the five-year curriculum in Home Economics and Nursing.

The degree of Doctor of Veterinary Medicine is conferred upon those who complete the five-year curriculum in Veterinary Medicine.

Those pursuing the six-year curriculum in Animal Husbandry and Veterinary Medicine are awarded the degree Bachelor of Science in Agriculture upon completion of the first four years, and the degree Doctor of Veterinary Medicine upon completion of the last two years of the curriculum.

Those pursuing the six-year curriculum in General Science and Veterinary Medicine are awarded the degree Bachelor of Science upon completion of the first four years, and the degree Doctor of Veterinary Medicine upon completion of the last two years of the curriculum.

For a second bachelor's degree an additional year of not fewer than thirty semester hours is required. This work is in charge of the dean who administers the curriculum chosen.

General Information

DUTIES AND PRIVILEGES

Good conduct is expected of all students. Aid and stimulus toward the development of good character is given by the Christian organizations of the College and the town and by the College itself. Every student is expected to render a good account of himself in the College community life. College discipline is confined chiefly to sending away those whose conduct, after fair trial, makes their further attendance at the College unprofitable or inadvisable.

In order that a fine type of democratic sociability may be fostered among students and faculty, a large community recreation and rest center is provided in Anderson Hall, the administrative building. This center, one of the largest rooms on the campus, is furnished with divans, arm chairs, and writing tables in wicker and is neatly and beautifully decorated. During free hours and between classes, students and faculty gather here for study, rest, and conversation. The room is available for student and faculty receptions and parties during the late afternoon and the evening hours.

Absences from class or laboratory must be accounted for to the instructor concerned. Permission for absence from College for one or more days must be secured in advance from the dean of the division in which the student is registered. Students cannot honorably leave the College before the close of a semester except by previous arrangement with the deans concerned.

Opportunities for general scientific, literary, music, and forensic training are afforded, in addition to the College courses, by various societies and clubs, which are described elsewhere in the catalogue and afford excellent training in their diverse lines.

At various times during the year College halls are opened for social, literary, musical, and dramatic entertainments furnished by the literary societies, the Department of Music, the Manhattan Theater, and other organizations of students and instructors. Addresses by prominent speakers, men of affairs, and persons prominent in scientific, educational, and social work are of frequent occurrence.

FEES

FEES SUBJECT TO CHANGE. All fees are subject to change at any time by the State Board of Regents.

PAYMENT OF FEES. The matriculation fee is paid upon admission to the College. The incidental fee, the student-health fee, the student-activity fee, and laboratory fees are payable at the beginning of each semester.

Students must be prepared to pay these fees in full at the time of registration; assignments cannot be completed without the payment. Checks on out-of-town banks or on local banks are accepted to the amount of the fees.

TUITION. There is no charge for tuition. Class instruction in music is free, but fees are charged for individual instruction. (See Department of Music for statement of fees for music.)

MATRICULATION FEE. A matriculation or entrance fee of \$7.50 for residents of Kansas, or \$15 for nonresidents, is charged all students in College curricula, but it is not paid by students who enroll in the summer school only, unless they are candidates for a degree at the end of the session. It is payable by special students.

INCIDENTAL FEE. An incidental fee of \$18.75 a semester, or \$15 for the nine-week summer school, is charged residents of Kansas; nonresidents pay \$37 a semester, or \$25 for the nine-week summer school. The incidental fee for the four-week summer school is \$7.50.

STUDENT-HEALTH FEE. A student-health fee of \$4 a semester or \$1.50 for the nine-week summer school is charged undergraduate students. Graduate students do not pay this fee, nor do they receive the benefits of the student-health service. This fee entitles the student to receive the services of the Department of Student Health for any illness contracted while in College.

STUDENT-ACTIVITY FEE. A student-activity fee of \$7.50 a semester is charged undergraduate students. This fee is imposed by the vote of the students themselves, and at their request is collected by the College at the beginning of each semester along with the fees levied by the state. The fund is used to support about fifteen student activities, including athletics, intercollegiate debate, dramatics, intercollegiate judging contests, the College band and orchestra, the Kansas State Collegian (the student newspaper), Royal Purple (the College yearbook), and the Student Governing Association. Payment of this fee admits one to athletic events, to intercollegiate debates and oratorical contests, to band and orchestra concerts, and to plays presented by the Manhattan Theater (a College dramatic organization). It gives membership in the Student Governing Association, and entitles one to receive the student newspaper and the College yearbook. Members of the faculty, employees of the College, and graduate students have the privilege of paying the fee and receiving its benefits.

RECAPITULATION. To make plain to prospective students the amount of fees due at the opening of each semester of the College year in accordance with the statements of the above paragraphs, but *not including the laboratory fees*, which are announced in a succeeding paragraph, the following tabular statement is given:

FOR RESIDENTS OF KANSAS

	<i>New students</i>	<i>Old students</i>
Matriculation (paid only once).....	\$7.50	None
Incidental (one semester).....	18.75	\$18.75
Student-health (one semester).....	4.00	4.00
Student-activity (one semester).....	7.50	7.50
Totals	\$37.75	\$30.25

FOR NONRESIDENTS OF KANSAS

	<i>New students</i>	<i>Old students</i>
Matriculation (paid only once).....	\$15.00	None
Incidental (one semester).....	37.00	\$37.00
Student-health (one semester).....	4.00	4.00
Student-activity (one semester).....	7.50	7.50
Totals	\$63.50	\$48.50

LABORATORY FEES. In all laboratories students are required to pay for supplies used and for apparatus broken or lost. The cost in the several subjects ranges from 50 cents to \$10 a semester. Charges are noted under the descriptions of the several courses; changes in charges are effective June 1. The following tabulation shows the laboratory charges for each semester of the freshman year in the several curricula. In a few instances these are approximate, since options exist in some curricula and charges are affected by the subjects chosen.

<i>Curriculum</i>	<i>First semester</i>	<i>Second semester</i>
Agricultural Administration	\$18.50	\$22.00
Agricultural Engineering	12.75	14.75
Agriculture	18.50	22.00
Animal Husbandry and Veterinary Medicine (six year)	18.50	22.00
Applied Music (not incl. sheet music and private lessons)	2.50	2.50
Architectural Engineering	12.75	14.25
Architecture	5.25	6.75
Chemical Engineering	14.25	14.25
Civil Engineering	12.75	12.75
Commerce	8.50*	8.50*

* Approximate figures.

<i>Curriculum</i>	<i>First semester</i>	<i>Second semester</i>
Commerce and Accounting.....	\$8.50*	\$8.50*
Electrical Engineering	15.25	14.75
General Science	17.25	17.25
General Science Pre-Medical and Pre-Pharmacal Adap.	13.50	13.50
General Science and Veterinary Medicine (six year),	17.25	17.25
Home Economics	19.25	14.00
Home Economics and Art.....	19.25	14.00
Home Economics and Inst. Mgmt. and Dietetics....	19.25	14.00
Home Economics and Journalism.....	19.25	14.00
Home Economics and Nursing (five year).....	18.50	13.20
Industrial Chemistry	15.00	13.50
Industrial Journalism	16.50*	8.00*
Landscape Architecture	9.00	10.50
Landscape Gardening	18.00	19.50
Mechanical Engineering	14.25	12.75
Milling Industry	16.25	16.25
Music Education (not incl. sheet music and private lessons)	2.50	7.50*
Physical Education for Men.....	13.50	14.00
Physical Education for Women.....	12.50	13.00
Veterinary Medicine (freshman or second year).....	21.50	19.50

LATE ASSIGNMENT FEE. For assignment after the close of the regular registration period the student is charged \$2.50. *There is no exception to this rule.*

AUDITION FEE. To persons not enrolled in or employed by the College, the fee for auditing classes is one dollar per semester hour of the course audited.

COMMENCEMENT FEE. On graduation and on receiving an advanced degree, students pay a commencement fee of \$7.50 to cover the cost of the diploma and other commencement expenses.

REFUND OF FEES. *No refund is made on the matriculation fee.* Certain refunds are made on other fees, as shown below, and *no exceptions are made to these rules.*

Refunds are given *only* on the presentation of the fee receipts for various fees paid. Refunds are authorized at the office of the registrar. *Fee receipts must be preserved* by the student. To be accepted, claims for fee refunds must be presented at the office of the registrar not later than the end of the semester or summer school for which the fees were paid.

A student permitted to withdraw before the end of the first week of the semester or summer school may receive a refund of all the fees paid for that semester or summer school. The first week ends at 5 p. m., Saturday, following the first day of enrollment.

A student permitted to withdraw after remaining the first week and less than one third of a semester or summer school may receive a refund of one half the fees paid for that semester or summer school.

Refund is made on the unused portion of laboratory fees. All claims for refunds on laboratory deposits must be made within fifteen days of the close of the semester or summer school.

A student dropping music before the end of a semester or summer school may receive a refund of fees paid proportional to the remaining time of the first three fourths of the semester or summer school; that is, the fees for at least the last one fourth of a semester or summer school are retained.

* Approximate figures.

OTHER EXPENSES

TEXTBOOKS. The cost of textbooks varies considerably from semester to semester and according to the curriculum pursued. The following tabulation shows the approximate cost of books required during the freshman year:

<i>Curriculum</i>	<i>First semester</i>	<i>Second semester</i>
Agricultural Administration	\$19.60	\$12.10
Agricultural Engineering	24.10	7.75
Agriculture	19.60	12.10
Animal Husbandry and Veterinary Medicine (six year)	19.60	12.10
Applied Music (not incl. sheet music and private lessons)	14.25*	.....
Architectural Engineering	24.10	6.25
Architecture	32.35	4.75
Chemical Engineering	23.65	5.50
Civil Engineering	23.75	13.10
Commerce	18.85*	4.75*
Commerce and Accounting	18.85*	4.75*
Electrical Engineering	21.35	13.75
General Science	20.95	4.00
General Science Pre-Medical and Pre-Pharmaceutical Adap.	18.70 [^]	4.00
General Science and Veterinary Medicine (six year), Home Economics	20.95	4.00
Home Economics	16.35	9.60
Home Economics and Art	16.35	9.60
Home Economics and Inst. Mgmt. and Dietetics	16.35	9.60
Home Economics and Journalism	16.35	9.60
Home Economics and Nursing (five year)	15.85	6.60
Industrial Chemistry	22.45	9.75
Industrial Journalism	18.60*	9.25*
Landscape Architecture	23.75	6.10
Landscape Gardening	20.85	9.60
Mechanical Engineering	24.60	11.50
Milling Industry	15.95	8.35
Music Education (not incl. sheet music and private lessons)	15.00	5.00*
Physical Education for Men	13.85	7.10
Physical Education for Women	15.85	6.50
Veterinary Medicine	22.60	5.50

DRAWING INSTRUMENTS. In several curricula, especially in architecture and engineering, drawing instruments are required. These range in price from \$7.50 to \$25 a set.

GYMNASIUM SUITS. Each young woman taking physical training must have an approved gymnasium suit costing about \$4.50. Complete gymnasium suits for young men cost about \$5.

MILITARY UNIFORM. Each student who takes military training must have a uniform. For the basic courses the uniform, except shoes, is furnished by the war department. For the advanced courses an allowance is made toward the cost of the uniform used.

ROOMS. Van Zile Hall is available as a residence for 125 women, but other rooms are not furnished by the College. They are readily available in the city. The cost is determined by the location and accommodations offered. For a room suitable for two persons the average cost is from \$6 to \$8 a month for each occupant.

BOARD. The cost of board depends largely upon individual requirements. In clubs and private boarding houses the cost is \$3 a week and upward. Students may board themselves at a smaller money outlay. The College operates a first-class cafeteria, where all meals may be obtained, except on Saturday evenings and on Sundays, at moderate prices. Food is furnished at

* Approximate figures.

cost, and the expense to the student depends upon the care and judgment which he employs.

Board and room may be obtained at a minimum cost of about \$4 a week.

LAUNDRY. The expense for laundry may be estimated at 40 cents to 70 cents a week, depending upon individual requirements.

BOARDING AND ROOMING HOUSES

Students who are not residents of Manhattan are expected to live in rooming houses which have been approved by the College administration. The Faculty Council on Student Affairs inspects the rooms and issues certificates of approval for those that are satisfactory. Correspondence relative to rooming and boarding accommodations may be addressed to the chairman of the Faculty Council on Student Affairs or to the secretary of the Young Men's Christian Association. Upon arrival in Manhattan young men should go to the office of the Y. M. C. A. secretary. Young women upon arrival should go to the office of the dean of women, or to the office of the Y. W. C. A. secretary. Taxi service to Anderson Hall on the campus is available from the railway stations and bus stations.

Van Zile Hall, a residence hall for women students, is located on the campus. It accommodates 125 women. It is a beautifully furnished, well-equipped, fireproof building of stone. Applications for rooms are considered in the order in which they are received. To validate an application for residence in the Hall a deposit of \$10 is required. This amount will be refunded in case of a change in plans, provided request is made to the dean of women by August 25. The contract for room and board in Van Zile Hall is for a full semester (eighteen weeks) and the obligation is canceled only for reasons satisfactory to the dean of women. All correspondence in regard to the residence hall should be addressed to the dean of women.

SELF-SUPPORT

The courses of instruction are based upon the supposition that the student is here for study. Therefore a proper grasp of the subjects cannot be obtained by the average student unless the greater part of his time is given to College work. Students of limited means are encouraged and aided in every possible way, but unless exceptionally strong, both mentally and physically, such students are advised to take lighter work by extending their courses, in case they are obliged to give any considerable time to self-support. As a rule, a student should be prepared with means for at least a semester, as some time is required in which to make acquaintances and to learn where suitable work may be obtained.

There are various lines in which students may find employment. The College itself employs student labor to the extent of about \$6,000 a month, at rates varying from 20 to 35 cents an hour, according to the nature of the employment and the experience of the employee. Most of this labor is upon the College farm, in the orchards and gardens, in the shops and the printing office, for the janitor, etc. Various departments utilize student help to a considerable extent during the vacations. Students demonstrating exceptional efficiency, ability and trustworthiness obtain limited employment in special duties about the College. Many students secure employment in various lines in the town, and some opportunity exists for obtaining board in exchange for work with families either in town or in the neighboring country.

Labor is universally respected in the College community, and the student who remains under the necessity of earning his way will find himself absolutely unhampered by discouraging social conditions. Indeed, over one third of the students support themselves wholly, while a third support themselves in part. False standards regarding physical work do not exist and are not tolerated by the board of instruction or by the student body as a whole. Absolutely democratic standards prevail at the College, and the students are judged on the basis of their personal worth and efficiency.

Students are assisted to obtain employment by means of the employment bureaus maintained by the Young Men's Christian Association and by the Young Women's Christian Association of the College, with the secretaries of which organizations correspondence is encouraged.

STUDENT LOAN FUNDS

The State Board of Regents has established the following rules covering the administration of student loan funds:

1. The development of sound character in student borrowers as well as the furnishing of financial aid to deserving students shall be regarded as a major purpose in administering student loan funds. Prompt payment of interest and of principal and other essential features of good business procedure shall be required to the fullest practicable extent.

2. When not inconsistent with the terms of the bequest or gift providing a student loan fund, not less than 10 percent of the annual income from the fund shall be set up as a reserve to cover possible losses of principal, until the total reserve for that fund equals 10 percent of the amount of the fund.

3. When not inconsistent with the terms of the bequest or gift providing a student loan fund, as much as necessary (but not exceeding 90 percent) of the annual income from the fund may be used to defray expenses for clerical help, supplies, postage, etc., necessary in administering the fund, but this expense shall not include the services of faculty members, these services being contributed without extra compensation.

4. When not inconsistent with the terms of the bequest or gift providing the loan fund involved, a student loan is to be made only when a note or notes are signed by the borrower and one other responsible person, preferably the borrower's parent or guardian, and this indorser must be recommended by his bank as of good financial standing and as otherwise satisfactory as an indorser.

5. As a general policy, loans will be made only to juniors, seniors and graduate students who have attended Kansas State College for at least one semester and preferably for one year, and who have a scholarship average of at least C. Departures from this policy will be permissible only in highly exceptional and strictly meritorious individual instances.

The College has established the following rules, among others, as to procedure with reference to all student loan funds:

1. The office of the Executive Secretary of Kansas State College Alumni Association is to be the central office through which all student loan activities are coördinated.

2. To apply for a loan from any of the loan funds, a student must present his request to the Alumni office. The Alumni office will give each such student a card designating the Loan Fund Committee to which he should apply for a loan. Decision concerning the Loan Fund Committee to which application should be made is to be based upon the qualifications of the student for a loan; the loans, if any, previously obtained by the student; the amount available to lend in each fund, and such other matters as may be mutually agreed upon by the chairmen of the committees concerned. The student must present the card from the Alumni office to the chairman or other designated representative of the committee named on the card. The Alumni office will keep a duplicate of every such card issued to students. The committee will retain the card presented by the student and furnish the student with the necessary application blanks, provided it appears worth while for the student to make formal application for a loan.

3. A student who has borrowed from one loan fund shall receive a loan from another fund only after those in charge of the fund from which the first loan was made have had an opportunity to extend an additional loan to the student. If the second loan is made from a fund other than the one from

which the first loan was secured, then the first loan shall have priority of payment.

4. The maximum total amount loaned from all loan funds to one individual, under usual circumstances, shall not exceed \$400.

Students wishing loans from any of the funds listed below should apply to Kenney L. Ford, Secretary of the K. S. C. Alumni Association.

THE ALUMNI LOAN FUND. The Alumni Association of Kansas State College has created a loan fund, chiefly from payments for life memberships in the association. Members pay the association \$3 a year, but on payment of \$50 in one sum they are relieved from further dues. If husband and wife are both eligible to membership, joint membership may be obtained by payment of \$75. The fund so created, now amounting, with accruals, to about \$51,800, is administered by a committee appointed by the directors of the Alumni Association. The committee announces no specific rules governing the granting of loans, but in general gives preference to junior and senior students, and to loans of smaller amounts on short time over larger amounts which cannot be paid for several years. Interest is charged at the rate of six percent a year. Alumni are urged to take life memberships and thus add to the funds available to worthy students.

Acknowledgment of additions to the Life Membership Fund is made at this place from year to year. Since the last report, up to and including October 21, 1935, the following named persons have completed payments for life membership: Ralph W. Baird, John W. Ballard, Robert O. Blair, Marion Brookover, Vianna Dizmang, C. R. Enlow, Martha E. Foster, Ivy A. Fuller, George W. Givin, E. O. Graper, C. E. Hammett, John B. Hanna, Robert H. Hazlett, George E. Hendrix, William K. Hervey, Raymond K. Hoefener, Ray Hoss, Charles B. Hudson, J. Willis Jordan, Althea L. Keller, Robert W. Kilbourn, L. M. Knight, Olga C. Larsen, John R. Latta, Barbara Lautz, Walter M. Lewis, A. E. McClymonds, Nellie Dilsaver McFillen, Wilmer J. McMillin, Eugenia Fairman McNall, C. J. Medlin, Julia M. Moehlman, Luella Sherman Mortenson, Frank L. Myers, Amer B. and Mamie Frey Nystrom, R. G. Obrecht, Elizabeth Quinlan, Myron W. Reed, George A. Rogler, J. D. and Helen Tedman Smerchek, Gerald G. Smith, Robert R. Teagarden, Franklin Thackrey, John E. Thackrey, Vera C. Thackrey, Florence Harris Walker, A. D. Weber, Verda Harris Whitenack, L. G. Wieneke, T. F. Winburn, Dora Thompson Winter, James H. Young, and Frank Zitnik. This lists brings the total paid-up life members to 715.

LOCKHART LOAN FUND. The Lockhart Loan Fund is the result of a bequest to the College by the late George N. Lockhart. The bequest originally consisted of a one sixth interest in the Lockhart Ranch in Wabaunsee county. This interest has been sold and the proceeds are available to use under the terms of the bequest "to form a fund to assist male students through college by means of loans at a reasonable rate of interest." The fund now amounts to approximately \$28,000. It is administered by a special committee, of which Prof. W. E. Grimes is chairman.

THE HENRY JACKSON WATERS LOAN FUND. The Henry Jackson Waters Loan Fund consists of the royalties received from the Kansas sales of Ex-President Waters' textbook, *The Essentials of Agriculture*, for the first five years. The royalties amounted to approximately \$2,000, which sum has been augmented by gifts of \$100 each from Senator Capper and L. R. Eakin and by smaller amounts received from some others. The entire amount, now over \$3,000, is in constant use. The fund is administered by a committee appointed by the president of the College and approved by the Board of Regents. The rules for the loans are likewise approved by the board. The rules allow emergency loans of \$50 to any student who has completed one semester of work in this College. Juniors may borrow \$100 and seniors may borrow \$150. This fund is administered by the Waters Loan Fund Committee, of which Prof. J. O. Hamilton is chairman.

THE 4-H CLUB LOAN FUND. The Collegiate 4-H Club of the College has created a loan fund of approximately \$1,500 to be loaned to deserving students who were former successful 4-H club members. This fund is loaned in units of \$50, drawing interest at 6 percent per annum. The fund has been created by the efforts of the members of the Collegiate 4-H Club in editing and publishing the "Who's Whoot," the annual 4-H Club Book of Kansas. It is hoped that the fund will increase in size from year to year and that it will prove helpful to deserving 4-H Club members attending college. The fund is administered by the K. S. C. Alumni Association in coöperation with the Collegiate 4-H Club.

THE STATE FEDERATION OF WOMEN'S CLUBS LOAN FUND. Each year several of the young women students of the Kansas State College are beneficiaries of the State Federation of Women's Clubs through the administration of its liberal Young Women's Student Loan Fund. Information regarding this fund may be obtained from Dean Mary P. Van Zile.

THE P. E. O. LOAN FUND. The P. E. O., a national organization of women, maintains a fund to be loaned to girls to help defray college expenses. Information regarding this fund may be obtained from Dean Mary P. Van Zile.

THE SOCIAL CLUB LOAN FUND. This is a fund loaned by the K. S. C. Social Club and is administered by the Waters Loan Fund Committee.

THE D. A. R. LOAN FUND. The D. A. R. Loan Fund is a fund available to both men and women students and is administered by the Waters Loan Fund Committee.

THE WOMEN'S PAN-HELLENIC LOAN FUND. The Alumnae Pan-Hellenic Fund is loaned to women students. Applications should be made to the president of the City Pan-Hellenic, through Dean Mary P. Van Zile.

THE WOMAN'S CLUB LOAN FUND. This is a fund established by the Woman's Club of Manhattan, and is available to both men and women students. This loan is administered by the Waters Loan Fund Committee.

THE AMERICAN ASSOCIATION OF UNIVERSITY WOMEN LOAN FUND. The Manhattan branch of the American Association of University Women maintains a small loan fund which is available to a graduate woman student enrolled in any department of the College recognized by the Graduate Council. Applications for this loan should be made to the chairman of the Graduate Loan Fund Committee of the Manhattan branch of the American Association of University Women.

THE BELLE SELBY CURTICE LOAN FUND. Mrs. Belle Selby Curtice, a graduate of the class of 1882, established a loan fund of \$1,000 in memory of the influence and inspiration the College has given her life. This fund is available to young women in the curriculum in Home Economics and is administered by the Waters Loan Fund Committee.

THE MASONIC LOAN FUND. The Knights Templar Commandery has established a loan fund that is available for junior and senior men and women who have given evidence of scholarship and worth. Applicants should seek recommendations from the commandery with whose members they may be acquainted.

THE FRANKLIN LITERARY SOCIETY LOAN FUND. The Franklin Literary Society established a loan fund which is available to students. It is administered by the Waters Loan Fund Committee.

THE ORDER OF THE EASTERN STAR LOAN FUND. This fund is open to members of the Order of the Eastern Star and to sons and daughters of members of that organization. Loans are made from this fund to College juniors and

seniors. Applications for loans are passed upon in August for the first semester and in January for the second semester. Applications should be filed well in advance of these months. Information may be obtained through the Grand Secretary, The Order of the Eastern Star, National Reserve Building, Topeka.

PRIZES AND MEDALS

STOCK JUDGING. The Block and Bridle Club offers four medals, one gold, one silver, and two bronze, to students obtaining the highest four places in the club's stock-judging contest.

DAIRY JUDGING. The Student Dairy Club each year holds a dairy-judging contest, and offers a gold, a silver, and a bronze medal to students obtaining the highest three places.

POULTRY JUDGING. The Department of Poultry Husbandry offers prizes to the value of \$100 to students in poultry-judging contests.

GRAIN JUDGING. The Klod and Kernel Klub holds an annual grain-judging contest. Cash prizes, trophies, merchandise, and subscriptions to farm papers are given to the highest ranking students.

ARCHITECTURE. The American Institute of Architects offers a medal to the senior architect showing the highest degree of general excellence. The faculty of the Department of Architecture offers prizes of books to those freshmen, sophomores, and juniors who do the best work.

Alpha Rho Chi, national social fraternity of architecture, awards a medal to the graduating senior of the Department of Architecture who has shown through his attitude and personality the greatest ability for leadership, service for his school and department, and real professional merit.

CIVIL ENGINEERING. The Kansas section of the American Society of Civil Engineers offers payment of the initiation fee into the American Society of Civil Engineers to the senior civil engineer making the highest grades during his senior year.

ELECTRICAL ENGINEERING. Two medals, first (gold) and second (silver), are awarded those seniors who have made the best records in twenty hours of certain fundamental, required electrical engineering subjects. Also, two medals, first (gold) and second (silver), are awarded to the ranking juniors who have completed not fewer than eighty semester credits of the required electrical engineering curriculum.

MARGARET RUSSEL SCHOLARSHIP AWARD. Phi Alpha Mu, the honor society for women taking work offered in the curriculum in general science, awards \$50 each year to the junior young woman enrolled in the curriculum in general science who had the highest scholastic standing at the close of the second semester of the previous college year. To be eligible for this award the student must have done her sophomore work in the Division of General Science at the Kansas State College.

OMICRON NU SCHOLARSHIP AWARD. Omicron Nu, the honor society of the Division of Home Economics, grants annually a prize of \$10 to the young woman achieving highest rank in scholarship among the freshmen of that division.

SIGMA TAU SCHOLARSHIP AWARD. Sigma Tau, the honor society in the Division of Engineering, awards annually medals to the three sophomore engineering students making the highest scholastic records in their freshman year.

COMMERCE. The Alpha Omega chapter of Alpha Kappa Psi, professional commerce fraternity, offers a scholarship medallion annually to the student who makes the highest scholastic record among all junior men enrolled in the curriculum in commerce.

SHORT-STORY WRITING. The Quill Club offers annually \$10 to the student of Kansas State College writing the best short story in a contest held by this organization.

JOURNALISM. The outstanding student in Agricultural Journalism each year is honored by having his name engraved upon one of the several small shields surrounding a larger shield which bears these words: "Recognition for superior attainments in Agricultural Journalism. Presented by Arthur Capper to students in the Department of Industrial Journalism and Printing, Kansas State College."

ORATORY. The literary societies through the Inter-Society Council offer each year in the Inter-Society Oratorical Contest three substantial cash and medal prizes.

The College is a member of the Missouri Valley Oratorical Association and is represented in its annual contest in which valuable cash and medal awards are offered.

Other contest opportunities of an intercollegiate character and carrying substantial awards are available from time to time.

SOCIOLOGY. The Kappa Alpha Chapter of Chi Omega Sorority offers a prize of \$25 to the woman student who holds the highest grade in sociology at the end of the first semester each year, the standing of the student to be determined by the instructor.

VETERINARY MEDICINE. Within the Division of Veterinary Medicine awards are made as indicated below:

Harwood prizes in physiology—donated by Dr. N. D. Harwood, K. S. C., '18—consist of a first prize of \$10 and a second prize of \$5. Sophomore students are eligible.

Salsbery prizes in therapeutics—donated by Dr. C. E. Salsbery representing the alumni of the suspended Kansas City Veterinary College—consist of a first prize of \$10 and a second prize of \$5. Junior students are eligible.

Franklin prizes in pathology—donated by Dr. O. M. Franklin, K. S. C., '12—consist of a first prize of \$10 and a second prize of \$5. Senior students are eligible.

Schmoker prizes in general efficiency—donated by Dr. E. A. Schmoker, K. S. C., '17—consist of a first prize of \$10 and a second prize of \$5. Senior students are eligible.

Bower prizes in pet animal medicine—donated by Dr. C. W. Bower, K. S. C., '18—consist of a first prize of \$10 and a second prize of \$5. Senior students are eligible.

SCHOLARSHIPS

DEBATE. In the Department of Public Speaking two scholarships of the value of \$100 each, one for men and one for women students, are offered annually for proficiency in intercollegiate debating.

FOR 4-H CLUB MEMBERS. The Union Pacific System offers \$100 scholarships to winners in 4-H Club work and in the study of vocational agriculture (in 36 counties named), the money to be used to enroll for a full-term course in agriculture, veterinary medicine, or home economics.

Senator Arthur Capper, of Topeka, Kan., offers \$300 annually for the purpose of providing two 4-H Club scholarships of \$150 each for any full-term course at the Kansas State College. One of these scholarships goes each year to the boy standing highest and the other to the girl standing highest in the 4-H leadership project in Kansas.

FOR WORLD WAR VETERANS AND THEIR DESCENDANTS. The trustees of the estate of LaVerne Noyes award to the Kansas State College annually six scholarships which cover the cost of matriculation fees, incidental fees, and laboratory charges only. These scholarships are available, with certain reservations, to deserving students who need this assistance and who served in the

army or navy of the United States between April 6, 1917, and September 11, 1918, or descended by blood from some one who so served. Enlistments must have been made previous to May 11, 1918, unless active over-sea, pre-armistice service was rendered. Applications for these scholarships should be made through the student's dean.

GRADUATE ASSISTANTSHIPS

Graduate assistantships and graduate research assistantships have been established for some years by action of the Board of Regents, and are available in several departments of the College. See Division of Graduate Study.

BUSINESS DIRECTIONS

General information concerning the College may be obtained from the president or the vice-president. Financial matters are handled through the office of the business manager, State Board of Regents, Topeka, Kan.

Prospective students who desire information or catalogues should communicate with the vice-president.

Scientific and practical questions and requests for special advice in subjects in which the College and the Experiment Stations are prepared to give information, should be addressed to the heads of the departments concerned with the work regarding which information is sought.

Applications for farmers' institutes should be made as early in the season as possible, to the Division of Extension. Requests for the publications of the Agricultural Experiment Station or of the Engineering Experiment Station should be made to the director of the station concerned.

Donations to the Library should be addressed to the librarian, and donations to the Museum to the curator of the Museum.

COLLEGE PUBLICATIONS

The official organ of the College is *The Kansas Industrialist*, published weekly and printed at the College by the Department of Industrial Journalism and Printing. Its pages are filled with articles of interest, with special reference to agriculture and the industries. Particular attention is paid to information concerning the work of the College, to investigations of the Experiment Stations, and to local and alumni news. *The Kansas Industrialist* will be sent to any address for \$3 a year. The alumni having active membership in the Alumni Association receive *The Kansas Industrialist* free of charge.

The Kansas State Collegian, a semiweekly newspaper, and *Royal Purple*, the College yearbook, are published by the Board of Student Publications.

The Kansas Agricultural Student is issued quarterly by the Agricultural Association of the Division of Agriculture, and *The Kansas State Engineer* is published by students in the Division of Engineering.

MOTOR CAR PARKING REGULATIONS

PUBLIC PARKS. Two public motor-car parks have been provided for general use by students, faculty members, employees, and visitors. One of these is northwest of Engineering Hall and the other is north of Waters Hall. No permits are required for the use of these parks, but cars must be so parked as not to interfere with the free movement of other cars into and out of parking spaces.

RESTRICTED PARKS. To accommodate crippled students and others having special need for parking spaces, a few small motor-car parks have been provided and permits for the exclusive use of these parks are issued when necessary. Each stall is assigned to a certain car and may be used by that car only. Cars must be so parked as not to interfere with the free movement of other cars into and out of the stalls.

PARKING ON DRIVEWAYS. No parking is permitted on the driveways except during public exercises. During such public exercises and for a short time before and after them, cars may be parked on the driveways provided they are so parked as not to interfere with either vehicular or pedestrian traffic.

In the interest of safety, the good appearance of the campus, and the general welfare of the college community, the coöperation of students and faculty in the observance of these regulations is requested. Furthermore, the handling of the parking problem will be greatly simplified if students and faculty members who come to the campus in motor cars will make extensive use of the streets adjacent to the campus for parking purposes.

COLLEGE ASSEMBLY

The College Assembly is held one hour each week. The library, offices, classrooms, and laboratories are closed and the students and faculty gather in the College Auditorium. These assembly exercises consist of devotional services, music and addresses. The devotional exercises are conducted by members of the faculty, by resident ministers of the various denominations, or by prominent visitors. Excellent music is provided by the College Orchestra, by members of the Department of Music, and by available outside talent. In addition to the addresses delivered by the president and by members of the faculty, many prominent leaders of state and national reputation are invited to address the assembly. Thus the assembly has become a center of true culture and enlightenment. Although attendance is not compulsory it is common to see nearly two thousand students present during these exercises.

COLLEGE POST OFFICE

The College operates an office for the reception and delivery of mail. This is not a part of the United States postal service, but students and College officers may have their mail delivered there. Mail is received from the Manhattan post office twice a day. Matter may be deposited for insured and registered mail, and postage stamps may be procured, but post-office orders cannot be obtained.

The chief purpose of this office is to facilitate intercommunication of College departments and communication of deans and teachers with students. All students are expected to call for their mail at least once each two days and preferably every day.

APTITUDE TESTS FOR FRESHMEN

Aptitude tests of all freshmen have been conducted here since 1919. In recent years, examinations of this character have been given quite generally in educational institutions. The tests required in this College occupy only about three hours. These tests are designed to ascertain what features of the student's mental endowment and attainments are strongest. The results are very helpful to deans and advisers in judging the intellectual progress of students, and in giving them counsel concerning occupational aptitudes. They are also of assistance in placing students or graduates in positions.

ASSIGNMENTS

The student, primarily, is responsible for seeing that he conforms to the requirements of the curriculum for which he is enrolled. His assigner and his dean will assist him in planning his work, but are not responsible for his errors. The catalogue is the authentic source of information. College officers try to see that requirements are complied with, but if they fail, the student is not thereby relieved. All of the catalogue statements concerning assignments, and the student's curriculum, should be read.

No student may be enrolled in classes or for private lessons in music or other subjects before receiving an assignment, and no assignment is completed until after the incidental fee and any special fees or charges are paid.

Assignments at the dates shown in the College calendar are made in Nichols Gymnasium, where detailed directions are announced by placards. Later assignments are made by the student's assigner during regular office hours, but are subject to checking by the registrar in respect to availability of classes. Classes are closed when the limits as to numbers are reached. A student is not admitted later than ten days after the opening of the semester except by special permission of his dean. An extra fee of \$2.50 is charged for assignments secured after the last period provided for assignment of students at the opening of each semester as announced in the College calendar.

A student desiring to take work at any other than the regular time must obtain the written consent of his dean, the head of the department in which the work is to be done, and the dean of the division to which the department belongs.

Each student must take full work unless excused by his dean, and more than regular work is not allowed to any student except by permission of his dean, and under no circumstances to anyone who failed or was conditioned or deficient in any subject the preceding semester, or whose average grade was below B.

A student is not allowed to carry work by correspondence while enrolled here, except by permission of his dean.

Special requests concerning assignments, and permission to make up deficiencies by outside study under an approved tutor, are acted upon by the student's dean in conference with the heads of the departments involved.

CHANGES IN ASSIGNMENTS

Subjects are not dropped from assignments within two weeks preceding the close of a period covered by midsemester or final scholarship-deficiency reports.

No student may drop a study or modify his assignment except by a re-assignment, and any student desiring a change in his assignment must apply to his dean. Any change in a student's assignment is made in the office of his dean. Teachers desiring that assignments be changed send requests to the proper deans. Notices of changes are furnished the registrar, the student, and the student's assigner. Changes are effective at once, and the registrar, through the heads of departments, sends notices or enrollment cards to the teachers affected.

A student receiving a notice of reassignment must at once report to classes in accordance therewith. If not content with the revised assignment, he may confer with his dean concerning it. All absences caused by a student's dropping out of class without a proper reassignment are reported by the instructor as unexcused absences.

AUDITING CLASSES

Auditing a class consists in attending it regularly without other participation, and without credit. Only persons having written permits may audit classes. Permission to audit is issued to (a) any person who is enrolled for credit, by the dean in charge of his assignment; (b) an employee of the College not enrolled for credit, by the dean of the division in which the person is employed with approval of the head of the department in which the course is offered; (c) any other person, on payment of a fee of one dollar per credit hour, by the dean of the division in which the course is offered with the approval of the head of the department. Laboratory courses may not be audited.

SCHOLARSHIP DEFICIENCIES

Any freshman student who receives deficiencies (grades of F or Con) in one third of the work to which he is assigned, or any other student who receives deficiencies in one fourth of his work, at the end of the semester, is automatically placed on probation for one semester and the parent or guardian of the student is informed of the fact. A third such probation automatically includes dismissal from the College.

Any freshman student who receives deficiencies in one half of his work, or any other student who receives deficiencies in two fifths of his work, at the end of the semester, is automatically dismissed from the College. The deans notify parents and guardians of the fact when students are dismissed or put on probation on account of scholarship deficiencies.

Students dismissed at the end of the first semester are excluded until the beginning of the next summer session. Those dismissed at the end of the second semester are excluded till the end of the next fall semester. During this period of dismissal the student must not habitually appear upon the campus nor enter any classes. Any student dismissed for scholarship deficiencies may petition in writing, on a form provided by the College, for immediate reinstatement. Petitions presented by such students are considered by a committee appointed for that purpose. Reinstatement is granted only in exceptional and meritorious cases.

ABSENCE AND TARDINESS

Each student must appear at the first exercises of his classes after he is assigned. Students must be present on the very first day of each semester or render a reasonable excuse. All absences are reported from the first day of the semester, even though the student enrolled late. Failure to take out an assignment is not accepted as an excuse for absence from classes. A student is not admitted later than ten days after the opening of the semester except by special permission of his dean.

Each student is required to attend every exercise of a class to which he is assigned, unless exempted under the provision that a junior or senior student is given the privilege of optional attendance at class exercises if, during the last two semesters he attended this College, he made not fewer than thirty points each semester, with an average record of not fewer than two points per credit hour each semester and no grades below passing.

All absences and all cases of tardiness must be promptly accounted for on the "absence blanks." Permission for necessary absences from College for a day or more must, in all cases, be previously obtained from the dean. Any student present at College and desiring to be excused for the day from certain classes must apply in advance to the teachers of those subjects.

The student's attendance record is considered by each instructor as an important factor in determining the grade given in a subject.

The class record of attendance is marked immediately after the beginning of the class period. For students who come in late the record of absence may be changed to that of tardiness, but the teacher is not obliged to make such change unless the student on the day of tardiness hands to him at the close of the hour, on the "absence blank," a statement that he was present. In such a case the record is changed to agree with facts. When a student who has been absent from College because of sickness returns, he must present to each instructor a certificate of good health from the College physician before he is permitted to remain in any classroom. The aim is to prevent the spread of any contagious disease.

Any class is excused if for any reason the instructor fails to report at the end of ten minutes after the beginning of the recitation period, unless the instructor sends word that he will be there later.

Signed reports of absences for each day are sent to the deans by the teachers before 5 o'clock p.m. Excuses submitted by students are transmitted with a recommendation in respect to excusing the absence. Action concerning excuse for absence is taken by the student's dean. Excuse for an absence does not relieve the student from responsibility for lecture, recitation, or laboratory work lost while absent.

Any student who is found to be persistently inattentive in his College work is at once temporarily suspended by his dean, and reported to the president for permanent suspension.

EXAMINATIONS

Final examinations are held during the last four days of each semester, according to a definite schedule; for students who are to be graduated at the close of the semester, the examinations are given earlier, usually at the regular hours for the respective courses.

No regular examination may be given at a date in advance of that provided except that, at the discretion of the head of the department, a student may be permitted to take his examination with another class in the same subject instead of his own class, and that in cases of extreme importance the dean of the student may authorize an examination at an earlier date.

Any student who receives a grade of A for the semester, in any subject, and whose absences for all causes from the class in that subject do not exceed one tenth of the number of times the class is scheduled to meet during the semester, may be excused from the final examination in that subject, at the discretion of the instructor; provided, however, that instructors are to announce such exemption lists in their respective subjects not earlier than the last session of the class preceding the final examination.

Examinations to remove conditions are held on the fourth Saturday of each semester. A student who has received the grade of Con is entitled to take such conditional examination, provided the instructor or the department head be notified of the student's desire to take the examination not later than the Tuesday evening preceding the Saturday set for the examination. If a subject in which a student is conditioned is not passed at the first opportunity, the grade is changed from Con to F, except that in individual instances, where the reason is sufficient, the student's dean may authorize such examination at a date different from that provided by the rule.

Permission for examination in subjects not taken in class or to make up failures by special examination must be obtained, on recommendation of the professor in charge, from the dean of the division in which the student is assigned. Permission to take such examination is not granted unless the preparation for it is made under an approved tutor. All such examinations are under the immediate supervision of the professor in whose department the subject falls.

Examinations in high-school subjects for admission to the College are held at the beginning of each semester and of the summer school. Students desiring such examinations should consult the registrar in advance.

GRADES

Student grades are designated by A, B, C, D, Con, and F, having the following significance and order of rank:

The grade A designates really distinguished achievement, and is the net resultant of exceptionally good mental ability in conjunction with serious application. It is expected that this grade will not include more than ten percent of all grades given a class, and usually will include about five percent.

The grade B represents superior achievement, better than that exhibited by the average student, but not distinguished. It is recognized as a mark of considerable honor and is the resultant of high ability and fair application, or of fair ability and serious application. The percentage of students assigned this grade will depend somewhat on the number assigned grade A, but the sum of grades A and B should approximate twenty-five percent of all grades assigned.

The grade C represents the standing of about half of all students in the College. It means achievement equal to that of the average of students, and includes about half of all student grades. It indicates neither superior nor inferior accomplishment.

The grade D, meaning passed, represents achievement of a grade below that of the average of students. It indicates a student's position as being in the upper part of the lower fourth of the class, and his work as being such as may be described as poor, or inferior. The number of grades D awarded, together

with the grades Con and F, should not, on the whole, exceed twenty-five percent of all and are expected to include about that proportion.

The grade Con, meaning conditioned, is the symbol used to represent work which is deficient in quality. The result of examinations to remove conditions is reported simply as D (passed) or F (failed). In case such examinations are not taken at the first opportunity offered, the grade Con automatically becomes an F, unless in the meantime the student has reënrolled in the course, in which case the Con shall not become an F if the student completes the course satisfactorily.

The grade F, meaning failed, is used to indicate work that is so unsatisfactory as to require that the work be repeated in class or under an approved tutor.

Inc, meaning incomplete, is reported when, in the judgment of the instructor, the student deserves further time to complete work which has been interfered with by an excusable cause of absence or disability. This is only a temporary report and in no way prejudices the student's final grade in a course. Students in laboratory and industrial work must put in at least four fifths of the required time in order to get a passing grade in the subject. Should the required time minimum not be reached, a mark of Inc is reported if the quality of the work done is satisfactory and one of F if it is unsatisfactory. Incomplete work for which a mark of Inc has been reported, if not made up within the first semester the student is in attendance, automatically becomes an F. However, extensions of time may be made in meritorious cases by the dean concerned, provided notice of such extension is sent by him to the registrar within the "first semester" time limit.

The distribution of grades indicated above applies to large numbers, at least a hundred or several hundred, and is not necessarily true of small numbers. It is not a foregone conclusion, for example, that one in a class of twenty must fail nor even that one in the class must have an A grade. In a small group the chances are very much greater that there may be a departure from the normal. If there be such a departure it should of course be recognized in the grades issued. In the long run the accumulated grades for a series of small classes should, however, approach the normal distribution.

REPORTS OF GRADES

On the fifth Saturday and the ninth Saturday of each semester, not later than 6 p. m. of the last day of the first semester, and not later than 6 p. m. of the day after the close of the second semester, reports of all grades below passing at those dates are sent to the students and the deans. The dates are shown in the College calendar, and these reports are an imperative duty of all teachers. The first two of these reports are made in percentages on a scale of seventy for passing. The reports at the end of the semester are on the letter system in use.

Students desiring reports of intrasemester grades must supply their teachers with properly filled officially provided cards between the fourth and the eleventh days after the fifth or the ninth Saturday of a semester. Reports so requested are to be made by the teachers, and may be sent to the students or student organizations through the College post office, or otherwise.

The instructor prepares for each student a semester grade based on the examination and classwork, and is required to report this to the registrar for record within one week after the close of the semester.

If a student drops a subject before midsemester a mark of Wd (withdrawn) is reported. However, subjects are not dropped from assignments within two weeks preceding the close of a period covered by midsemester or final scholarship-deficiency reports.

If a student withdraws from College before midsemester a mark of Wd is reported for each subject, irrespective of the standing of the student in the subject. However, regardless of the time of withdrawal, if all the required work of a course has been completed, a final grade shall be reported. If a student goes through the first half of the semester, but not the second half,

a half-semester grade is reported for record, and designated as such, but a subject dropped at any time after midsemester on account of failure is given a semester grade of F.

In case of absence from the final examination at the end of a semester, a semester grade is not reported until the reason for such absence has been learned; however, within one week after the end of the semester the teacher reports to the registrar a mark of Inc. If the student's absence is inexcusable a semester grade is reported on the basis of zero for the final examination, but if the absence is excused or excusable, a reasonable time, usually not over one month, is allowed within which the examination may be taken.

The result of an examination to remove a condition is reported in quadruplicate to the dean of the student, who transmits copies to the registrar, the student, and the student's assigner. The same procedure is followed in reporting a grade to replace Inc and in reporting corrections of grades.

Instructors are enjoined to leave all class books on file in the proper department or with the president of the College when severing their connection with the institution.

THE POINT SYSTEM

For each hour of work assigned, the student receives points, according to the grade attained, on the following scheme: Grade A, 3 points; B, 2 points; C, 1 point; and D (or lower), no points. For graduation the total requirement in points is the same as in hours. Above the freshman year classification is based on the same requirement in points as in hours.

Seniors meeting the graduation requirements in hours but failing to meet it in points are required to take further courses designated by the dean of the division in which their major work lies, until the requirement in points is met.

CLASSIFICATION OF STUDENTS

New students are classified by the Committee on Admission. To be classified as a freshman on entrance one must have been graduated from an accredited high school, or offer fifteen units of acceptable high-school work. One offering fourteen acceptable high-school units is classified as a conditioned freshman. A student is not advanced in classification until the required entrance units are completed. A student is classified as a sophomore, junior or senior when he attains credit in a number of hours and also of points nine less than the full number of hours required in one, two or three years, respectively, of the curriculum in which he is enrolled. Reclassification of students is made by the registrar each academic year previous to the opening of the first semester.

CREDITS FOR EXTRACURRICULAR WORK

Credit toward graduation may be obtained through satisfactory performance of the duties of certain activities not included in the requirements of any curriculum. These subjects and the limitations upon the semester hours of credit that may be so obtained are as follows:

<i>Subject</i>	<i>Per semester</i>	<i>Total</i>
Orchestra	½	4
Band	½	4
Choral Ensemble	½	4
Debate	2	4
Oratorical Contest	2	4
<i>Kansas State Collegian</i> journalism.....	1	4
<i>Agricultural Student</i> journalism.....	1	4
<i>Kansas State Engineer</i> journalism.....	1	4

To obtain credit on one of these subjects, the student must be regularly assigned to it in accordance with the general rules governing assignments, but may be assigned only upon the written recommendation of the instructor in charge of the work. This recommendation is filed in the office of the student's dean, and is effective until revoked.

Credits obtained in the above-named subjects may be counted as electives in the student's curriculum, or may be formally substituted for required subjects if the curriculum does not offer sufficient elective opportunity. Approval as electives or substitutions is obtained only through the regular procedures. A total of not more than eight semester hours may be allowed a student for these subjects, and not more than two of these may be obtained in any one semester.

BIBLE STUDY

Bible study is an elective. Two semester hours are granted for each completed one-year course. Credit may be granted to any one student for not more than two courses. Teachers of classes are to be approved as tutors, and the supervision of the work is placed in the Department of Education. This department also conducts the examination for credit in Bible study.

COURSE NUMBERS

Each course offered bears a number indicating in a general way the standing of students for whom it is given. Courses for undergraduates bear numbers 101 to 199, courses for undergraduates and graduates bear numbers 201 to 299, and courses for graduates only bear numbers 301 to 399.

In applying this system, the courses offered by any department are numbered independently of all other departments of the College.

CLASSES

The minimum numbers for which classes are organized are as follows:

Freshmen	15
Sophomores, juniors, or seniors.....	7

This rule is varied only by special permission of the Board of Regents.

THE STUDENT GOVERNING ASSOCIATION

The governing association of the student body was organized in the spring of 1919, as the Student Self-governing Association, and reorganized in the spring of 1926 as the Student Governing Association.

The executive council of the association consists of seven members, elected each spring for the following school year by the student body as a whole. The council discharges all executive functions of the association, and sits as a court in disciplinary cases. Actions of the council are subject to approval by the faculty council. In cases of disagreement which are not compromised successfully, the decision of the president of the College is final.

Officers of the association are a president, vice-president, secretary, and treasurer, elected by the council. Though the council sits as a committee of the whole in all its affairs, certain members are put in charge of certain activities, such as discipline, social affairs, etc. Membership in the student association is contingent upon payment of the student activity fee.

THE CHRISTIAN ASSOCIATIONS

The Young Men's Christian Association and the Young Women's Christian Association are organizations of the greatest worth and value in the College community, forming centers of moral culture and religious stimulus among the young men and women during their development period. As is well known, the Christian associations in colleges stand for the best ideals among the students, and are always accorded the cordial support of the authorities. In addition to general moral and spiritual development, the college Christian associations have a practical and efficient influence among the students in many directions.

THE YOUNG MEN'S CHRISTIAN ASSOCIATION

The College Y. M. C. A. has always been a strong and influential body among the students. All young men of the College are welcome in membership of the organization. No fixed fee is charged, each member giving whatever he feels able to afford. The work of the organization is carried on by a student cabinet, which is composed of the chairmen of the standing committees and officers. Each year there is organized a freshman commission for the benefit of the new men, especially those who have had Hi-Y experience. One of the useful and practical features of the Y. M. C. A. is the students' employment bureau, which is maintained for all students seeking employment. Especial attention is given the new students on and after arrival in helping them to find rooms and boarding places and to get the right start in College life. The association maintains a regular secretary, with whom prospective students are cordially encouraged to correspond.

THE YOUNG WOMEN'S CHRISTIAN ASSOCIATION

The College Y. W. C. A. is one of many similar associations in the colleges of this country. It maintains as its purpose the development of a well-rounded womanhood based upon Christian ideals and standards. An office and a reading room are provided. A full-time secretary is employed and she has the assistance of the student leaders of the association and of a group of local women who are interested in the welfare of the students.

Through its college sister work the association endeavors to reach every new woman student. Any young woman who expects to enter College may write to the secretary of the association for assignment to a college sister who will help her to make campus adjustments during the opening weeks of the College year. Coöperating with the dean of women, the association helps women students make satisfactory living arrangements while attending College and maintains an employment bureau for their convenience. Various social functions are given jointly by the Y. M. C. A. and the Y. W. C. A. Student forums and meetings for study and discussion of subjects of interest to students are arranged, and at stated periods there are held devotional and inspirational meetings to which all students are invited.

THE NEWMAN CLUB

The Newman Club, an organization of Catholic students, holds meetings devoted to religious study on alternate Sundays. This work is carried on under the local pastor. The College authorities recognize this Bible study by allowing a two-hour credit for it when duly certified. In further recognition of the club's efforts, the College has placed a set of the Catholic Encyclopedia in the library, where there is also a comprehensive selection of Catholic books and pamphlets purchased by the club. In addition to the meetings devoted to religious study, social meetings are held.

The club is affiliated with the national organization of Newman clubs of the state universities and colleges. Its aim is to foster sound morality, to develop character, and to promote the knowledge and practice of their faith among Catholic students.

LITERARY SOCIETIES

The literary societies of the College, four in number, are wholly student organizations, holding weekly meetings in the College buildings. The Ionian and Browning societies admit only young women to membership; the Hamilton and the Athenian societies admit only young men. Students are encouraged to join one of these organizations for the sake of practice in the use of language, training in debate, and general experience in conducting meetings and in dealing with their fellows. These societies jointly maintain an oratorical board which arranges for the intersociety oratorical contest.

COSMOPOLITAN CLUB

A chapter of The Association of Cosmopolitan Clubs in Universities and Colleges of America is maintained at Kansas State College. The active membership is composed of foreign and American students in equal numbers, and is open to both men and women. A limited number of faculty members are admitted to associate membership. The objective of the club is the promotion of international understanding through friendship between the nationalities represented on the campus. Motto—"Above All Nations Is Humanity."

SCIENCE CLUB

The Science Club, meeting monthly, is an organization of instructors, students, and others interested in science. Its programs include popular lectures by prominent men of science, and papers giving the result of research work at the College. The meetings are also characterized by free discussion of the subjects presented.

AGRICULTURAL SOCIETIES

The Agricultural Association meets during regular agricultural seminar periods. Special meetings are held at the call of the president of the association. All resident students enrolled in the Division of Agriculture are members. The objectives of the association are to encourage and support divisional activities; to correlate the work of various clubs and other organizations of students within the division; and, in general, to have leaders elected and authorized to speak for the student body of the division at all times.

The Agricultural Economics Club meets on the second and fourth Tuesdays of each month. Membership is open to students enrolled in the curriculum of agricultural administration, to majors in agricultural economics, to graduate students majoring or minoring in agricultural economics, and to members of the faculty whose work lies within the field of agricultural economics. The objectives of the club are to promote interest in agricultural economic topics and to further the acquaintanceship of faculty and students. Faculty members and outside speakers are usually secured for programs. Some social meetings are held each year.

The Alpha Mu Club meets on the second Monday of each month during the college year. Its object is to promote interest in milling and its closely associated fields, by bringing the milling industry in closer contact with the school. Membership is open to those taking the milling industry curriculum, the milling faculty, and others closely associated to the milling field. Outside speakers are frequently secured for programs.

The Block and Bridle Club meets on the first and third Tuesdays of each month. Membership is open to students majoring in animal husbandry and to students signifying their intention of majoring in animal husbandry. The object of the club is to promote the interests of animal husbandry in the College and in the state. Livestock problems of all kinds are discussed, and the members of the faculty and outside speakers are secured for addresses on special topics.

The Dairy Club meets on the second and fourth Tuesdays of each month. Membership is open to anyone who is taking any four-year curriculum in the Division of Agriculture and also to anyone actively engaged in dairy work at the College. The object of the organization is the furtherance of dairying in Kansas. Current topics and records of the dairy breeds are read and lectures on special subjects are given by faculty and outside speakers.

The Horticultural Club meets the first and third Mondays of each month during the College year. Its object is to promote the horticultural interests of the state and to afford opportunity for students to improve their knowledge of horticulture. Faculty members and students of the College interested in horticulture are eligible for membership. Students present the majority of the programs.

The Klod and Kernel Klub meets on the second and fourth Tuesdays of

each month. Membership is open to junior and senior agronomy students and members of the agronomy faculty. The object of the society is to arouse more interest in agronomic work and to help students and faculty members of the Department of Agronomy to become better acquainted. Faculty and outside speakers are secured for programs.

ENGINEERING SOCIETIES

The students in agricultural, civil, electrical, and mechanical engineering are organized as student branches of the American Society of Agricultural Engineers, the American Society of Civil Engineers, the American Institute of Electrical Engineers, and the American Society of Mechanical Engineers, respectively. The Architects Club conducts the meetings of the students in architecture.

The purpose of these various societies is to acquaint the students with the latest development in the fields of engineering and architecture, to give them more definite ideas as to the opportunities in their professions and the requirements for success in their professions, to promote acquaintance and fellowship among the students, and to further the interest of the Division of Engineering in the College and the state.

GENERAL SCIENCE SOCIETY

The Popenoe Entomological Club meets twice a month. The object of the club is to promote interest in entomological work at the College. Membership is open to students and faculty members interested in insects. Entomological topics are discussed by members of the club and outside speakers. Occasional field trips are sponsored by the club.

HOME ECONOMICS SOCIETY

The Margaret Justin Home Economics Club is an organization which includes all students in the Division of Home Economics.

Its purpose is to promote professional interest by means of social contact and through talks by leaders in the field of home economics. It is affiliated with the American Home Economics Association and is designed to lead to continued membership in that organization after graduation from college.

VETERINARY SOCIETY

The Junior Chapter of the American Veterinary Medical Association is a student organization in affiliation with the American Veterinary Medical Association.

The object of the chapter is to promote interest and knowledge in veterinary science. The organization meets on the second and fourth Thursdays of each month. Papers are presented by the students. Members of the faculty and outside speakers also appear on the program.

EXTENSION SERVICE SOCIETY

The Collegiate 4-H Club is an organization composed of college young men and young women who formerly were 4-H Club members. Its purpose is to maintain and increase the interest of its members in extension work and 4-H Club work, to develop more effective leadership in such work, to maintain and increase a loan fund for 4-H Club members in college, and in general to aid and promote the well-being of former 4-H Club members at Kansas State College. It participates actively in many campus activities and lends its aid to the various extension activities conducted on the campus or in connection with the College. The club publishes each year the yearbook of 4-H Club work in Kansas known as the "Who's Whoot." The organization aims to acquaint its members with the latest developments in the various fields in which they are interested and to bring added opportunities for professional and educational development. Outside speakers are frequently secured and the organization sends representatives to various national or interstate student conventions or meetings.

HONORS

In each of the divisions of the College, "sophomore honors" are awarded at Commencement to not more than five percent of the sophomore class having the highest standing up to the close of the sophomore year.

In a similar manner "senior honors" are awarded to not exceeding ten percent of the senior class having the highest standing during their junior and senior years.

In awarding honors, the following values are assigned: Grade A, 3; B, 2; C, 1; D, 0; Con, minus 1; and F, minus 2. The honor grade is found by dividing the sum of the product of the grade values and the credit hours by the number of credit hours of work taken. In order to receive honors, the student's average must be B or higher.

The diplomas of the highest three percent of the senior class are inscribed "with high honor" and of the remainder of the highest ten percent "with honor."

HONOR SOCIETIES

A chapter of Phi Kappa Phi, an honor scholarship society, membership in which is open to honor graduates of all departments of American universities and colleges, was installed at the Kansas State College on November 15, 1915. The eligibility of undergraduates to membership is determined on the basis of their scholarship. The candidates are elected to membership at the October, April, and July meetings of the chapter.

The honor society of agriculture, Gamma Sigma Delta, has as its object the encouragement of high standards of scholarship in all branches of agricultural science and education, and the encouragement of a high degree of excellence in the practice of agricultural pursuits. Seniors whose grades place them in the upper one fourth of their class are eligible for membership. Election is in the hands of faculty members of the local chapter.

A chapter of Sigma Xi was installed at this institution in March, 1928. The object of this society is to encourage original investigations in pure and applied science. Members of the faculty and graduate students who have shown noteworthy achievement in original investigations are eligible for election to active membership; seniors who have shown marked excellence in two or more departments of pure or applied science are eligible for election to associate membership.

Besides these above mentioned there are a number of honor fraternities, sororities, and societies which are open to students in different divisions of the College or in different activities. These are treated below.

HONORARY AND PROFESSIONAL ORGANIZATIONS

The honorary and professional organizations of the College consist of fraternities, sororities, and societies. Membership in these organizations is based on scholarship and achievement. They seek to stimulate effort and to promote the interests of the various divisions or departments which they serve or represent. The list of organizations follows:

<i>Organization</i>	<i>Division or department</i>
Alpha Kappa Psi.....	Commerce
Alpha Zeta	Agriculture
K Fraternity	Athletics
Mortar and Ball.....	Military
Mu Phi Epsilon.....	Music
Omicron Nu	Home Economics
Phi Alpha Mu.....	General Science
Phi Delta Kappa.....	Education
Phi Epsilon Kappa.....	Physical Education
Phi Lambda Upsilon.....	Chemistry
Phi Mu Alpha.....	Music
Pi Kappa Delta.....	Debating
Pi Mu Epsilon.....	Mathematics
Quill Club	College Writers
Scabbard and Blade.....	Military
Sigma Delta Chi.....	Industrial Journalism
Sigma Tau	Engineering
Tau Epsilon Kappa.....	Architecture
Theta Sigma Phi.....	Industrial Journalism

AMERICAN CHEMICAL SOCIETY

This institution is headquarters for the Kansas State College section of the American Chemical Society. Its regular and special meetings constitute a valuable stimulus to interest and progress in chemistry. The section provides each year for one or more lectures by eminent chemists from out of town.

THE COLLEGE BAND

The College Band is a military organization, composed chiefly of cadets assigned to this duty for the College year in lieu of drill and technical military instruction. The Band is limited in its membership, and attendance of the members upon its exercises is obligatory. It has proved an effective aid to the cadet corps, stimulating a love for martial music, and affording an attractive feature of the various public ceremonial occasions at the College.

THE COLLEGE ORCHESTRA

The Orchestra is a student organization connected with the Department of Music, membership in which is voluntary. Its daily training under competent leadership results in the acquisition of a considerable repertoire of musical compositions of the best quality. Those connected with the Orchestra obtain in this way familiarity with the works of many of the great composers, and among the students at large the orchestra is an efficient aid in cultivating a taste for, and appreciation of, good music.

Student Health

Head Physician HUSBAND
Assistant Physician DILL
Assistant Physician GROODY
Head Nurse UMBERGER
Head Hospital Nurse WHITE

Nurse RATZLOFF
Nurse ARNOLD
Technician LONGREN
Hospital Housekeeper WILHITE

The Department of Student Health was established in order to maintain good health among the students of the College. It is supported by the student-health fee fund. An adequate hospital with a capacity of thirty-five beds is provided. There are two full-time physicians and one part-time physician in the department. Four nurses and a technician are employed regularly and the matron of the hospital also devotes her entire time to student-health needs. The services of the physicians and standard hospital nursing service are furnished by the Collège, but a student may employ, at his own expense, any physician or private nurse he may desire.

The offices of the department are in Anderson Hall and are open to students each school day from 7:45 a. m. to 5 p. m. Students have the privilege of consulting any of the College physicians on any question of personal hygiene of whatsoever nature. It is expected that students who have need of medical service and are able to walk will go to the department offices, unless there is a possibility that they have a contagious disease. Those who are unable to walk, or who have reason to believe that they have some contagion, should go to the hospital at once. No ambulance service is maintained by the College because in almost all cases patients are able to ride to the hospital in an ordinary conveyance.

The College hospital is ready to receive students any hour of the day or night. Free hospital service is given for three days in each case of acute illness except smallpox. After that period a charge of one dollar a day is made. Smallpox cases are not handled at the hospital except in cases where the disease has been contracted after proper vaccination against it. Patients are admitted to the hospital only on recommendation of the head physician. Hospital service does not include major surgical cases, such as appendicitis, hernia, etc. If such a case develops while the student is in the hospital, he will be transferred, at his own expense, to a hospital of his choice. The College physicians are not required to treat chronic diseases. However, when practicable, such cases may be handled on the same basis as acute cases. Fractures and dislocations of a serious nature are not treated, but minor cases may be treated at the option of the head physician. Students with fractures are admitted to the hospital.

In order to help control contagious diseases, a student absent from classes because of illness must, before he returns to his classes, secure from the College physician a return card showing him to be free from all such diseases.

The health department observes the same vacations and holidays as the rest of the College. Students admitted to the hospital or remaining in the hospital at a time for which the student-health fee has not been paid or during Christmas holidays, will be charged the actual cost of service.

The College Library

Librarian SMITH
Associate Librarian DERBY
Loan Librarian CAMP
Reference Librarian DAVIS
Documents Librarian HOFF
Assistant Reference Librarian SWENSON

Assistant Loan Librarian CULLIPHER
Acting Cataloguer GULICK
Classifier BAKER
Continuations Assistant BAXTER
Class Reserves Assistant MULLER

The general College Library consists of all books belonging to the College, including the library of the Agricultural Experiment Station, which is incorporated with it. On June 30, 1935, the Library contained 108,374 bound volumes, besides much unbound material. It receives currently about 1,100 serial publications. As a depository the Library receives the documents and other publications of the United States government. The books are classified according to the Dewey system and are indexed in a dictionary card catalogue.

The Library is primarily for free reference, but the privilege of drawing books is accorded to all of those connected with the College as registered students or as members of the faculty. Books not specially reserved may be drawn for home use for two weeks. All books are subject to recall at any time.

General reference books, books reserved for classes, general periodicals, and certain other groups of books are to be consulted only in the reading rooms. They may not be loaned from the Library except when the reading rooms are closed. They must then be returned to the Library by the time it next reopens. Any violation of the regulations of the Library subjects the offender to a fine or to a withdrawal of library privileges, or to both, according to the gravity of the offense. More serious offenses, such as mutilation or theft of books or periodicals, are considered just causes for suspension or expulsion of the offender, who is also required to make good the loss incurred.

READING ROOMS. Three reading rooms are maintained in connection with the Library: the general reference room, containing encyclopedias, dictionaries, atlases, bibliographies, and general reference books; the special reference room, containing books reserved for classes; and the periodical room, containing current magazines and the important daily and weekly Kansas newspapers. These rooms are freely open to the student and to the public for purposes of reading and study.

DIVISIONAL LIBRARIES. Divisional and departmental collections are deposited in certain College buildings apart from the main Library. These collections are for the special convenience of the instructors and students of the departments concerned. They are under the direction of the librarian and are accessible to all students at regular hours.

The Division of Graduate Study

JAMES EDWARD ACKERT, *Dean*

Facilities for advanced degrees were offered at the Kansas State College as early as 1866. Opportunities for investigation and research were afforded originally in 1877, when the Master of Science degree first was authorized. Graduate study was administered by the general faculty up to 1903, when this work was placed in the hands of a faculty committee. After 1903 the graduate work grew steadily. In 1909 it was put under the supervision of the Council of Deans. The work was reorganized in 1919 and placed under the supervision of a Graduate Council, which had charge of all graduate work until November 1, 1931. On that date a Division of Graduate Study was formed and a dean of the division appointed. During the next year the College was authorized to offer work leading to the degree Doctor of Philosophy, effective September 1, 1932.

The Graduate Council, which is continued, consists of seven members selected from the following divisions of the College: Agriculture, Engineering, General Science, Home Economics, and Veterinary Medicine. The members of the Graduate Council are appointed by the president. The dean of the Division of Graduate Study is chairman of the council.

The graduate faculty consists of the president of the College, the deans of the academic divisions, the heads of departments offering graduate work, and staff members recommended by the heads of departments and approved by the Graduate Council as qualified to give graduate instruction. The president of the College is chairman of the graduate faculty, the dean of the Division of Graduate Study is vice-chairman and the secretary of the Graduate Council is secretary. The graduate faculty offers all graduate courses, and at the call of the chairman holds meetings for the consideration and adoption of general rules of procedure in the administration of the graduate work.

The Graduate Council determines, subject to the authority of the president of the College and the State Board of Regents and in accordance with any general regulations adopted by the graduate faculty, matters of curriculum, admission to graduate study and to candidacy for advanced degrees, and other matters which relate to the proper administration and development of graduate work in the College.

ADMISSION

Correspondence regarding admission to graduate study should be addressed to the Dean of the Division of Graduate Study, who will on request supply the required application blanks. Each applicant who is not a graduate of this College must submit with his application an official transcript of his college record.

Admission to graduate study is granted to graduates of institutions whose requirements for the bachelor's degree are substantially equivalent to those of the Kansas State College. Admission to graduate study, however, may not be construed to imply admission to candidacy for an advanced degree. Such candidacy is determined after the student has demonstrated by his work for a period of two months or longer (M.S.), or approximately two years (Ph.D.), that he has the ability to do major work of graduate caliber.

REGISTRATION

Students who have been admitted to graduate study are required to register, to obtain their assignments from the dean of the division, and to pay their fees during the regular registration periods.

FEES*

Graduate students are subject to the same fees as other students except that (1) they are exempt from the student-health fee and the student-activity fee and (2) the fee for problem or research work pursued *in absentia* is \$2.50 a semester hour.

ASSIGNMENTS

Not more than sixteen hours, including thesis, may be assigned in a single semester, nor more than eight hours during the nine-week summer school, nor more than four hours during the four-week summer school. Students holding graduate assistantships may not be assigned more than twelve hours, including thesis, in one semester.

GRADES†

An advanced degree will not be conferred on any student who does not make a grade of B or higher in three fourths of the hours taken for the degree, including the thesis. A failure or absence from examination in any course may prevent the conferring of the degree, and failure in any course in the major field precludes conferring the degree in the same year.

DEGREES

Of the advanced academic degrees, the degrees Master of Science and Doctor of Philosophy are conferred. The following professional degrees are conferred: Agricultural Engineer, Architect, Architectural Engineer, Landscape Architect, Chemical Engineer, Civil Engineer, Electrical Engineer, Flour Mill Engineer, and Mechanical Engineer.

CONFERRING OF DEGREES. Candidates for advanced degrees at the end of the second semester and summer school are required to be present in the academic costume and hood appropriate for the degree, unless arrangements have been made in advance for the conferring of the degree *in absentia*. Application for this privilege should be made to the dean of the Division of Graduate Study. Degrees are conferred at the end of the first and second semesters and summer school. Candidates for degrees, except professional degrees, at the end of the second semester are required to be present at the exercises of Baccalaureate Sunday also, unless excused by the Council of Deans.

GENERAL REQUIREMENTS FOR THE DEGREES MASTER OF SCIENCE AND DOCTOR OF PHILOSOPHY

Candidates for the degrees Master of Science and Doctor of Philosophy are expected to assume the initiative and the responsibility. It is important to recognize that graduate work does not consist in the fulfillment of routine requirements alone. The various courses as well as the assistance and advice of the instructors are to be regarded simply as aids in acquiring the methods, discipline, and spirit of independent research.

Each candidate for a degree is expected to have a wide knowledge of his subject and of related lines of work. This is usually obtained only by a wide range of private reading and study outside the immediate field covered by the formal courses to which he may be assigned.

The branch of knowledge to which the student expects to devote the larger part of his time is termed his major subject. The other fields of study selected, which necessarily will be more restricted in scope, are termed minor subjects. The latter should be so chosen as to make the candidate proficient in a second field.

Approximately two thirds of the student's time is devoted to his major sub-

* See section headed Fees, under General Information.

† See section headed Grades, under General Information.

ject and one third to one or more minor subjects. The word subject is used to designate a recognized field of study, and is not defined by the limits of a department. The nature and distribution of the majors and minors (program of study) are approved by the Graduate Council, upon the recommendation of the major instructor and the head of the department (M. S.), or of the supervisory committee (Ph.D.).

The approved program of study is made the basis of the formal assignment to courses at the beginning of each semester and of the summer sessions.

Courses numbered in the two hundreds are open to both graduate and undergraduate students. For graduate credit in such courses, the student must do extra work, the nature and amount of which is determined by the instructor.

REQUIREMENTS FOR THE DEGREE MASTER OF SCIENCE

Work leading to the degree Master of Science is offered in the following departments:

DIVISION OF AGRICULTURE

Agricultural Economics
Agronomy
Animal Husbandry
Dairy Husbandry
Horticulture
Milling Industry
Poultry Husbandry

DIVISION OF ENGINEERING

Agricultural Engineering
Applied Mechanics
Architecture
Civil Engineering
Electrical Engineering
Machine Design
Mechanical Engineering
Shop Practice and Industrial Arts

DIVISION OF GENERAL SCIENCE

Bacteriology
Botany and Plant Pathology
Chemistry
Economics and Sociology

Education*

English
Entomology
Geology
History and Government
Industrial Journalism and Printing
Mathematics
Modern Languages
Physics
Public Speaking
Zoölogy

DIVISION OF HOME ECONOMICS

Art
Child Welfare and Euthenics
Clothing and Textiles
Food Economics and Nutrition
General Home Economics
Household Economics
Institutional Management

DIVISION OF VETERINARY MEDICINE

Anatomy and Physiology
Pathology

RESIDENCE REQUIREMENTS. Candidates for the degree Master of Science (M. S.) are required to spend at least one collegiate year in residence, except under certain special conditions when the residence may be reduced to one and one half semesters, or three nine-week summer schools. The equivalent of thirty semester hours, including a thesis, must be satisfactorily completed.

LANGUAGE REQUIREMENTS. A reading knowledge of two modern foreign languages is highly desirable.

MASTER'S THESIS. Each candidate for a master's degree is required to present a thesis on some subject approved by the major instructor and the head of the department. (See general requirements for the master's and doctor's degrees.)

The thesis ordinarily demands one fourth of the student's time and may not exceed one third of it. The thesis and special reports upon it must be prepared in accordance with specifications to be obtained from the office of the dean of the Division of Graduate Study. (See College calendar for dates.)

A candidate for the master's degree is subject to a rigid oral examination covering the major and minor subjects and thesis by a committee consisting of the instructors with whom the major and minor work was taken, the head of the major department, the dean of the division in which the major work is offered, and a member of the Graduate Council as chairman.

* In graduate work in education, major emphasis is placed upon rural and vocational education.

REQUIREMENTS FOR THE DEGREE DOCTOR OF PHILOSOPHY

DEPARTMENTS OFFERING MAJOR WORK. Major work leading to the degree Doctor of Philosophy is offered in the following fields: Bacteriology, Chemistry, Entomology, Genetics, and Milling Industry. Minor work for this degree may be chosen in the departments offering major work for the degree and in supporting fields in other departments offering graduate work.

RESIDENCE AND CREDIT REQUIREMENTS. At least three years (of nine months each) of graduate study beyond the bachelor's degree, equivalent to 90 semester hours, including a thesis, are required of candidates for the degree Doctor of Philosophy. At least one year of this time must be spent in residence at this College.

LANGUAGE REQUIREMENTS. Each candidate for the degree Doctor of Philosophy must demonstrate to the head of the Department of Modern Languages, or to members of his staff designated by him, ability to read the literature of the major field in two modern foreign languages, to be designated by the supervisory committee. The language requirements shall be fulfilled before the preliminary examinations are taken.

SUPERVISORY COMMITTEE. For each student who contemplates working for the degree Doctor of Philosophy, a supervisory committee is chosen by the dean of the Division of Graduate Study. This committee, consisting of not fewer than five members representing the major and minor fields, aids the student in the preparation of the program of study, which must be approved by the Graduate Council, and has charge of all examinations except the language examinations.

MAJORS AND MINORS. Approximately two thirds of the graduate work (program of study) shall be in a major field and the remainder devoted to one or two minors. In exceptional cases, all of the graduate work may be chosen in one field. The work in the major field may be taken wholly within a department or it may include closely related courses and problems in other departments or divisions of the College. The same principle applies to the minor or minors. (See general requirements for the degrees Master of Science and Doctor of Philosophy.)

PROGRAM OF STUDY AND EXAMINATIONS. Students enrolling in graduate study leading to the degree of Doctor of Philosophy work on a tentative program of study until approximately two thirds of the program, including a substantial portion of the thesis, has been completed. Ordinarily at the close of the second year of graduate study and not later than the beginning of the year in which the student contemplates receiving the degree, the candidate must pass oral and written preliminary examinations over the entire field of study. When the student has passed the language examinations and the preliminary oral and written examinations, he is recommended by the supervisory committee to the Graduate Council for admission to candidacy for the degree Doctor of Philosophy. The program of study leading to the degree accompanies the recommendation.

On completion of the three years of graduate study as prescribed in the program of study and on submission of a thesis satisfactory to the supervisory committee, at least one month before commencement, the candidate is given the final examination.

DOCTOR'S THESIS. Early in the graduate work a thesis subject is chosen in the major field and approved by the supervisory committee. The finished thesis must constitute a contribution to knowledge, either presenting conclusions from new material, or interpreting previous knowledge in a new light. Two complete typewritten copies of the thesis approved by the supervisory committee shall be submitted to the dean of the Division of Graduate Study at least one month before commencement. On the completion of all requirements for the degree, one copy shall be placed on the shelves of the College

library and the other filed with the head of the department in which the major work is taken.

Before the degree is conferred the candidate shall guarantee the printing of the doctor's thesis (wholly or in part as determined by the supervisory committee) within three years after the date of the conferring of the degree. This guarantee shall be either a statement from the editor of an appropriate technical serial or publishing company that the thesis has been accepted for publication or shall be in the form of a cash deposit of \$100 or a bond acceptable to the Graduate Council. If the thesis is not published in acceptable form within three years, the deposit or the bond shall be forfeited unless an extension of time is granted by the Graduate Council for delayed publication after acceptance. When the thesis has been published, 125 copies shall be consigned to the College library.

REQUIREMENTS FOR PROFESSIONAL DEGREES IN ENGINEERING AND ARCHITECTURE

A graduate in engineering or in architecture from this College will be granted the professional degree of Mechanical Engineer, Civil Engineer, Chemical Engineer, Electrical Engineer, Agricultural Engineer, Flour Mill Engineer, Architect, Architectural Engineer, or Landscape Architect, under the following conditions:

The candidate must submit a statement of his experience and a thesis covering some phase of his practice. The thesis and experience must be approved by the head of the department in which the degree is requested, by the dean of the Division of Engineering, and by the Graduate Council, before the granting of such a degree will be recommended to the College Faculty and to the State Board of Regents.

The candidate must declare his candidacy and file with the dean of the Division of Engineering a detailed statement of his professional study and experience, and an outline of his proposed thesis, not later than the November 15 next preceding the commencement at which the degree is to be conferred.

A preliminary copy of the completed thesis must be submitted for criticism not later than April 1, and the final copy in duplicate must be submitted not later than May 15.

The candidate for a professional degree shall present himself at the commencement exercises in academic costume in order that the degree may be conferred.

He shall pay a diploma fee of \$7.50 to the business office not later than May 15.

VACATION CREDIT

Upon the recommendation of his major instructor a student may accumulate a limited number of hours of graduate credit in problem or research courses during the period between the close of the summer school and the beginning of the next succeeding semester under the following provisions: (1) The approval of the dean of the Division of Graduate Study must be secured in advance. (2) The work must be done under the supervision of a member of the graduate faculty.

On completion the credit so earned will be included on the student's next regular assignment marked "vacation credit," and will be in addition to the regularly allowed number of hours assigned. Such credits will be forwarded to the registrar by the instructor as soon as the latter receives the class cards.

GRADUATE WORK IN ABSENTIA

Graduates may be enrolled for from one to six hours of research or problem work *in absentia* on the recommendation of a member of the graduate faculty and with the approval of the dean of the Division of Graduate Study.

GRADUATE ASSISTANTS

In order to encourage graduates of this College and of similar institutions to continue their studies and to pursue work leading to advanced degrees, the College has established graduate assistantships in several departments. These assistantships, which may be graduate assistantships, or graduate research assistantships, demand approximately one half of the time of the student for laboratory or research assistance along the line of his major work during the regular collegiate year. The remainder of his time is given to graduate study. No graduate assistant or graduate research assistant may receive more than twelve hours of graduate credit per semester nor satisfy the residence requirements in less than two semesters and one nine-week summer school.

Graduate assistantships, paying a salary fixed each year by the State Board of Regents, have been established as follows:

<i>Subject</i>	<i>Number</i>
Applied Mechanics	2
Botany	1
Chemistry	5
Dairy Husbandry	1
Horticulture	1
Institutional Management	3
Machine Design	1
Zoölogy	2

Graduate research assistantships as listed below usually are maintained in the departments named. Occupants of these positions assist in the conduct of regular research work in the institution.

<i>Subject</i>	<i>Number</i>
Agricultural Engineering	1
Animal Husbandry	1
Botany	1
Clothing and Textiles.....	1
Electrical Engineering	1
Mechanical Engineering	1
Zoölogy	4

By satisfactorily completing six hours of graduate work in the nine-week summer school, graduate assistants and graduate research assistants may meet the requirements for a master's degree within one calendar year.

Applications for all assistantships should be made annually by April 15 for the following academic year. Students desiring such appointments may obtain application blanks from the dean of the Division of Graduate Study.

GRADUATE LOAN

The Manhattan Branch of the American Association of University Women maintains a loan fund which is available to graduate women students enrolled in any department of the Kansas State College that offers graduate work. Application for this loan shall be made to the chairman of the Graduate Loan Fund Committee of the Manhattan Branch of the American Association of University Women.

SENIORS AND GRADUATE STUDY

A senior who has completed so much of his work for the bachelor's degree that his program for the year is not full may, with the consent of his dean and of the dean of the Division of Graduate Study, be assigned to one or more courses for graduate credit. In no case shall such combination of courses exceed seventeen hours.

GRADUATE WORK IN THE SUMMER SCHOOL

Graduate students desiring to do a part or all of the work for the master's degree in the summer may complete the requirements, in certain lines only, by pursuing graduate work for four nine-week summer schools. Persons in-

terested should correspond with the dean of the Division of Graduate Study in advance. In special cases it may be possible to complete the residence requirements for the master's degree in three nine-week summer schools.

Full information concerning the courses offered is contained in the Summer School number of the Kansas State College *Bulletin*, which may be obtained upon application to the vice-president of the College.

THE GRADUATE CLUB

The Graduate Club is an organization composed of graduate students and members of the graduate faculty. Its purpose is to promote sociability and wide acquaintance among its members.

The Division of Agriculture

LELAND EVERETT CALL, *Dean*

The teaching of rational practical agriculture is fundamental to development in a state whose principal industries are agricultural. Kansas prospers in direct proportion to the productivity of her soil and to the effectiveness with which it is utilized. Effective utilization of the agricultural resources of the state depends upon the success with which the agricultural industries of the state are developed. In order to succeed in farming it is necessary to know something of the soil, the conservation of its fertility and moisture, and its proper cultivation; the kinds of plants to grow and how to improve them; the selection, breeding, and feeding of livestock; the maintenance of orchards, gardens, and attractive surroundings; farm buildings, and the equipment of the farm and the farm house with modern conveniences; the best methods of marketing the products of the farm; and in addition to all this, how to make the farm home the center of influence for good citizenship in the agricultural community.

A man may learn many of these things through practical experience, and thus become successful in modern farming. But practical experience alone is slow and expensive. The Kansas State College of Agriculture and Applied Science furnishes a means of acquiring systematic training in agriculture which fits young men adequately for the farm at a moderate expenditure of time and money.

In addition to training men for service as farmers, the College prepares students for various other activities which must be carried on if the agriculture of the state and nation is to be developed properly. These activities include scientific investigation of agricultural problems in the state and national institutions, agricultural extension work, teaching of agriculture, service in the industries directly involving agriculture, and a variety of other lines of public and private service of an agricultural nature. The demand for well-trained, reliable men in all these lines is always extensive. The primary aim of the College in training men in agriculture is to fit them for service in which they will develop into agricultural leaders, either as farmers or in some other capacity, and as such contribute to the upbuilding of rural institutions and the improvement of American country life.

The facilities for agricultural training at this College are of a high order. The College owns 1,428.7 acres of land, which is used for investigation, instruction, and demonstration in the various courses in agriculture and allied branches. The campus, which comprises 155 acres, is one of the best examples of ornamental tree planting and forestry in the state. Students working daily amid such surroundings can scarcely fail to gain an appreciation of the beautiful. A tract of 320 acres is devoted to the work in agronomy; for horticulture and forestry work, 80 acres are used; for dairy work, about 160 acres; and for animal husbandry, about 550 acres. The herds and flocks contain high-class representatives of the important breeds of dairy and beef cattle, hogs, horses, and sheep. With this class of stock available for the work in judging, the student is supplied with types of the best breeds and becomes familiar with these types by actual handling of the stock.

Three of the four-year curricula offered in this division lead to the degree of Bachelor of Science in Agriculture. The four-year curriculum in milling industry leads to the degree of Bachelor of Science in Milling Industry. The six-year curriculum in animal husbandry and veterinary medicine, the last two years of which are given in the Division of Veterinary Medicine, leads to the degree of Bachelor of Science in Agriculture at the end of four years, and to the degree of Doctor of Veterinary Medicine at the end of two more years.

The curriculum in agriculture and the curriculum in agricultural administration have a common freshman year. It is not necessary until near the end of

this freshman year that any student of agriculture state formally which of these curricula he will pursue.

Students selecting the curriculum in agriculture are not required until the second semester of the sophomore year to name the department in which they will major. A student may major not only in any department in the Division of Agriculture but also in the Departments of Botany and Plant Pathology, Entomology, Zoölogy, Bacteriology, Chemistry, or Agricultural Engineering. Liberal provision is also made for substitutions to meet definite and purposeful objectives. See "Substitutions to Meet Certain Objectives," following the outline of "Curriculum in Agriculture."

CURRICULUM IN AGRICULTURE

The curriculum in agriculture is designed primarily to meet the needs of the students who expect to return to the farm. However, the student who completes the curriculum will have had sufficient training to enable him to enter some one of the many lines of agricultural industry as a specialist. The demand for men thus trained is constantly increasing and such positions offer attractive opportunities for men who by nature and training are adapted to the work. The United States Department of Agriculture, the state colleges and departments of agriculture, high schools, private institutions of secondary and college rank, and a great variety of commercial interests, are constantly demanding men trained in agriculture.

The young man who expects to make farming his life work can start with no better asset than the thorough training in practical and scientific agriculture afforded by the four-year curriculum. The American farmer needs more of the skill that comes through the training of the hand, in order that he may better do the work of farming; but much more he needs the training of the mind in the fundamental truths that underlie every operation in farming, in order that he may use the skill of the craftsman with reason and judgment. One may learn how to plow a field with the greatest skill; the work may be a model of its kind. If, however, it is plowed with utter disregard to the moisture conditions which prevail, the result may be a failure. To understand the conditions which should determine when and how to plow is the work of the trained mind; the other is the work of the trained hand. The farmer and the teacher of agriculture must possess both kinds of training, and the curriculum has been organized with this fact in view, and has been so arranged that the student begins his practical training in agriculture on the day he enters College.

ANALYSIS OF THE CURRICULUM IN AGRICULTURE

One hundred twenty-four semester hours in addition to military science are required for graduation, as follows:

	Semester hours
Prescribed in agriculture.....	31
Electives in agriculture, required with the prerequisites.....	21
Required in agriculture.....	52
Prescribed in nonagriculture.....	47
Electives in nonagriculture, required.....	6
Electives that may be nonagricultural.....	19
Total allowed in nonagriculture.....	72
Required in military science.....	4
Total semester hours for graduation.....	128

Any candidate for a degree in agriculture must have had at least six months' farm experience approved by the dean of the Division of Agriculture. A formal statement giving information regarding this experience must be filed in the dean's office during the last semester of the senior year.

The student who completes the freshman and sophomore years will have had, in addition to the fundamental work in chemistry, zoölogy, geology, botany, and English, basic studies in soils, farm crops, livestock, dairying, poultry husbandry, horticulture, and agricultural economics. These two years give the student a general knowledge of the whole range of agriculture, more than one third of his time being devoted to strictly agricultural courses.

During the junior and senior years the student continues his studies of fundamental science and learns to apply science to agriculture. He is led step by step to understand the scientific relations to every farming operation. There is so much agriculture to be taught that it becomes necessary for the student to determine which of the general lines he should emphasize. This is made possible by numerous electives in soils, crops, agricultural economics, animal husbandry, dairy husbandry, horticulture, milling, and poultry husbandry.

CURRICULUM IN AGRICULTURAL ADMINISTRATION

The curriculum in agricultural administration is planned to meet the needs of students preparing for industries that are closely related to farming and in which basic training in both agriculture and business principles is desirable. Important among such industries and occupations are: Rural banking, the marketing and processing of grains, the sale and development of lands, hardware and implement retailing, promotion and sales, writing on farm subjects or in other phases of agricultural journalism, and the teaching of agriculture in high school and elsewhere. Those wishing to engage in certain specialized types of farming will find this curriculum suited to their needs. An increasing demand for men trained in the business phases of agriculture and closely related industries is coming from industries whose customers are primarily in rural communities. The United States Department of Agriculture, the state agricultural colleges and departments of agriculture, high schools, and many other interests are also in need of men trained along these lines.

The interdependence of town and farm is increasing. Recognition of this increased interdependence is to be found in many of the activities of farms and civic organizations in which the farmers and the business men of the towns join to attain mutually desired ends. The business man of the rural town must render service to farmers, and service can be rendered best when the needs of customers are understood. In addition, every business man needs to know the principles underlying successful business activity. The curriculum in agricultural administration is planned to give this combined understanding of the needs and problems of agriculture and of the principles that must be observed to make a business successful. Ample opportunity is given to elect business subjects such as accounting, business organization, credit and finance, business law, marketing, and subjects in other related fields.

ANALYSIS OF CURRICULUM IN AGRICULTURAL ADMINISTRATION

One hundred twenty-four semester hours in addition to military science are required for graduation. For the field of agricultural education, field 6 as presented under "Electives" in the outline of the curriculum, these requirements may be classified as follows:

	Semester hours
Prescribed in agriculture.....	25
Electives in agriculture required with the prerequisites.....	27
Required in agriculture.....	52
Prescribed in nonagriculture.....	38
Electives in nonagriculture, required.....	15
Electives that may be nonagricultural.....	19
Total allowed in nonagriculture.....	72
Required in military science.....	4
Total semester hours for graduation.....	128

For fields 1 to 5 the hours may be grouped as follows:

	Semester hours
Prescribed in agriculture.....	25
Electives in agriculture required with the prerequisites.....	30
Required in agriculture.....	55
Prescribed in nonagriculture.....	38
Electives in nonagriculture, required.....	15
Electives that may be nonagricultural.....	16
Total allowed in nonagriculture.....	69
Required in military science.....	4
Total semester hours for graduation.....	128

The fifteen hours of major electives are chosen from courses in agricultural economics. The other electives in agricultural and nonagricultural subjects are grouped according to the industry or occupation for which the student is preparing.

STATE TEACHER'S CERTIFICATE

By the selection of proper electives in the Department of Education, the four-year curriculum in agriculture or in agricultural administration may lead to the degree of Bachelor of Science in Agriculture, and also qualify the student for the three-year Kansas state teacher's certificate, renewable for life and valid in any high school or other public school in the state. A student in the curriculum in agriculture, desiring to qualify for teaching, should begin his professional preparation by electing Psychology, first semester, junior year. (This course is required in the first semester of the sophomore year in the curriculum in agricultural administration.) A total of eighteen hours in the Department of Education is required for this certificate. These are as follows: Psychology, Principles of Secondary Education, Educational Psychology, Vocational Education, Methods of Teaching Agriculture, and Practice Teaching.

STATE CERTIFICATE FOR TEACHERS OF VOCATIONAL AGRICULTURE

Electives in the curriculum in agricultural administration and in the field of agricultural education may be so chosen as to meet the requirements for the state certificate for the teaching of vocational agriculture in Kansas high schools participating in the federal Smith-Hughes funds. In this case the group of minor electives in related nonagricultural subjects must complete the candidate's professional preparation in education, and the group of general electives must include the necessary training in mechanical lines for the handling of farm shop problems. These groups must, therefore, include the following courses or their equivalents:

	<i>Semester hours</i>
Minor electives	15
Principles of Secondary Education.....	3
Educational Psychology	3
Methods of Teaching Agriculture.....	3
Teaching Participation in Agriculture.....	3
Vocational Education	3
General electives	17
Gas Engines and Tractors.....	3
Farm Buildings	3
Farm Machinery	3
Farm Carpentry I.....	3
Farm Blacksmithing I.....	1
Farm Blacksmithing II.....	1
Farm Shop Methods.....	3
Total	32

CURRICULUM IN LANDSCAPE GARDENING

The curriculum in landscape gardening is planned to prepare those who complete it for the practice of general landscape gardening. The training given includes the engineering features of the profession, the design of landscape improvements, and the plant materials and architectural structures which are used in the arrangement and beautification of both public and private grounds.

As the general culture and wealth of the country increase, one of their most common expressions is the improvement of home surroundings, for both utility and beauty, and the enlargement and beautification of public parks, recreational areas, school grounds, and cemeteries. The design and supervision of this work require professionally trained men. Those so trained have increasingly great opportunity for profitable, interesting, and valuable employment in a profession which requires the talents of an artist and the practicality of a builder.

CURRICULUM IN MILLING INDUSTRY

The milling of wheat and other cereals is one of the major industries in this country and calls for men of the best training. While the milling of grains is probably the oldest of the mechanic arts, it is one of the last to find a place in the educational system. Kansas State College is the only college in the United States that has a curriculum especially planned for students particularly interested in the milling industry.

The curriculum in milling industry is planned to meet the needs of students in three major fields of the industry: (1) milling administration, (2) milling technology, and (3) milling chemistry. The first is related to the merchandising of the raw materials and manufactured products; the second to the management and operation of the mechanical equipment; the third to the testing and control of the products.

The curriculum requires 128 hours for graduation. The basic work calls for 65 hours, allowing 63 hours for electives. These electives are divided into majors and minors, the major electives for each of the three fields being hereafter listed. Considerable leeway is allowed in the selection of minors so as better to adapt the curriculum to the individual needs of the students.

CURRICULUM IN ANIMAL HUSBANDRY AND VETERINARY MEDICINE

This six-year curriculum is described and outlined in this catalogue in the section devoted to the Division of Veterinary Medicine.

AGRICULTURE IN THE SUMMER SCHOOL

All of the departments of this division usually offer courses in the Summer School. Some of these are basic college courses, but graduate work particularly suited to high-school teachers of vocational agriculture is emphasized.

Full information concerning the courses offered is contained in the Summer School number of the Kansas State College *Bulletin*, which may be obtained upon application to the vice-president of the College.

Curriculum in Agriculture

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
College Rhetoric I, Engl. 101.....	*3(3-0)	Gen. Geology, Geol. 103.....	3(3-0)
Gen. Botany I, Bot. 101.....	3(1-4, 2)	Gen. Botany II, Bot. 105.....	3(1-4, 2)
Gen. Chemistry, Chem. 110.....	5(3-6)	Gen. Org. Chemistry, Chem. 122....	5(3-6)
El. of An. Husb., An. Husb. 125....	3(2-4)or	El. of Dairying, Dairy Husb. 101....	3(2-3)or
El. of Dairying, Dairy Husb. 101....	3(2-3)	El. of An. Husb., An. Husb. 125....	3(2-4)
Freshman Lect., Gen. Ag. 102.....	1(2-0)	Library Methods, Lib. Ec. 101.....	1(1-0)
Infantry I, Mil. Sc. 101A.....	1(0-3)	Infantry II, Mil. Sc. 102A.....	1(0-3)
Phys. Education M, Phys. Ed. 103..	R(0-2)	Phys. Education M, Phys. Ed. 104..	R(0-2)
Ag Seminar, ¹ Gen. Ag. 103.....	R	Ag. Seminar, ¹ Gen. Ag. 103.....	R
Total.....	16	Total.....	16

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
El. of Horticulture, Hort. 107.....	3(2-3)	Prin. of Feeding, An. Husb. 152 ²	3(3-0)
Ag. Economics, Ag. Ec. 101.....	3(3-0)	College Rhetoric II, Engl. 104.....	3(3-0)
Anat. and Physiol., Anat. 131.....	3(2-3)or	Farm Crops, Agron. 101.....	4(2-6)or
Plant Physiology I, ³ Bot. 208.....	3(3-0)	Soils, Agron. 130.....	4(3-3)
Soils, Agron. 130.....	4(3-3)or	General Zoology, Zool. 105.....	5(3-6)
Farm Crops, Agron. 101.....	4(2-6)	Infantry IV, Mil. Sc. 104A.....	1(0-3)
Farm Poul. Pro., Poul. Husb. 101..	2(1-2, 1)	Phys. Education M, Phys. Ed. 106..	R(0-2)
Infantry III, Mil. Sc. 103A.....	1(0-3)	Ag. Seminar, ¹ Gen. Ag. 103.....	R
Phys. Education M, Phys. Ed. 105..	R(0-2)		
Ag. Seminar, ¹ Gen. Ag. 103.....	R		
Total.....	16	Total.....	16

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
Genetics, An. Husb. 221.....	3(3-0)	Gen. Econ. Entomology, Ent. 203...	3(2-3)
Plant Pathology I, Bot. 205.....	3(1-4, 2)	Ag. Microbiology, Bact. 106.....	3(1-6)
Farm Organization, Ag. Ec. 106.....	3(2-3)	Ag. Journalism, Ind. Jour. 160.....	3(2-3)
Elective.....	7	Elective.....	7
Ag. Seminar, ¹ Gen. Ag. 103.....	R	Ag. Seminar, ¹ Gen. Ag. 103.....	R
Total.....	16	Total.....	16

SENIOR

FIRST SEMESTER		SECOND SEMESTER	
Elective.....	16	Ag. Relationships, Gen. Ag. 105.....	R(1-0)
Ag. Seminar, ¹ Gen. Ag. 103.....	R	Elective.....	16
		Ag. Seminar, ¹ Gen. Ag. 103.....	R
Total.....	16	Total.....	16

Number of hours required for graduation, 128.§

Electives

The electives in the curriculum in agriculture are grouped as follows:

	<i>Semester hours</i>
MAJOR ELECTIVES	12
These electives may be taken in any one of the departments of the Division of Agriculture. In certain cases also a science department outside of the division may be selected for a major department; <i>e. g.</i> , Chemistry, Entomology, Bacteriology.	
MINOR AGRICULTURAL ELECTIVES.....	9
These electives may be taken from one or more departments but must directly strengthen the student's preparation in agriculture.	
MINOR NONAGRICULTURAL ELECTIVES.....	6
These electives must be chosen from one or more of the following departments: English, Education, Economics and Sociology, History and Government, Mathematics, Modern Languages.	
GENERAL ELECTIVES	19
These electives are expected to be chosen because they are adapted to meet individual needs and to round out the preparation provided by the rest of the student's curriculum. All students not offering one unit of high-school physics for entrance are required to include three hours of general physics in their electives.	

All electives must be officially approved, before assignment, by both the dean of the Division of Agriculture and the head of the department in which the student majors.

SUBSTITUTIONS TO MEET CERTAIN OBJECTIVES

Students desiring more definitely to prepare themselves for scientific or special work in the field of agriculture may, with the approval of the dean of the Division of Agriculture and the head of the department in which they expect to major, substitute courses in the Departments of Mathematics, Physics, Chemistry, Bacteriology, Entomology, Zoölogy, Botany and Plant Pathology, Education, Agricultural Engineering, Modern Languages, and other approved departments, in place of twenty-five hours in the curriculum in agriculture; provided, that no student may receive a degree in agriculture who does not have at least twenty-five hours in technical agriculture in not fewer than three departments.

* The number before the parenthesis indicates the number of hours of credit; the first number within the parentheses indicates the number of hours of recitation each week; the second shows the number of hours to be spent in laboratory work each week; and the third, where there is one, indicates the number of hours of outside work in connection with the laboratory each week.

1. Four meetings each semester.

2. Sometime during the second semester of the sophomore year each student is required to file a written statement in the office of the dean of the Division of Agriculture, designating the department of the division in which he will major.

3. Students who do not expect to major in animal husbandry, dairy husbandry, or poultry husbandry may, with the approval of the head of the department in which they expect to major, take Plant Physiology I (Bot. 208) instead of Anatomy and Physiology.

§ Seniors must meet the graduation requirement in points as well as in hours. See section headed: The Point System.

1. Four meetings each semester.

Curriculum in Agricultural Administration

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
College Rhetoric I, Engl. 101.....	3(3-0)	Gen. Geology, Geol. 103.....	3(3-0)
Gen. Botany I, Bot. 101.....	3(1-4, 2)	Gen. Botany II, Bot. 105.....	3(1-4, 2)
Gen. Chemistry, Chem. 110.....	5(3-6)	Gen. Org. Chemistry, Chem. 122.....	5(3-6)
El. of An. Husb., An. Husb. 125.....	3(2-4) <i>or</i>	El. of Dairying, Dairy Husb. 101.....	3(2-3) <i>or</i>
El. of Dairying, Dairy Husb. 101.....	3(2-3)	El. of An. Husb., An. Husb. 125.....	3(2-4)
Freshman Lect., Gen. Ag. 102.....	1(2-0)	Library Methods, Lib. Ec. 101.....	1(1-0)
Infantry I, Mil. Sc. 101A.....	1(0-3)	Infantry II, Mil. Sc. 102A.....	1(0-3)
Phys. Education M, Phys. Ed. 103..	R(0-2)	Phys. Education M, Phys. Ed. 104..	R(0-2)
Ag. Seminar,* Gen. Ag. 103.....	R	Ag. Seminar,* Gen. Ag. 103.....	R
Total.....	16	Total.....	16

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
General Psychology, Educ. 184.....	3(3-0)	El. of Hort., Hort. 107.....	3(2-3)
Ag. Economics, Ag. Ec. 101.....	3(3-0)	Feeding L. S., An. Husb. 172.....	3(3-0)
College Algebra A, Math. 107.....	5(5-0)	College Rhetoric II, Engl. 104.....	3(3-0)
Soils, Agron. 130.....	4(3-3) <i>or</i>	Soils, Agron. 130.....	4(3-3) <i>or</i>
Farm Crops, Agron. 101.....	4(2-6)	Farm Crops, Agron. 101.....	4(2-6)
Infantry III, Mil. Sc. 103A.....	1(0-3)	Farm Poul. Pro., Poul. Husb. 101..	2(1-2, 1)
Phys. Education M, Phys. Ed. 105..	R(0-2)	Infantry IV, Mil. Sc. 104A.....	1(0-3)
Ag. Seminar,* Gen. Ag. 103.....	R	Phys. Education M, Phys. Ed. 106..	R(0-2)
Total.....	16	Ag. Seminar,* Gen. Ag. 103.....	R
		Total.....	16

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
Ag. Journalism, Ind. Jour. 160.....	3(2-3)	Ag. Seminar,* Gen. Ag. 103.....	R
Ag. Seminar,* Gen. Ag. 103.....	R	Elective.....	16
Elective.....	13	Total.....	16
Total.....	16		

SENIOR

FIRST SEMESTER		SECOND SEMESTER	
Ag. Seminar,* Gen. Ag. 103.....	R	Ag. Relationships, Gen. Ag. 105.....	R(1-0)
Elective.....	16	Ag. Seminar,* Gen. Ag. 103.....	R
Total.....	16	Elective.....	16
		Total.....	16

Number of hours required for graduation, 128.

Electives

The electives in the curriculum in agricultural administration are grouped as indicated below in the following fields: (1) rural banking, (2) land economics, (3) grain industries, (4) agricultural journalism, (5) agricultural engineering, and (6) agricultural education.

SEMESTER HOURS OF ELECTIVES REQUIRED FOR VARIOUS FIELDS

GROUP	Hours	
	<i>in fields 1, 2, 3, 4, 5</i>	<i>in field 6</i>
Major electives in agricultural economics.....	15	10
Minor agricultural electives (not more than nine semester hours from one department)	15	17
Minor electives in related nonagricultural subjects.....	15	15
General electives	16	19
Total	61	61

NOTE.—All students not offering one unit of high-school physics for entrance are required to include three hours of general physics in their electives.

All electives must be officially approved before assignment by both the dean of the Division of Agriculture and the head of the Department of Agricultural Economics.

* Four meetings each semester.

Curriculum in Landscape Gardening

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
College Rhetoric I, Engl. 101.....	3(3-0)	College Rhetoric II, Engl. 104.....	3(3-0)
Gen. Botany I, Bot. 101.....	3(1-4, 2)	Gen. Botany II, Bot. 105.....	3(1-4, 2)
Gen. Chemistry, Chem. 110.....	5(3-6)	Gen. Org. Chemistry, Chem. 122....	5(3-6)
Engr. Draw., Mach. Des. 101.....	2(0-6)	Domestic Arch., Arch. 124.....	2(2-0)
Library Methods, Lib. Ec. 101.....	1(1-0)	Gen. Geology, Geol. 103.....	3(3-0)
Freshman Lect., Gen. Ag. 102.....	1(2-0)	Infantry II, Mil. Sc. 102A (men)....	1(0-3)
Infantry I, Mil. Sc. 101A (men)....	1(0-3)	Phys. Education M, Phys. Ed. 104..	R(0-2)or
Phys. Education M, Phys. Ed. 103..	R(0-2)or	Phys. Education W, Phys. Ed. 152A,	R(0-3)
Phys. Education W, Phys. Ed. 151A,	R(0-3)	Ag. Seminar,* Gen. Ag. 103.....	R
Ag. Seminar,* Gen. Ag. 103.....	R		
Total (men).....	16	Total (men).....	17
Total (women).....	15	Total (women).....	16

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
Object Draw. I, Arch. 111.....	2(0-6)	Object Drawing II, Arch. 114.....	2(0-6)
Ag. Economics, Ag. Ec. 101.....	3(3-0)	Plane Trigonometry, Math. 101....	3(3-0)
Silviculture, Hort. 119.....	3(2-3)	Ext. Speech I, Pub. Spk. 106.....	2(2-0)
Soils, Agron. 130.....	4(3-3)	El. of Horticulture, Hort. 107.....	3(2-3)
Landscape Gardening I, Hort. 125..	3(3-0)	Ag. Journalism, Ind. Jour. 160....	3(2-3)
Infantry III, Mil. Sc. 103A (men)....	1(0-3)	Physiographic Geol., Geol. 110.....	3(3-0)
Phys. Education M, Phys. Ed. 105..	R(0-2)or	Infantry IV, Mil. Sc. 104A (men)....	1(0-3)
Phys. Education W, Phys. Ed. 153..	R(0-3)	Phys. Education M, Phys. Ed. 106..	R(0-2)or
Ag. Seminar,* Gen. Ag. 103.....	R	Phys. Education W, Phys. Ed. 154..	R(0-3)
		Ag. Seminar,* Gen. Ag. 103.....	R
Total (men).....	16	Total (men).....	17
Total (women).....	15	Total (women).....	16

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
Plant Materials I, Hort. 224.....	3(2-3)	Plant Materials II, Hort. 226.....	3(2-3)
Pencil Rend. and Sketch., Arch. 116,	2(0-6)	Water Color I, Arch. 118.....	2(0-6)
Surveying I, Civ. Engr. 102.....	2(0-6)	Surveying III, Civ. Engr. 151, 155..	3(2-3)
Theory of Lands. Design, Hort. 243..	2(2-0)	Gen. Econ. Ent., Ent. 203.....	3(2-3)
Greenh. Constr. and Mgt., Hort. 128..	3(3-0)	Gen. Hist. of Arch., Arch. 244.....	3(3-0)
Taxo. Bot. of Fl. Plants, Bot. 225..	3(1-4, 2)	Horticultural Probs., Hort. 244.....	2(0-0)
Ag. Seminar,* Gen. Ag. 103.....	R	Ag. Seminar,* Gen. Ag. 103.....	R
Total.....	15	Total.....	16

SENIOR

FIRST SEMESTER		SECOND SEMESTER	
Landscape Gard. II, Hort. 238.....	3(1-6)	Ag. Relationships, Gen. Ag. 105.....	R(1-0)
Landscape Constr., Hort. 227.....	3(2-3)	Civic Art, Hort. 223.....	3(1-6)
Plant Physiology I, Bot. 208.....	3(3-0)	Landscape Gard. III, Hort. 246....	3(1-6)
Plant Pathology I, Bot. 205.....	3(1-4, 2)	Spraying, Hort. 207.....	3(2-3)
Horticultural Probs., Hort. 244.....	2(0-0)	Plant Ecology, Bot. 228.....	2(2-0)
Elective ¹	2	Horticultural Probs., Hort. 244.....	2(0-0)
Ag. Seminar,* Gen. Ag. 103.....	R	Elective ¹	3
		Ag. Seminar,* Gen. Ag. 103.....	R
Total.....	16	Total.....	16

Number of hours required for graduation: Men, 129; women, 125.

Curriculum in Milling Industry

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
El. of Milling, Mill. Ind. 101.....	2(1-3)	College Rhetoric II, Engl. 104.....	3(3-0)
College Rhetoric I, Engl. 101.....	3(3-0)	Plane Trigonometry, Math. 101....	3(3-0)
College Algebra, Math. 104.....	3(3-0)	Gen. Organic Chem., Chem. 122....	5(3-6)
Gen. Chemistry, Chem. 110.....	5(3-6)	Engr. Drawing, Mach. Des. 101....	2(0-6)
Freshman Lect., Gen. Ag. 102.....	1(2-0)	Flow Sheets, Mill. Ind. 103.....	2(0-6)
Library Methods, Lib. Ec. 101.....	1(1-0)	Infantry II, Mil. Sc. 102A.....	1(0-3)
Infantry I, Mil. Sc. 101A.....	1(0-3)	Phys. Education M, Phys. Ed. 104..	R(0-2)
Phys. Education M, Phys. Ed. 103..	R(0-2)	Milling Seminar ²	R
Milling Seminar ²	R	Ag. Seminar,* Gen. Ag. 103.....	R
Ag. Seminar,* Gen. Ag. 103.....	R		
Total.....	16	Total.....	16

1. All students not offering one unit of high-school physics for entrance are required to include three hours of general physics in their electives.

2. Two meetings each month.

* Four meetings each semester.

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
Milling Practice I, Mill. Ind. 109....	3(1-6)	Milling Practice II, Mill. Ind. 111...	3(1-6)
Gen. Physics I, Phys. 135.....	4(3-3)	Gen. Physics II, Phys. 140.....	4(3-3)
Gen. Botany I, Bot. 101.....	3(1-4, 2)	Gen. Botany II, Bot. 105.....	3(1-4, 2)
Infantry III, Mil. Sc. 103A.....	1(0-3)	Current History, Hist. 126.....	1(1-0)
Phys. Education M, Phys. Ed. 105..	R(0-2)	Infantry IV, Mil. Sc. 104A.....	1(0-3)
Milling Seminar ¹	R	Phys. Education M, Phys. Ed. 106..	R(0-2)
Ag. Seminar, ² Gen. Ag. 103.....	R	Milling Seminar ¹	R
Elective ³	5	Ag. Seminar, ² Gen. Ag. 103.....	R
		Elective ³	4
Total.....	16	Total.....	16

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
Milling Entomology, Ent. 116.....	1(1-0)	Mill. Qual. of Wheat, Mill. Ind. 212..	3(3-0)
Mkt. Grading Cereals, Agron. 115...	3(1-6)	Milling Seminar ¹	R
Ag. Economics, Ag. Econ. 101.....	3(3-0)	Ag. Seminar, ² Gen. Ag. 103.....	R
Milling Seminar ¹	R	Elective ³	13
Ag. Seminar, ² Gen. Ag. 103.....	R		
Elective ³	9		
Total.....	16	Total.....	16

SENIOR

FIRST SEMESTER		SECOND SEMESTER	
Milling Seminar ¹	R	Milling Seminar ¹	R
Ag. Seminar, ² Gen. Ag. 103.....	R	Ag. Seminar, ² Gen. Ag. 103.....	R
Elective ³	16	Ag. Relationships, Gen. Ag. 105.....	R
		Elective ³	16
Total.....	16	Total.....	16

Number of hours required for graduation: 128—basic courses, 65 hours,
elective courses, 63 hours.

Electives for Students in Milling Administration

MAJOR ELECTIVES

General Psychology, Educ. 184.....	3(3-0)	Grain Marketing, Ag. Ec. 203.....	3(3-0)
Extempore Speech I, Pub. Spk. 106..	2(2-0)	Money and Banking, Econ. 116.....	3(3-0)
Extempore Speech II, Pub. Spk. 108,	2(2-0)	Business Law I, Hist. 163.....	3(3-0)
Com'l. Correspondence, Engl. 122...	3(3-0)	Business Law II, Hist. 164.....	3(3-0)
Writ. and Oral Salesmanship, Engl. 123,	3(3-0)	Prin. of Advertising, Ind. Jour. 178..	4(4-0)
Accounting I, Econ. 133.....	3(2-3)	Business Finance, Econ. 217.....	3(3-0)
Accounting II, Econ. 134.....	3(2-3)		
Mktg. of Farm Prod., Ag. Ec. 202....	3(3-0)	Total.....	41

MINOR ELECTIVES: A total of 22 hours of minor electives complete the work of the curriculum.

Electives for Students in Milling Technology

MAJOR ELECTIVES

Plane Anal. Geometry, Math. 110...	4(4-0)	Str. of Material E, Ap. Mech. 216...	3(3-0)
Calculus I, Math. 250.....	5(5-0)	Flour Mill Constr., Mill. Ind. 203...	3(0-9)
Calculus II, Math. 251.....	3(3-0)	Steam and Gas Engineering C, Mech.	
Applied Mechanics, Ap. Mech. 202..	4(4-0)	Engr. 120, 125.....	3(2-3)
Des. Geom., Mach. Des. 106.....	2(0-6)	Elec. Engr. C, Elec. Engr. 102, 106..	3(2-2, 1)
Mechanism, Mach. Des. 121.....	3(3-0)	Engr. Woodwork, Shop 101.....	1(0-3)
Mach. Drawing I, Mach. Des. 111...	2(0-6)		
Mill. Tech. I, Mill. Ind. 201.....	2(0-6)	Total.....	40
Mill. Tech. II, Mill. Ind. 202.....	2(0-6)		

MINOR ELECTIVES:⁴ A total of 22 hours of minor electives complete the work of the curriculum.

1. Two meetings each month.
2. Four meetings each semester.
3. Major electives may be in milling administration, milling technology, or milling chemistry. These groups of electives are listed below. Minor electives are flexible and are intended to give leeway to adapt the curriculum to individual needs. Minor electives must be officially approved before assignment by the dean of the Division of Agriculture and the head of the Department of Milling Industry.
4. Students majoring in milling technology must include solid geometry in their minor electives unless this subject was included in their entrance requirements.

Electives for Students in Milling Chemistry

MAJOR ELECTIVES

Chemistry II, Chem. 102.....	5(3-6)	Chemistry of Proteins, Chem. 236A...	3(2-3)
Plane Anal. Geometry, Math. 110...	4(4-0)	Experimental Baking, Mill. Ind. 206,	3(1-6)
Calculus I, Math. 250.....	5(5-0)	Colloidal Chemistry, Chem. 213.....	2(2-0)
Physiological Chemistry, Chem. 231,	5(3-6)	Adv. Wheat and Flour Testing, Mill.	
Quan. Analysis A, Chem. 250.....	3(1-6)	Ind. 210.....	2(0-6)
Quan. Analysis B, Chem. 251.....	3(1-6)	Chemical Microscopy, Chem. 245...	1(0-3)
Prin. Animal Nutr., Chem. 230.....	3(3-0)		
Wheat and Flour Test., Mill. Ind. 205,	2(0-9)	Total.....	47
Physical Chemistry I, Chem. 206....	5(3-6)		

MINOR ELECTIVES: A total of 16 hours of minor electives complete the work of the curriculum.

Electives in Industrial Journalism

Provision is made for students desiring to prepare for the field of agricultural journalism to major in industrial journalism. They thus secure to a large extent the agricultural training provided in either the curriculum in agriculture or the curriculum in agricultural administration, but instead of securing advanced intensive training in some field of agricultural production or agricultural administration, secure some fundamental training in journalism. They are then well prepared for a large vocational field as agricultural writers, magazine and newspaper publishers, or leaders in other journalistic activities, especially those closely related to agriculture. The electives provided for students selecting such a field for major work are as follows:

Electives for Students of Agriculture Majoring in Industrial Journalism

Industrial Writing, Ind. Jour. 161...	2(2-0)	Prin. of Advertising, Ind. Jour. 178..	4(4-0)
Editorial Practice, Ind. Jour. 257....	2(2-0)	Copy Reading, Ind. Jour. 254.....	2(0-6)
Ind. Feature Writing, Ind. Jour. 167,	2(2-0)	History and Ethics of Journalism,	
The Rural Press, Ind. Jour. 181.....	2(2-0)	Ind. Jour. 273.....	3(3-0)
		Journalism Surveys, Ind. Jour. 278..	2(0-6)

Agricultural Economics

Professor GRIMES
 Professor HOWE²
 Associate Professor EVANS¹
 Assistant Professor HODGES
 Assistant Professor HENNEY
 Assistant Professor MONTGOMERY

Assistant Professor FARSONS
 Instructor PINE
 Instructor FOX
 Instructor DOLL
 Assistant MILLER

The investigational work in agricultural economics brings together the latest information concerning the business of farming and of closely related industries. These data are used in the instructional work of the department and illustrate the principles of successful farm organization and operation, the marketing of farm products, and the conduct of business enterprises that are closely related to agriculture. The student has an opportunity to learn of the factors and economic forces involved in marketing, credit, taxation, land utilization, conservation, and similar subjects. Attention is given to the probable future consequences of various policies and practices, in addition to providing opportunity to become acquainted with existing conditions. The student in agricultural economics has exceptional opportunity to work with facts taken from the actual business of farming and of other industries that are closely related to agriculture.

The department is expanding its facilities to meet the growing demand for advanced study. Opportunities for careers for those who are well trained in this field are increasingly favorable, because of the growing importance of agricultural economics to the farmer and in our national life.

1. On leave April 1, 1935, to June 30, 1936.
 2. On sabbatic leave February 1 to June 30, 1936.

COURSES IN AGRICULTURAL ECONOMICS

FOR UNDERGRADUATE CREDIT

101. § AGRICULTURAL ECONOMICS. 3(3-0)*; I. Prerequisite: Sophomore standing. Dr. Grimes, Mr. Howe, Mr. Henney, Mr. Parsons, and Mr. Pine.
Economic principles as they relate to agriculture.

106. FARM ORGANIZATION. 3(2-3); I and II. Prerequisite: Ag. Ec. 101, Agron. 130, and An. Husb. 152. Dr. Grimes, Mr. Evans, Mr. Hodges, and Mr. Pine.

The economic factors affecting the organization and operation of the farm business, and their effect on profits. Results from actual farms are studied in the laboratory. Charge, \$1.

112. FARM COST ACCOUNTING. 3(2-3); I and II. Prerequisite: Ag. Ec. 101. Mr. Evans and Mr. Hodges.

Various systems of farm records and accounts. In the laboratory, problems from actual farms. Cost of producing farm products; analysis and utilization of cost of production data. Charge, \$1.

FOR GRADUATE AND UNDERGRADUATE CREDIT

202. MARKETING OF FARM PRODUCTS. 3(3-0); I and II. Prerequisite: Ag. Ec. 101. Mr. Henney, Mr. Montgomery, and Mr. Parsons.

Price problems affecting time of buying and selling; buyers' and sellers' relations; marketing organizations and the control of marketing, and the adaptability of products to market demands and preferences.

203. GRAIN MARKETING. 3(3-0); I. Prerequisite: Ag. Ec. 202. Mr. Montgomery and Mr. Fox.

Price influences and price relationships, buying and selling problems; domestic and export trade in grain; grain trade organization; regulation and control of the trade.

204. TRANSPORTATION OF FARM PRODUCTS. 3(3-0); I. Prerequisite: Ag. Ec. 101. Mr. Henney.

Rate making and other transportation problems having an important influence on the marketing of farm products.

206A. ADVANCED FARM ORGANIZATION. 3(2-3); II. Prerequisite: Ag. Ec. 106. Mr. Evans and Mr. Hodges.

Factors affecting the successful organization and operation of the farm business; effects of external factors. A number of the better and more profitable farms are visited.

212. CONSERVATION OF AGRICULTURAL RESOURCES. 2(2-3); II. Prerequisite: Ag. Ec. 101; junior standing. Mr. Howe.

The world's agricultural resources, the economics of their utilization, and their present and future relationship to human well-being.

218. AGRICULTURAL LAND PROBLEMS. 3(3-0); I. Prerequisite: Ag. Ec. 101. Mr. Howe.

A study of the relation of population to land supply and the conditions affecting tenure, ownership, and valuation of land.

* The number before the parenthesis indicates the number of hours of credit; the first number within the parentheses indicates the number of hours of recitation each week; the second shows the number of hours to be spent in laboratory work each week; and the third, where there is one, indicates the number of hours of outside work in connection with the laboratory required each week. I, II, and SS indicate that the course is given the first semester, second semester, and summer school, respectively.

§ For an explanation of the system used in numbering courses, see the paragraph on "Course Numbers," given elsewhere in this catalogue.

219. TAXATION AND LAND OWNERSHIP. 3(3-0); II. Prerequisite: Ag. Ec. 101, or consult instructor. Mr. Howe.

Analysis of public expenditures and revenues, public credit, and fiscal administration with special emphasis upon the effects of each upon agriculture.

LAND LAW. See Hist. 276.

221. AGRICULTURAL FINANCE. 2(2-0); II. Prerequisite: Ag. Ec. 101. Mr. Howe.

Sources and kinds of credit for purchasing farm land and financing farm operations.

227. FARMER MOVEMENTS. 3(3-9); I. Prerequisite: Ag. Ec. 101. Dr. Grimes and Mr. Hodges.

Farmers' efforts to improve their economic status through organization. Principles underlying successful organization of farmers.

231. AGRICULTURAL ECONOMICS SEMINAR. 1(1-0); I and II. Prerequisite: Ag. Ec. 101. Dr. Grimes, Mr. Evans, Mr. Howe, Mr. Hodges, Mr. Henney, Mr. Montgomery, and Mr. Parsons.

Current questions in agricultural economics reviewed and discussed; topics prepared and presented by students.

235. LIVESTOCK MARKETING. 3(3-0); II. Prerequisite: Ag. Ec. 202. Mr. Henney and Mr. Fox.

The economics of livestock marketing and factors affecting livestock prices.

240. PRINCIPLES OF COÖPERATION. 3(3-0); II. Prerequisite: Ag. Ec. 101. Dr. Grimes and Mr. Montgomery.

A study of the principles underlying coöperation endeavor. Experiences of coöperative associations of farmers are used as illustrative material.

251. MARKETING OF DAIRY PRODUCTS. 3(3-0); I. Prerequisite: Ag. Ec. 202. Mr. Parsons.

Principles underlying the marketing of dairy products, factors affecting prices, and the function of dairy marketing organizations.

270. AGRICULTURAL ECONOMIC PROBLEMS. Credit to be arranged; I, II, and SS. Prerequisite: Ag. Ec. 106 or 202, or such other courses as are necessary for the study of the problem selected. Dr. Grimes, Mr. Evans, Mr. Hodges, Mr. Howe, Mr. Henney, Mr. Montgomery, and Mr. Parsons.

FOR GRADUATE CREDIT

301. RESEARCH IN AGRICULTURAL ECONOMICS. Credit to be arranged; I, II, and SS. Prerequisite: Consult instructors. Dr. Grimes, Mr. Evans, Mr. Hodges, Mr. Howe, Mr. Henney, Mr. Montgomery, and Mr. Parsons.

Individual research problems in the marketing of farm products, coöperation among farmers, farm movements, land problems, taxation, tenancy, agricultural industries, agricultural finance, farm labor, farm power, farm organization, and cost of producing farm products. Any of the subjects assigned may furnish data for a master's thesis.

305. ADVANCED AGRICULTURAL ECONOMICS. 3(3-0); I. Prerequisite: Ag. Ec. 101 or equivalent. Mr. Howe.

The basic principles of economics, a strengthened foundation in fundamentals; planned readings in the works of leading economists, and discussion of principles and their application to problems confronting specialists in agricultural economics.

310. HISTORY OF AGRICULTURAL ECONOMIC THOUGHT. 3(3-0); II. Prerequisite: Ag. Ec. 101 or equivalent. Dr. Grimes.

Development of agricultural economics and relation of agricultural economic doctrines to conditions existing when they were formulated.

Agronomy

Professor THROCKMORTON
 Professor PARKER
 Professor ALDOUS
 Professor LAUDE
 Associate Professor ZAHNLEY
 Associate Professor CLAPP

Associate Professor METZGER
 Assistant Professor DAVIS
 Assistant Professor MYERS
 Instructor HIDE
 Assistant PARSONS
 Seed Analyst HARLING

The College farm used by the Department of Agronomy comprises 320 acres of medium rolling upland soil, well suited to experimental and demonstration work. It is well equipped with all kinds of farm machinery necessary in crop production. The general fields and experimental plots used for the breeding and testing of farm crops, and for conducting experiments in soil fertility and methods of culture, afford the student excellent opportunities for study and investigation.

Large and well-equipped laboratories for soil and crop work are maintained for the regular use of students. Material is provided for the study of the grain and forage crops best adapted to different purposes and most suitable for growing in the state. Ample greenhouse space is provided for problems and research work in crops and soils.

The Department of Agronomy offers courses in cereal and forage crop production and improvement, in pasture management, in soil, soil fertility, soil survey, and dry-land farming.

COURSES IN FARM CROPS

FOR UNDERGRADUATE CREDIT

101. FARM CROPS. 4(2-6); I and II. Prerequisite: Bot. 101. Mr. Davis. The distribution, relative importance, value, and production of the more important grain and forage crops. Deposit, \$3.50.

105. SEED IDENTIFICATION AND WEED CONTROL. 2(1-3); I. Prerequisite: Agron. 101. Mr. Zahnley and Mrs. Harling.

Methods of propagation, control, and eradication of weeds.

Laboratory.—Identification of weed plants and seeds; germination and purity testing; field trips. Charge, \$1.

108. GRAIN GRADING AND JUDGING. 2(0-6); II. Prerequisite: Agron. 101. Mr. Zahnley.

Practice in grading and judging crops and crop products, including wheat, corn, oats, barley, rye, buckwheat, flax, rice, alfalfa, clover, soybeans, cowpeas, field beans, and grain sorghums. Charge, \$3.

114. ADVANCED GRAIN JUDGING. 2(0-6); I. Prerequisite: Agron. 108. Mr. Zahnley.

Identification, commercial grading and judging, and presenting orally and in writing the merits of samples of the various kinds of field crops. Charge, \$3.

115. MARKET GRADING OF CEREALS. 3(1-6); I. Prerequisite: Mill. Ind. 101. Offered in 1936-'37 and alternate years thereafter. Mr. Zahnley.

Practice in the market classification and grading of cereals and certain fundamental phases of production. Charge, \$3.50.

FOR GRADUATE AND UNDERGRADUATE CREDIT

202. CROP IMPROVEMENT. 3(2-3); or 4(2-6); II. Prerequisite: Agron. 101 and An. Husb. 221. Dr. Parker.

Principles of plant breeding reviewed and applied to the principal groups of field crops; methods of selection, hybridization, and breeding for special qualities.

Laboratory.—A study of heritable characters in crop plants and of laboratory, greenhouse, and field methods of plant breeding. Charge, \$1.

205. PRINCIPLES OF AGRONOMIC EXPERIMENTATION. 3(2-3); I. Prerequisite: Agron. 101 and 130. Mr. Laude.

The principles of experimentation in general, and their application to agronomic problems; important contributions to agronomic science studied from the historical and statistical viewpoint. Charge, \$1.

207. PASTURE IMPROVEMENT I. 3(2-3); II. Prerequisite: Bot. 102 and Agron. 101. Dr. Aldous.

Distribution, forage value, and grazing management of tame and native pasture plants; principal poisonous plants, their distribution and methods to use in eliminating losses; and the importance of tame and native pastures.

208. PLANT GENETICS. 3(3-0); I. Prerequisite: An. Husb. 221. Dr. Parker. An advanced course for students interested in plant breeding and principles of genetics. Offered in 1934-'35, and alternate years thereafter.

209. GENETICS SEMINAR. 1(1-0); I and II. Prerequisite: Consult instructors. Dr. Nabours, Dr. Parker, Dr. Warren, Dr. Ibsen, and Dr. Brunson. Study and criticism of genetic experiments in plants and animals, of the biological and mathematical methods employed, and of the validity of conclusions drawn.

210. CROP PROBLEMS. Credit to be arranged; I, II and SS. Prerequisite: Agron. 101 and 130. Dr. Parker, Dr. Aldous, Mr. Laude, and Mr. Zahnley.

Special problems chosen or assigned; written report upon completion of problems; credit varies with amount and quality of work done. Deposit, \$4.

211. CROP ECOLOGY. 2(2-0); II. Prerequisite: Agron. 101 and 130. Mr. Laude.

A study of the environmental conditions that influence the growth of crops, with special reference to the soil, climatic, biologic, and economic factors primarily responsible for the distribution and concentration of crop production in different regions and countries.

214. ADVANCED CROPS. 3(2-3); I. Prerequisite: Agron. 101. Offered in 1937-'38 and alternate years thereafter. Mr. Zahnley.

Recent investigations in production and subsequent handling of forage, fiber, sugar, root, and other classes of crops not considered in previous courses.

Laboratory.—The growth habits and classification of the crops considered in the lecture, the preparation of these crops for market, and the grading of the more important classes. Charge, \$1.

215. PASTURE IMPROVEMENT II. 2(2-0); II. Prerequisite: Agron. 207 and 208. Offered in 1936-'37 and alternate years thereafter. Dr. Aldous.

Experimental methods and results obtained in the improvement of pastures and the development, selection, and breeding of pasture plants.

216. AGRONOMIC LITERATURE. 2(2-0); I. Prerequisite: Senior classification. Mr. Throckmorton and other members of the staff.

A survey of important literature in the general field of agronomy, including soils, crop production, crop ecology and physiology, statistical methods and plot technique, plant breeding, pasture management, seeds, and weeds.

FOR GRADUATE CREDIT

301. RESEARCH IN CROPS. Credit to be arranged; I, II, and SS. Prerequisites depend upon the problem selected. Dr. Parker, Dr. Aldous, Mr. Laude, and Mr. Zahnley.

Special problems chosen or assigned, resulting data being available for master's thesis. Deposit, \$4.

COURSES IN SOILS

FOR UNDERGRADUATE CREDIT

130. SOILS. 4(3-3); I and II. Prerequisite: Chem. 110 and Geol. 103. Mr. Throckmorton, Mr. Myers, and Dr. Hide.

Fundamental principles underlying the management of soils. Charge, \$3.

FOR GRADUATE AND UNDERGRADUATE CREDIT

231. DRY-LAND FARMING. 2(2-0); I. Prerequisite: Agron. 130. Mr. Myers. Principles of soil management under light rainfall conditions and a study of experimental results obtained in dry-land areas.

235. DEVELOPMENT AND CLASSIFICATION OF SOILS. 3(2-3); II. Prerequisite: Agron. 130. Dr. Metzger.

A study of the influence of soil-forming agencies on soil characteristics and their relationship to soil classification.

236. SOIL PROBLEMS. Credit to be arranged; I, II, and SS. Prerequisites depend on problem assigned. Mr. Throckmorton, Mr. Myers, Dr. Metzger, and Dr. Hide.

Special problems in soils, chosen or assigned. Deposit, \$4.

244. SOIL MANAGEMENT. 3(2-3); II. Prerequisite: Agron. 101 and 130. Mr. Myers.

The more practical phases of tillage, erosion control, nitrogen maintenance, crop rotations, and the use of lime, manure, and commercial fertilizers as related to humid conditions are discussed.

248. SOIL FERTILITY. 3(3-0); I. Prerequisite: Agron. 130 and Bot. 208. Mr. Myers.

The chemistry of soils and related physical and biological factors. Practical applications are considered, but major emphasis is placed upon the more fundamental problems bearing on soil fertility.

249. SOIL FERTILITY LABORATORY. 2(0-6); I. Prerequisite: Agron. 130 and Chem. 250. Dr. Metzger.

Chemical and physical laboratory studies of soils and soil problems. Charge, \$5.

FOR GRADUATE CREDIT

331. RESEARCH IN SOILS. Credit to be arranged; I, II, and SS. Prerequisite: Agron. 130 and Chem. 250. Mr. Throckmorton, Dr. Metzger, Mr. Myers, and Dr. Hide.

Special soil problems, which may extend throughout the year and furnish data for a master's thesis. Charge, \$4.

Animal Husbandry

Professor McCAMPBELL
Professor WEBER
Professor BELL
Professor IESEN

Associate Professor AUBEL
Associate Professor MACKINTOSH
Associate Professor COX
Assistant Professor TAYLOR

The courses of study in this department are arranged to give the student special instruction in the selection, breeding, feeding, marketing, and management of all classes of livestock.

The department devotes 624 acres of land to the maintenance of herds and flocks of purebred horses, cattle, sheep, and hogs. The College livestock has attained a national reputation among breeders and feeders on account of the many prize-winning animals produced.

This department feeds experimentally from 750 to 1,000 animals each year. This affords excellent opportunity to study feeding animals and problems in feeding.

The feed yards and barns are well arranged for experimental feeding and the maintenance of the herds. The laboratory of the animal husbandry student is the feed lot and the judging pavilion. He studies the animal from the standpoint of the breeder and the feeder. He learns to combine the needs of each and to find those qualities in the animal best suited to meet these needs.

COURSES IN ANIMAL HUSBANDRY

FOR UNDERGRADUATE CREDIT

125. **ELEMENTS OF ANIMAL HUSBANDRY.** 3(2-4); I and II. Mr. Bell, Dr. Aubel, Mr. Cox, and Mr. Taylor.

A general survey of the field of animal husbandry, with special emphasis on the relation of livestock to agriculture in general. Type, conformation, quality, character, and breed characteristics in animals are stressed in the laboratory. Charge, 50 cents.

140. **ADVANCED STOCK JUDGING I.** 2(0-6); I. Prerequisite: An. Husb. 125. Mr. Bell.

The judging of market animals and of different breeds of purebred stock, four to six animals in a group, as is customary at county and state fairs. Charge, 50 cents.

143. **ADVANCED STOCK JUDGING II.** 2(0-6); II. Prerequisite: An. Husb. 140. Mr. Bell.

Continuation of An. Husb. 140; occasional trips to the best livestock farms of the state, where the management of herds and flocks as handled by the most successful stockmen of the state are judged and observed. Charge, 50 cents.

146. **FORM AND FUNCTION IN LIVESTOCK.** 2(0-6); I. Prerequisite: An. Husb. 143. Mr. Bell.

A detailed and specific study of animal form and type, and influence of type upon function; relation of form, type and condition to growth and development; comparative measurements of growing and fattening animals, speed and draft horses, mutton and wool sheep, and lard and bacon types of hogs; special training in presenting orally the relative merits of animals of all breeds. Charge, 50 cents.

152. **PRINCIPLES OF FEEDING.** 3(3-0); II. Prerequisite: Anat. 131 and Chem. 122. Open only to students in the curriculum in Agriculture. Mr. Cox.

The digestive system and processes of nutrition; the origin, chemical analysis, grades, and feeding values of different feeds; the theory of practical economy of rations for the maintenance and for the fattening of all classes of farm animals.

156. **BEEF-CATTLE PRODUCTION.** 2(2-0); II. Prerequisite: An. Husb. 152 or 172. Mr. Weber.

Economical methods of producing beef cattle. One field trip required.

159. **SWINE PRODUCTION.** 2(2-0); II. Prerequisite: An. Husb. 152 or 172. Dr. Aubel.

Economical methods of producing swine. One field trip required.

162. **SHEEP PRODUCTION.** 2(2-0); I. Prerequisite: An. Husb. 152 or 172. Mr. Cox.

Economical methods of producing sheep. One field trip required.

165. **HORSE PRODUCTION.** 2(2-0); I. Prerequisite: An. Husb. 152 or 172. Dr. McCampbell.

Economical methods of producing horses. One field trip required.

167. **MEATS.** 2(1-3); II. Prerequisite: An. Husb. 125. Mr. Mackintosh. Killing and dressing, cutting, curing, judging, and selecting meats. Charge, \$1.

171. LIVESTOCK PRODUCTION. 3(3-0); I. Prerequisite: An. Husb. 152 or 172. Open only to juniors and seniors not majoring in animal husbandry. Mr. Cox. Practical insight into the production of beef cattle, horses, swine, and sheep.

172. FEEDING LIVESTOCK. 3(3-0); II and SS. Prerequisite: Chem. 122 or its equivalent. Open only to students not enrolled in the curriculum in Agriculture. Mr. Bell.

A practical study of the processes of digestion and assimilation, the feed requirements of different animals, the relative feeding value of different feeds, and methods of calculating rations.

176. MEATS HE. 1(0-3); I and II. For juniors and seniors in home economics. Prerequisite: Food and Nutr. 106. Mr. Mackintosh.

The selection, cutting, and curing of meats; particular attention to grading of carcasses and uses of the various cuts of meats. At least one field trip required. Charge, \$1.

184. BREED STUDIES. 2(2-0); I. Prerequisite: An. Husb. 125. Mr. Mackintosh.

A study of the origin, development, adaptability, families, strains, noted sires, and noted breeders of the leading breeds of farm livestock other than dairy cattle.

186. ANIMAL HUSBANDRY PRACTICUMS. 2(0-6); II. Mr. Weber, Dr. Aubel, Mr. Mackintosh, and Mr. Cox.

A course designed to give students information relative to, and experiences in, the manual phases of livestock management.

189. FEEDS AND FEEDING. 3(3-0); II. Prerequisite: Chem. 122 and Anat. 222. Open only to students in the curriculum in Veterinary Medicine. Mr. Taylor.

This course includes a résumé of digestion and nutrition but deals primarily with the practical phases of feeding different classes of livestock.

FOR GRADUATE AND UNDERGRADUATE CREDIT

221. GENETICS. 3(3-0); I, II, and SS. Prerequisite: Zoöl. 105 and Bot. 105. Dr. Ibsen.

A general study of variation, Mendelian inheritance, and related subjects.

224. ANIMAL BREEDING. 2(2-0); I. Prerequisite: An. Husb. 221. Dr. Aubel. The physiology of reproduction; general principles of heredity; variation; systems of mating; influence of pedigrees and herdbook standard; and an analysis of the breeding practices of leading breeders.

225. ADVANCED GENETICS. 4(3-3); II. Prerequisite: An. Husb. 221. Dr. Ibsen.

Genetics studied in greater detail than in An. Husb. 221; particular attention to the relation of chromosomes to heredity.

227. GENETICS SEMINAR. 1(1-0); I and II. Prerequisite: Consult instructors. Dr. Nabours, Dr. Ibsen, Dr. Parker, Dr. Warren, and Dr. Brunson. Genetic experiments in plants and animals, the biological and mathematical methods employed, and validity of conclusions drawn.

229. RESEARCH IN GENETICS. Credit to be arranged; I and II. Prerequisite: An. Husb. 225. Dr. Ibsen.

A course offering opportunity for individual study of problems in which small mammals are used as the experimental animals.

231. ADVANCED STUDIES IN PEDIGREES. 3(1-6); II. Prerequisite: An. Husb. 184. Mr. Mackintosh.

Pedigrees and prepotency and individuals representing the more important strains and families of beef cattle, horses, sheep, and swine.

233. **ADVANCED FEEDING.** 2(2-0); I. Prerequisite: An. Husb. 152. Mr. Weber.

A survey of the experimental feeding of horses, cattle, sheep, and hogs; fundamental and practical feeding problems of the various sections of the country; results obtained in experimental investigation of these problems.

244. **ANIMAL HUSBANDRY SEMINAR.** 1(1-0); II. Open only to senior and graduate students majoring in animal husbandry. Prerequisite: An. Husb. 152. Mr. Weber.

245. **ANIMAL HUSBANDRY PROBLEMS.** Credit to be arranged; I, II, and SS. Prerequisite: An. Husb. 152 and other courses; consult instructor. Dr. McCampbell.

250. **PUREBRED LIVESTOCK PRODUCTION.** 2(2-0); II. Prerequisite: An. Husb. 184 and 224; senior or graduate standing. Dr. McCampbell.

The real function of purebred livestock; the many factors upon which the successful production of purebred livestock depends; and possibilities in purebred livestock production.

260. **LIVESTOCK AND MEAT INDUSTRY.** 3(3-0); II. Prerequisite: An. Husb. 125 and 152. Dr. McCampbell.

An advanced study of the livestock and meat industry; its organization, operation, and development; and the relation of its diversified activities to each other and to the public. Lectures, assigned readings, and reports.

268. **LIVESTOCK EXPERIMENTAL METHODS.** 2(2-0); II. Prerequisite: An. Husb. 152 and 221. Dr. McCampbell and Dr. Ibsen.

How to plan, conduct, and interpret experiments involving the use of animals.

274. **ADVANCED MEATS.** 1 to 4 hours; II. Prerequisite: An. Husb. 167. Mr. Mackintosh.

Grading of carcasses; studies in nutritive value of different grades of meat; factors influencing the quality of meats; factors influencing dressing percentages of meat animals; and identification of meats from different animals.

290. **PROBLEMS IN TRAINING AGRICULTURAL JUDGING TEAMS.** 2(10-0); four-week SS. Prerequisite: An. Husb. 125, Agron. 101, Poult. Husb. 101, Dairy Husb. 101, and one year's teaching experience. Mr. Zahnley, Mr. Scott, Mr. Cave, and Mr. Davidson.

A seminar course in problems involved in training agricultural judging teams in animal husbandry, agronomy, poultry husbandry, and dairy husbandry. Practice in each field is a part of the course.

FOR GRADUATE CREDIT

301. **RESEARCH IN ANIMAL HUSBANDRY.** Credit to be arranged; I and II. Prerequisite: Consult instructor. Dr. McCampbell and other members of the department.

Special problems in beef-cattle production, swine production, sheep production, horse production, purebred livestock production, or genetics.

305. **ANIMAL NUTRITION SEMINAR.** 1(1-0); I and II. Prerequisite: Senior or graduate standing. Dr. McCampbell.

Study and criticism of experimental work in animal nutrition, of the methods employed, and of the validity of conclusions drawn.

311. **THE WOOL INDUSTRY.** 3(2-3); II. Prerequisite: An. Husb. 162. Mr. Cox.

The supply of wool and the demand for it; and the method of producing, marketing, storing, grading, and manufacturing wool.

Dairy Husbandry

Professor ATKESON
Professor CAVE
Professor MARTIN

Associate Professor RIDDELL
Assistant Professor CAULFIELD
Graduate Assistant WALES

The activities of the Department of Dairy Husbandry may be divided into two groups; those that deal with the production of milk and those that deal with the manufacturing of the several dairy products. In order to get first-hand information a dairy herd is maintained and a creamery operated. The animals in the dairy herd are used by judging classes and in experiments in the feeding, care, and management of dairy animals. Up-to-date methods in creamery operation are exemplified in the creamery.

The dairy herd consists of excellent types of the four dairy breeds: Jersey, Guernsey, Ayrshire, and Holstein. These animals are purebred, and a number have been entered in the advanced registry of their respective breeds. The herd is now housed in a new dairy barn with up-to-date equipment for housing dairy cattle.

The Department of Dairy Husbandry is provided with ample room in the west wing of Waters Hall. The creamery is located in a one-story annex on the north end of this wing. In this building the department has the most up-to-date equipment available for handling butter, cheese, milk, ice cream, and condensed milk on a quantity basis, and is equipped far better than ever before to instruct students interested in the manufacturing side of dairying.

Students who have specialized in dairying are now among the leading dairy-cattle breeders of the state. Others who were interested in the manufacturing side of dairying are in responsible positions with creameries and milk companies or in business for themselves. The dairy industry is expanding in Kansas, and this is bringing a greater demand for men with experience and knowledge of dairying.

The instruction in the Department of Dairy Husbandry includes the study of the selection and breeding of dairy animals, the production of milk, its manufacture into butter, cheese, and other dairy products, and its sale on the market.

COURSES IN DAIRY HUSBANDRY

FOR UNDERGRADUATE CREDIT

101. ELEMENTS OF DAIRYING. 3(2-3); I and II. Mr. Cave, Mr. Martin, Dr. Riddell, and Mr. Caulfield.

The secretion, composition, and properties of milk; factors influencing the quantity and quality of milk; care of milk and cream on the farm; different methods of creaming; construction and operation of farm separators; principles and application of the Babcock test; the use of the lactometer; and butter making on the farm.

Laboratory.—A brief study of the methods used in the selection of dairy cattle, the production and manufacture of dairy products, and the common tests used in connection with dairy products. Charge, \$2.50.

104. DAIRY CATTLE JUDGING. 1(0-3); I and II. Dr. Riddell and Mr. Cave. Judging dairy stock from the standpoint of economical production and breed type.

106. DAIRY INSPECTION. 2(1-3); I. Prerequisite: Dairy Husb. 101. Mr. Caulfield.

Advanced work in the testing of dairy products and testing for adulterations; practice in use of score cards for inspecting and grading milk plants, farm dairies, and creameries; outlining of state and city ordinances governing the handling and public sale of dairy products; training in duties of city, state, and government inspectors. Charge, \$3.

108. MILK PRODUCTION. 3(3-0); II. Prerequisite: Dairy Husb. 101 and An. Husb. 152 or 172. Mr. Atkeson.

Economical production of milk and the most approved method of handling the dairy herd; construction of dairy barns and buildings; other subjects relating to the dairy farmer.

110. BUTTER MAKING. 3(2-3) or 4(2-6); I. Prerequisite: Dairy Husb. 101 and Bact. 211. To be taught concurrently with Bact. 235. Mr. Martin.

History and development of the butter industry. Methods of cream production and care on the farm and in the plant. Methods of butter manufacturing, marketing, and food value of butter.

Laboratory.—Practice in sampling and grading cream, butter analysis, preparation of cream for churning, manufacture of butter, and performing the various tests used by butter makers. Charge, \$3.

116. MARKET MILK. 3(2-3); II. Prerequisite: Dairy Husb. 101 and Bact. 211. Mr. Martin.

Classes of market milk; equipment and methods for clean milk production; relation of clean milk to producer, dealer, and consumer; systems of milk inspection, score cards, and milk and cream contests; milk plants, including their methods and equipment.

Laboratory.—Actual practice in all the steps in the production of market milk and cream in the College milk plant. Charge, \$3.

119. DAIRY INSPECTION FOR VETERINARY STUDENTS. 2(1-3); II. Mr. Caulfield and Dr. Riddell.

The composition and properties of milk; principles and practices of clean milk production on the farm; study of suitable state and city ordinances governing the handling and sale of milk and dairy products.

Laboratory.—The testing of milk and dairy products; quality tests; preparation and testing of chemical disinfectants; the inspection and scoring of dairy farms and milk plants. Charge, \$3.

120. ADVANCED DAIRY CATTLE JUDGING. 1(0-3); II. Mr. Cave.

Continuation of Dairy Husb. 104; visits to the best farms of the state; opportunity to judge stock kept by the most successful breeders.

127. CONDENSED AND POWDERED MILK. 2(1-3); I. Prerequisite: Dairy Husb. 116 and Bact. 211. Offered in 1937-'38 and alternate years thereafter. Mr. Martin.

The history of milk condensing, methods of manufacture, condensing machinery, and the powdered-milk industry.

Laboratory.—Condensing milk in the College plant. Charge, \$3.

130. ICE CREAM MAKING. 3(2-3); II. Prerequisite: Dairy Husb. 106 and 116. Offered in 1936-'37 and alternate years thereafter. Mr. Martin and Mr. Caulfield.

A thorough study of the science and practice of the commercial manufacture of ice cream and ices.

Laboratory.—Practice in all phases of the manufacture of ice cream and ices in the College plant. Charge, \$3.

135A. CHEESE MAKING. 2(1-3); II. Prerequisite: Dairy Husb. 106 and Bact. 211. Offered in 1937-'38 and alternate years thereafter. Mr. Caulfield.

Manufacture of American cheddar cheese, soft cheeses, and the most important foreign varieties.

Laboratory.—Actual manufacture of the various types of cheese. Charge, \$3.

140. DAIRY PRODUCTS JUDGING. 1(0-3); I. Prerequisite: Dairy Husb. 101. Mr. Martin.

Inspection of dairy products for quality; score-card grading of ice cream, butter, cheese, and market milk; practice judging in preparing for the dairy products judging team. Charge, \$2.

FOR GRADUATE AND UNDERGRADUATE CREDIT

202. DAIRY SEMINAR. 1(1-0); II. Prerequisite: Dairy Husb. 101, 106, and 108. Mr. Atkeson.

A study and review of dairy periodicals and experiment station bulletins, books, and other dairy literature.

207. FEEDING AND MANAGEMENT OF DAIRY CATTLE. 3(2-3); II. Prerequisite: Dairy Husb. 108 and An. Husb. 152. Mr. Cave.

An advanced course in feeding as it applies to dairy cattle under ordinary conditions and to cows on advanced registry test; general management problems and the fitting of animals for show and sale. Charge, \$1.

212. DAIRY CATTLE BREEDING AND SELECTION. 2(1-3); I. Prerequisite: Dairy Husb. 108. Offered in 1937-'38 and alternate years thereafter. Dr. Riddell.

An advanced course giving consideration to (1) the history and development of the different breeds and families of dairy cattle; (2) reproduction; (3) inheritance of milk secretion; (4) bull indexes; (5) age correction factors; (6) selection of the herd sire; (7) systems of breeding.

Laboratory.—Brief study of the herd books of different dairy herds and practice in pedigree writing and analysis; practice judging on the basis of type, pedigree, and production standard.

216. DAIRY PRODUCTION PROBLEMS. Credit to be arranged; I and II. Prerequisite: Dairy Husb. 101, 104, and 108, and An. Husb. 152. Mr. Atkeson and Mr. Cave.

An investigation pertaining to dairy production problems, plans for said investigation to be so formulated that the study may be continued for more than one semester, if necessary.

221. DAIRY MANUFACTURING PROBLEMS. Credit to be arranged; I and II. Prerequisite: Dairy Husb. 101, 106, 108, and 110. Mr. Martin and Mr. Caulfield.

An investigation pertaining to dairy manufacturing problems, plans for said investigation to be so formulated that, if necessary, the study may be continued for more than one semester.

226. CREAMERY MANAGEMENT. 2(2-0); II. Prerequisite: Dairy Husb. 111. Offered in 1936-'37 and alternate years thereafter. Mr. Martin.

An advanced course in creamery management for students specializing in dairy manufacturing.

FOR GRADUATE CREDIT

301. RESEARCH IN DAIRY HUSBANDRY. Credit to be arranged; I and II. Prerequisite: Dairy Husb. 108, 110, 116, and 226.

Special investigations in dairy production or dairy manufactures which may form the basis of a thesis in partial fulfillment of the requirement for the degree of master of science.

305. ANIMAL NUTRITION SEMINAR. 1(1-0); I and II. Prerequisite: Consult instructors. Mr. Atkeson, Mr. Cave, and Dr. Riddell.

Study and criticism of experimental work in animal nutrition, of the methods employed, and of the validity of conclusions drawn.

General Agriculture

Dean CALL
Assistant Dean DURHAM

102. FRESHMAN LECTURES. 1(2-0); I. Dean, assistant dean, heads of departments, and freshman advisers of the Division of Agriculture, assisted by a professor of education and various other members of the College faculty.

A two-fold object: (1) to assist in development of ability to study effectively; (2) to inform regarding prospective opportunities for service in various fields of work open to agricultural graduates, the requirements for success in these fields, and the relationship between agricultural and other subject matter in well-balanced agricultural training.

103. AGRICULTURAL SEMINAR. R (four meetings each semester).

Discussion of general agricultural questions and of agricultural student affairs; programs presented by students, members of the faculty, and invited speakers. Charge, 75 cents.

105. AGRICULTURAL RELATIONSHIPS. R(1-0); II.

Agricultural graduates and their duties, responsibilities, and opportunities for service as citizens of the agricultural community and as specialists in various phases of agricultural activity.

Horticulture

Professor BARNETT
Professor QUINLAN
Associate Professor PICKETT
Associate Professor BALCH
Associate Professor SMITH

Assistant Professor FILINGER
Assistant Professor ABMEYER
Graduate Assistant OBERLE
Graduate Assistant STEBBINS

Instruction offered in the Department of Horticulture covers pomology, vegetable gardening, greenhouse practice, forestry, and landscape gardening.

The horticultural farm consists of eighty acres of land devoted exclusively to work in horticulture and forestry. Full equipment of garden tools, spraying machinery and accessories, pruning tools, and special apparatus for floriculture is available at all times for the use of the students. The College grounds furnish one of the finest and most complete laboratories in the state for the study of landscape gardening, and on them are located the vegetable gardens.

Instruction in landscape gardening is planned to meet the requirements of two classes of students: (1) students who wish a general knowledge of the principles underlying landscape gardening; (2) students who wish to specialize in landscape gardening. A complete curriculum, with the coöperation of the Departments of Civil Engineering and Architecture, is offered the latter students. (See "Curriculum in Landscape Gardening.")

COURSES IN GENERAL HORTICULTURE

FOR UNDERGRADUATE CREDIT

107. ELEMENTS OF HORTICULTURE. 3(2-3); I and II. Prerequisite: Bot. 105. Mr. Barnett, Dr. Filing, Dr. Pickett, and Mr. Oberle.

The relation of the more important subdivisions of horticulture to general agriculture and to advanced courses in pomology and olericulture; practices necessary for success in orcharding and gardening and the principles on which these practices are based.

Laboratory.—Study of fruit-bearing habits, propagation, pruning, spraying, transplanting, cover crops, fruit varieties, etc. Charge, \$1.

FOR GRADUATE AND UNDERGRADUATE CREDIT

207. SPRAYING. 3(2-3); II. Prerequisite: Chem. 110. Dr. Pickett.

Spray machinery and accessories; chemical properties, manufacture and use of the important insecticides and fungicides; determination of spray dates.

Laboratory.—Preparation and testing of spray materials; special study of spray machinery and accessories. Charge, \$1.

208. LITERATURE OF HORTICULTURE. 2(2-0); II. Prerequisite: Hort. 111. Offered in 1937-'38 and alternate years thereafter. Dr. Filinger.

Books, journals, and serials relating to horticulture are reviewed and classified; biographies of leading horticulturists are studied, and bibliographies are prepared.

235. HORTICULTURE SEMINAR. 1(1-0); I and II. Prerequisite: Hort. 111, 133, or 128. Mr. Barnett.

A study and critical discussion of recent horticultural publications and of experimental and research projects now under way in this and other agricultural experiment stations.

244. HORTICULTURAL PROBLEMS. Credit to be arranged; I, II, and SS. Prerequisite: Consult instructor. Mr. Barnett, Mr. Quinlan, Dr. Pickett, Mr. Balch, Dr. Filinger, and Mr. Smith.

Investigations in pomology, olericulture, floriculture, or landscape gardening are undertaken by advanced or graduate students. Conferences and reports required.

FOR GRADUATE CREDIT

301. RESEARCH IN HORTICULTURE. Credit to be arranged; I, II, and SS. Prerequisite: Consult instructor. Mr. Barnett, Mr. Balch, Dr. Pickett, Mr. Quinlan, Dr. Filinger, and Mr. Smith.

Any feasible problem relating to the student's major line of graduate study—pomology, olericulture, floriculture, or landscape gardening. Data collected may form basis for a master's thesis.

COURSES IN FORESTRY

FOR UNDERGRADUATE CREDIT

114. FARM FORESTRY. 3(2-3); I. Prerequisite: Bot. 105. Mr. Smith.

A study of the growing of forest trees on the farm; methods of planting, care, and harvesting; utilization of woodlot products; value of windbreaks and shelterbelts, their establishment and management. Charge, \$1.

119. SILVICULTURE. 3(2-3); I. Prerequisite: Bot. 105. Mr. Smith.

A study of the influence of site factors on forest trees; theory and practice of germination, seeding and planting of forest trees in the nursery and in the field. Charge, \$1.

120. FOREST NURSERY PRACTICE. 3(2-3); I. Prerequisite: Bot. 105. Mr. Smith.

Collection, storage, and germination of tree seed; planning a forest nursery; establishment and care of the nursery; consideration of artificial regeneration in the forest practice of the United States. Charge, \$1.

COURSES IN LANDSCAPE GARDENING

FOR UNDERGRADUATE CREDIT

125. LANDSCAPE GARDENING I. 3(3-0); I and SS. Mr. Quinlan.

An introductory course in the fundamental principles of landscape gardening.

FOR GRADUATE AND UNDERGRADUATE CREDIT

223. CIVIC ART. 3(1-6); II. Prerequisite: Hort. 243. Offered in 1937-'38 and alternate years thereafter. Mr. Quinlan.

A study of the growth and development of cities and towns. Emphasis is laid on the design of community and civic centers, parks, land subdivisions, etc.

224. PLANT MATERIALS I. 3(2-3); Prerequisite: Bot. 105. Mr. Quinlan. Study and identification of perennials and annuals for general ornamental planting; planting plans.

226. PLANT MATERIALS II. 3(2-3); II. Prerequisite: Hort. 224. Mr. Quinlan.

Study and identification of trees, shrubs, and vines for general ornamental planting. Planting plans, sketches, and written reports are required.

227. LANDSCAPE CONSTRUCTION. 3(2-3); I. Prerequisite: Civ. Engr. 111. Offered in 1936-'37 and alternate years thereafter. Mr. Quinlan.

Interpretation of topographic maps, preparation of grading plans; structures in relation to the topography, sewage, water supply, lighting, and drainage on the private estate. Charge, \$1.

238. LANDSCAPE GARDENING II. 3(1-6); I. Prerequisite: Hort. 125 and 226. Mr. Quinlan.

An elementary course in the designing of the home grounds, the country estate, special gardens, and playgrounds. Several sketch problems will be given during the course. Charge, \$1.

243. THEORY OF LANDSCAPE DESIGN. 2(2-0); I. Prerequisite: Hort. 125. Offered in 1937-'38 and alternate years thereafter. Mr. Quinlan.

The economic and aesthetic theory of design; taste, character, historic styles, and composition; natural elements in design; planting design.

246. LANDSCAPE GARDENING III. 3(1-6); II. Prerequisite: Hort. 226, 243, and 238. Mr. Quinlan.

Advanced course in designing of large parks, cemeteries, golf courses, educational groups, and high-class land subdivisions; construction details; contracts and specifications. Several sketch problems will be given during the course. Charge, \$1.

COURSES IN POMOLOGY

FOR UNDERGRADUATE CREDIT

110. SMALL FRUITS. 2(2-0); II and SS. Prerequisite: Bot. 105. Dr. Filingner. Growing, harvesting, and marketing small fruits; management of home and commercial plantations.

111. SYSTEMATIC POMOLOGY. 3(2-3); I. Prerequisite: Hort. 107. Dr. Filingner.

Technical study of fruit varieties, including varietal relationships; pomological nomenclature, variety description, and both artificial and natural systems of variety classification.

Laboratory.—Study of actual fruits from many parts of the United States; description, identification, judging, and preparation of fruit displays. Charge, \$1.

FOR GRADUATE AND UNDERGRADUATE CREDIT

201. PRACTICAL POMOLOGY. 3(2-3); II. Prerequisite: Hort. 111. Dr. Filingner.

Fruit geography, orchard locations, financing the orchard, orchard equipment, orchard economics, fruit manufactured products, and fruit marketing. Lectures and recitations.

Laboratory.—Laboratory practice in grading and packing fruits; intensive field work in identification of fruit plant varieties; propagation and advanced pruning of fruit plants. Charge, \$1.

202. SUBTROPICAL POMOLOGY. 2(2-0); II. Prerequisite: Hort. 111. Offered in 1937-'38 and alternate years thereafter. Mr. Barnett.

The geography and methods of production of the principal subtropical fruits grown in the United States. Lectures and assigned readings.

205. ADVANCED POMOLOGY. 3(2-3); I. Prerequisite: Hort. 111. Dr. Pickett. A course on the fundamentals of orcharding.

Laboratory.—Advanced apple judging; production and marketing studies. Charge, \$1.

COURSES IN VEGETABLE GARDENING AND FLORICULTURE

FOR UNDERGRADUATE CREDIT

128. GREENHOUSE CONSTRUCTION AND MANAGEMENT. 3(3-0); I. Mr. Balch. Principles of greenhouse construction and methods of greenhouse management; conservatories and commercial greenhouses.

129. FLORAL ARRANGEMENT. 2(1-3); I. Mr. Balch.

The use of flowers and floral pieces for the home and the store.

Laboratory.—The arrangement of seasonable flowers for various uses. Charge, \$1.

130. SCHOOL GARDENING. 2(2-0); SS. Mr. Balch.

A general study of soils, insects, diseases, and machinery as related to vegetable crops and their culture.

133. ELEMENTS OF VEGETABLE GARDENING. 3(2-3); II. Mr. Balch.

The practices necessary for success in vegetable gardening—the fundamentals for the student who becomes a teacher, a county agricultural agent, or a vegetable grower, and a foundation for advanced courses in vegetable production. Charge, \$1.

FOR GRADUATE AND UNDERGRADUATE CREDIT

210. MARKET GARDENING. 3(2-3); II. Prerequisite: Agron. 130 and Hort. 133. Mr. Balch.

The business side of market gardening; preparation of seed orders; estimates of costs per acre of growing various garden crops; harvesting, storing, and marketing vegetables.

Laboratory.—Each student is assigned a plot of ground to plant and care for during the semester. Careful records of cultural operations and of yields; disease and insect control. Charge, \$1.

Milling Industry

Professor SWANSON
Associate Professor CLARK
Associate Professor WORKING

Assistant Professor PENCE
Instructor ANDERSON

The milling of wheat and other cereals is one of the leading manufacturing industries of the United States, and milling products constitute over one third of the total food materials produced in the United States. An industry of such magnitude calls for technically trained men. Kansas is the center of the hard-winter-wheat belt, and flour milling is the second manufacturing industry in the state.

The department has a well-equipped flour mill, consisting of six double stand rolls with necessary wheat-cleaning machinery, sifters, purifiers, and dust collectors. The equipment is equal to that found in the commercial mills of the same capacity.

The baking laboratory is equipped with dough mixer, proofing closet, baking oven, and other necessary apparatus. The chemical laboratory contains the apparatus needed for flour and wheat testing. For advanced work there are available a hydrogen-ion potentiometer, and apparatus for making conductivity measurements and viscosity tests.

COURSES IN MILLING INDUSTRY**FOR UNDERGRADUATE CREDIT**

101. **ELEMENTS OF MILLING.** 2(1-3); I. Mr. Clark, Mr. Pence, and Mr. Anderson.

A survey of the field of the milling industry; practice work on an experimental mill. Charge, \$2.

103. **FLOW SHEETS.** 2(0-6); II. Prerequisite: Mill. Ind. 101. Mr. Pence.
Tracing the course of milling products through the mill and construction of flow sheets. Charge, \$2.

109. **MILLING PRACTICE I.** 3(1-6); I. Prerequisite: Mill. Ind. 103. Mr. Pence and Mr. Anderson.

A study of wheat cleaning machines, tempering controls, grinders, sifters, purifiers, flour blending, redressing, and principles of bleaching. Charge, \$2.

111. **MILLING PRACTICE II.** 3(1-6); II. Prerequisite: Mill. Ind. 109. Mr. Pence and Mr. Anderson.

Relation of roll and bolting surfaces, principles of belt management, lubrications, spout construction, methods of checking and controlling flour mill operations. Charge, \$2.

112. **PRINCIPLES OF BAKING.** 3(1-6); II. Mr. Clark.

The theory and principles of baking procedures and interpretation of qualities in baked products. Not open for credit to students who major in milling chemistry. Charge, \$5.

FOR GRADUATE AND UNDERGRADUATE CREDIT

201. **MILLING TECHNOLOGY I.** 2(0-6); I. Prerequisite: Mill. Ind. 111. Mr. Pence.

Problems related to management of flour-mill operations, variation in wheat conditioning, corrugation, roll spiral, roll surfaces, purifiers, and bolters. Charge, \$2.

202. **MILLING TECHNOLOGY II.** 2(0-6); II. Prerequisite: Mill. Ind. 201. Mr. Pence.

Study of the influence of external conditions on flour-mill operations, management of air control, exhaust, dust collectors, flour bleachers, determining the flow of mill streams. Charge, \$2.

203. **FLOUR MILL CONSTRUCTION.** 3(0-9); I. Prerequisite: Mach. Des. 111 and 121; prerequisite or concurrent, Ap. Mech. 216. Mr. Pence.

A study of the design and construction of modern flour mills, the making of flow sheets, and the selection and placing of machinery.

205. **WHEAT AND FLOUR TESTING.** 3(0-9); I. Prerequisite: Mill. Ind. 212 and Chem. 122 or 123, and 251 or 260. Dr. Working.

Special quantitative tests applied to cereals and their products; methods of analysis and interpretation of results. Deposit, \$7.50.

206. **EXPERIMENTAL BAKING.** 3(1-6); II. Prerequisite: Mill. Ind. 205. Mr. Clark.

Practice in baking tests; comparison of methods, formulas, and flours; interpretation of results. Charge, \$5.

210. **ADVANCED WHEAT AND FLOUR TESTING.** 1 to 5 semester hours; I and II. Prerequisite: Mill. Ind. 205 and other courses; consult instructor. Dr. Working.

Physiochemical and other methods used in testing wheat and flour. Deposit, \$2.50 per hour.

212. MILLING QUALITIES OF WHEAT. 3(3-0); II. Prerequisite: Chem. 122 or 123. Dr. Swanson.

Factors which affect the milling qualities of wheat and the quality of flour, such as moisture, respiration, enzymes, harvesting, storage, climate, and soil.

214. MILLING INDUSTRY PROBLEMS. Credit to be arranged; I, II, and SS. Prerequisite: Mill. Ind. 212, or such other courses as are necessary for the problem selected. Dr. Swanson, Mr. Clark, Dr. Working, Mr. Pence, and Mr. Anderson. Charge, \$2.50 per hour.

218. MILLING INDUSTRY SEMINAR. R($\frac{1}{2}$ -0); I and II.

All students who major in milling industry meet with the instructors twice each month to discuss problems of general interest to students in milling industry. Programs are furnished by both students and instructors.

FOR GRADUATE CREDIT

301. RESEARCH IN MILLING INDUSTRY. Credit to be arranged; I, II, and SS. Prerequisite: Consult instructors. Dr. Swanson, Mr. Clark, Dr. Working, and Mr. Pence.

A definite line of investigation which may, if sufficient as to quality and quantity, be used as a basis for thesis presented in partial fulfillment of the requirements for the degree of master of science.

Poultry Husbandry

Professor PAYNE
Professor WARREN

Associate Professor SCOTT
Farm Superintendent GISH

The poultry plant, occupying twenty-four acres and situated just north of the northeast corner of the College campus, is devoted to the breeding and rearing of the stock used for class and experimental work. It is equipped with various types of houses, runs, incubators and brooders, and with flocks of the leading breeds of fowls.

There is in the government and state experiment stations and in schools and colleges an increasing demand for men with experience and systematic training in handling poultry. There is likewise a growing demand for men to enter poultry-packing houses and for men capable of managing poultry-farming enterprises of considerable proportions.

COURSES IN POULTRY HUSBANDRY

FOR UNDERGRADUATE CREDIT

101. FARM POULTRY PRODUCTION. 2(1-3); I and II. Mr. Payne and Mr. Scott.

Problems of poultry management on the general farm. Charge, \$2.

104. PRACTICE IN POULTRY FEEDING. 1(3 times a day, 7 days a week, for 3 weeks, at hours outside the regular schedule); II. Prerequisite: Poult. Husb. 101. Offered in 1937-'38 and alternate years thereafter. Mr. Scott.

A flock of fowls cared for under supervision of an instructor; careful records kept of feeds consumed and eggs produced; survey of recent literature on poultry feeding. Charge, \$2.

109. POULTRY JUDGING. 3(1-6); I. Prerequisite: Poult. Husb. 101. Mr. Scott.

A historical study of the various breeds commonly found on the Kansas farm; particular attention to production characteristics and tracing evolution of present breed types.

Laboratory.—Judging the standard breeds and varieties by comparison; judging hens for egg production on the basis of their trap-nest records. Charge, \$2.

116. MARKET POULTRY AND EGGS. 4(2-6); I. Prerequisite: Poult. Husb. 101. Offered in 1937-'38 and alternate years thereafter. Mr. Payne.
Methods of handling market eggs and live and dressed poultry.

Laboratory.—Candling and grading eggs; crate-feeding, killing, dressing, grading, and packing market poultry. Charge, \$2.

120. ARTIFICIAL INCUBATION AND BROODING. 3(1-6); (laboratory 3 times a day, 7 days a week, for not less than 8 weeks, at hours outside the regular schedule); II. Prerequisite: Poult. Husb. 101 and Zoöl. 105. Mr. Scott.
The development of the chick; metabolism; survey of the literature on incubation and brooding; actual care of an incubator throughout the incubation period; bringing off the hatch; care of chicks in brooder for 3 weeks. Charge, \$2.

125. ADVANCED INCUBATION. 1(0-3); (laboratory 3 times a day, 7 days a week, for not less than 3 weeks, at hours outside the regular schedule); II. Prerequisite: Poult. Husb. 101 and 120. Offered 1937-'38 and alternate years thereafter. Mr. Scott.
Study of the baby chick industry; operation of a Mammoth incubator; packing and shipping of baby chicks. Charge, \$2.

FOR GRADUATE AND UNDERGRADUATE CREDIT

204. POULTRY GENETICS. 3(3-0); II. Prerequisite: An. Husb. 221. Dr. Warren.
A study of the literature on inheritance in poultry with special reference to its bearing on practical breeding problems.

POULTRY FARM ORGANIZATION. See Ag. Ec. 206A.

POULTRY BACTERIOLOGY. See Bact. 216.

POULTRY ANATOMY. See Anat. 202.

206. POULTRY PROBLEMS. Credit to be arranged; I, II, and SS. Prerequisite: Poult. Husb. 101 and 104; consult instructors. Mr. Payne and Mr. Scott.
A definite investigation covering some phase of poultry work, to be continued into the next semester if necessary.

210. GENETICS SEMINAR. 1(1-0); I and II. Prerequisite: Consult instructors. Dr. Nabours, Dr. Ibsen, Dr. Warren, Dr. Parker, and Dr. Brunson.
Genetic experiments in plants and animals, the biological and mathematical methods employed, and validity of conclusions drawn.

216. POULTRY MANAGEMENT. 3(3-0); II. Prerequisite: Poult. Husb. 101; senior or graduate standing. Mr. Payne.
A detailed study of all phases of farm and commercial flocks, including cost of production.

220. POULTRY SEMINAR. 1(1-0); I. Prerequisite: Poult. Husb. 101. Required of all graduate students and of both juniors and seniors majoring in poultry husbandry. Dr. Warren.
A review of current literature appearing in periodicals and bulletins and reports on research projects and topics of special interest.

FOR GRADUATE CREDIT

301. RESEARCH IN POULTRY HUSBANDRY. Credit to be arranged; I, II, and SS. Prerequisite: Poult. Husb. 101, 104, 109, 116, and 120; consult instructors. Dr. Warren, Mr. Payne, and Mr. Scott.
A definite line of investigation in poultry genetics, management, or incubation, which may form the basis of a master's thesis.

305. ANIMAL NUTRITION SEMINAR. 1(1-0); I and II. Prerequisite: Consult instructors. Mr. Payne and Mr. Scott.
Study and criticism of experimental work in animal nutrition, of the methods employed, and of the validity of conclusions drawn.

The Agricultural Experiment Station

The Kansas Agricultural Experiment Station was organized under the provisions of an act of congress, approved March 2, 1887, which is commonly known as the Hatch act, and is officially designated as—

"An act to establish agricultural experiment stations in connection with the colleges established in the several states under the provisions of an act approved July 2, 1862, and the acts supplementary thereto."

The wide scope and far-reaching purposes of this act are best comprehended by an extract from the body of the measure itself, in which the objects of its enactment are stated as being—

"To aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and practices of agricultural science."

The law specifies in detail—

"That it shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and waters; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses for forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable."

On the day after the Hatch act had received the signature of the President, the legislature of Kansas, being then in session, passed a resolution, dated March 3, 1887, accepting the conditions of the measure, and vesting the responsibility of carrying out its provisions in the Board of Regents of the Kansas State College.

Until 1908 the expenses of the Agricultural Experiment Station were provided for entirely by the federal government. The original creative act (the Hatch act) carried an annual congressional appropriation of \$15,000. No further addition to this amount was made until the passage of the Adams act, which was approved March 16, 1906. This measure provided "for the more complete endowment and maintenance of agricultural experiment stations," a sum beginning with \$5,000, and increasing each year by \$2,000 over the preceding year for five years, since which time the annual appropriation has been \$15,000—

"To be applied to paying the necessary expenses of conducting original researches or experiments bearing directly on the agricultural industry of the United States, having due regard to the varying conditions and needs of the respective states or territories."

It is further provided that—

"No portions of said moneys exceeding five percentum of each annual appropriation shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation or repair of any building or buildings, or to the purchase or rental of land."

The Adams act, providing as it does for original investigations, supplied the greatest need for the Agricultural Experiment Station—means of providing men and equipment for advanced research. Only such experiments may be entered upon under the provisions of this act as have first been passed upon and approved by the Office of Experiment Stations of the United States Department of Agriculture.

Further support for the Agricultural Experiment Station was provided by the federal government by the passage of the Purnell act, which was approved

February 24, 1925. This measure authorized an appropriation of \$20,000 for the fiscal year beginning July 1, 1925, with allotments increasing annually by \$10,000 until a total of \$60,000 was reached for the fiscal year beginning July 1, 1929. The law specifies that—

"The funds appropriated pursuant to this act shall be applied only to paying the necessary expenses of conducting investigations or making experiments bearing directly on the production, manufacture, preparation, use, distribution, and marketing of agricultural products and including such scientific researches as have for their purpose the establishment and maintenance of a permanent and efficient agricultural industry, and such economic and sociological investigations as have for their purpose the development and improvement of the rural home and rural life, and for printing and disseminating the results of said researches."

The Purnell act, while specific in its statement of the purposes for which the appropriation may be used, is broad in scope and provides specifically for scientific research in agricultural economics, home economics, and rural sociology, in addition to providing more liberal support for the older established work of the Agricultural Experiment Station.

A fourth act authorizing federal support for the agricultural experiment stations was approved June 29, 1935, when the Bankhead-Jones act was signed. This law authorizes appropriations to land-grant colleges for research based upon the rural population of the various states. The sum of \$1,000,000 is authorized for work throughout the United States and its territories for the first fiscal year, and for each of the four fiscal years thereafter \$1,000,000 more than the amount authorized for the preceding fiscal year, and \$5,000,000 for each fiscal year thereafter. The amount available for Kansas based upon rural population is approximately \$12,000 for the first fiscal year and approximately \$60,000 when the act is in full force. The act provides for—

"Research into laws and principles underlying basic problems of agriculture in its broadest aspects; research relating to the improvement of the quality of, and the development of new and improved methods of production of, distribution of, and new and extended uses and markets for, agricultural commodities and by-products and manufactures thereof; and research relating to the conservation, development and use of land and water resources for agricultural purposes."

The Bankhead-Jones act states specifically that the research authorized shall be in addition to research provided for under existing laws and that no allotment of funds shall be made to a state for any fiscal year in excess of the amount which the state makes available for such fiscal year out of its own funds for research.

More than one hundred projects, covering practically all phases of agricultural investigation, are being studied by the members of the Agricultural Experiment Station staff.

The farms, livestock, laboratories, and general equipment of the College are all directly available for the use of the Agricultural Experiment Station.

The results of the work of the station are published in the form of bulletins, circulars, and scientific papers. These bulletins are of two classes—those which record the results of research work of a purely scientific character and those which present technical information in a simplified form, suitable for the general reader. The circulars are popular presentations of data which call for immediate application, as well as timely and useful information not necessarily new or original. The scientific papers are usually published as reprints of addresses given before scientific bodies. These reprints contain original information or report definite steps in the progress of investigations under way.

All bulletins and other publications from the Agricultural Experiment Station are sent without charge to citizens of the state. Any person in the state who so desires may have his name placed on the permanent mailing list of the station.

Letters of inquiry and general correspondence should be addressed: "Agricultural Experiment Station, Manhattan, Kan." Special inquiries should be directed, so far as possible, to the heads of departments having in charge the matters concerning which information is desired.

CONTROL WORK OF THE STATION

In addition to the work of agricultural investigation, the state has enlarged the activities of the station along various lines of state executive or control work.

One of the important lines of control work is that of the State Entomological Commission. (Laws of 1907, ch. 386; 1909, ch. 27.) This commission, created in 1907, was established—

"To suppress and eradicate San José scale and other dangerous insect pests and plant diseases throughout the state of Kansas."

The professors of entomology at the Kansas State College and at the University of Kansas are by law designated as two of the five members of the above commission. Acting under the title of state entomologists, they divide between them the territory of the state, for the purpose of inspection.

They are empowered—

"To enter upon any public premises . . . or upon any land of any firm, corporation or private individual within the state of Kansas, for the purpose of inspection, destroying, treating, or experiment upon the insects or diseases aforesaid."

They may treat or cause to be treated "any and all suspicious trees, vines, shrubs, plants and grains," or, under certain conditions, may destroy them. They must annually inspect all nursery stock, and no nursery stock is to be admitted within the state without such inspection.

By legislative act (Laws of 1909, ch. 49), a "division of forestry" at the Kansas State College is also provided for in the following terms—

"For the promotion of forestry in Kansas there shall be established at the Kansas State Agricultural College, under the direction of the Board of Regents, a division of forestry. The Board of Regents of the Kansas State Agricultural College shall appoint a state forester, who shall have general supervision of all experimental and demonstration work in forestry conducted by the Agricultural Experiment Station. He shall promote practical forestry in every possible way, compile and disseminate information relative to forestry, and publish the results of such work through bulletins, press notices, and in such other ways as may be most practicable to reach the public, and by lecturing before farmers' institutes, associations, and other organizations interested in forestry."

It will thus be seen that the state of Kansas is making increased use of the scientific staff of the Agricultural Experiment Station in matters of state importance requiring the application of technical knowledge.

Branch Agricultural Experiment Stations

FORT HAYS BRANCH STATION

The land occupied by this station is a part of what was originally the Fort Hays military reservation. Being no longer required for military purposes, it was turned over to the Department of the Interior, October 22, 1899, for disposal under the act of congress of July 5, 1884. Through the influence of Senator, later Regent, W. A. Harris, and of Congressman Reeder, a bill was passed in the fifty-sixth congress setting aside this reservation "for the purpose of establishing an experimental station of the Kansas Agricultural College and a western branch of the Kansas State Normal School thereon and a public park." This bill was approved March 28, 1900. By act of the state legislature, approved February 7, 1901, the act of congress donating this land and imposing the burden of the support of these institutions was accepted. The same session of the legislature passed an act providing for the organization of a branch experiment station and appropriating a small fund for preliminary work. In the division of this land, the College received 3,560 acres.

The land at the Fort Hays Branch Station consists mainly of high, rolling

prairie, with a limited area of rich alluvium bordering on a creek, and is situated on the edge of the semiarid plains region. It is well suited for experimental and demonstration work in dry farming, in irrigation, and in crop, forestry, and orchard tests, under conditions of limited rainfall and high evaporation.

The work of this station may be divided into two divisions: (a) experimental projects; (b) general farm and livestock work. The experimental projects are as follows: dry-farming investigations, forage-crop investigations, cereal-crop investigations, forest, nursery and park demonstrations and investigations, farm dairying, and experiments in the feeding and breeding of livestock. All this work is confined to the study of the problems peculiar to the western half of the state, and relates especially to crop production under limited rainfall, to the development of varieties better adapted to the climatic conditions there prevailing, and to studies of the systems of animal husbandry and dairy husbandry suited to this region. The facilities of this station are being used for the growing of large quantities of pure seed of the strains and varieties which have proved in actual test to be most productive in the western part of the state.

GARDEN CITY BRANCH STATION

In 1906 the county commissioners of Finney county purchased, for purposes of agricultural experimentation, a tract of land amounting to 320 acres, situated four and one half miles from Garden City, on the unirrigated upland.

The land has been leased for a term of ninety-nine years to the Kansas Agricultural Experiment Station as an "experimental and demonstration farm" for the purpose of determining the methods of culture, crop varieties, and crop rotation best suited to the southwestern portion of the state, under dry-land farming conditions. A pumping plant irrigating from eighty to one hundred acres has been installed for the purpose of investigating the expense of pumping and the cost of equipment necessary for plants of this type, which are common in the shallow-water districts between Garden City and Scott City and along the Arkansas valley. The Experiment Station's investigations in irrigation are centered at this branch station.

COLBY BRANCH STATION

The legislature of 1913 provided for the establishment of a branch experiment and demonstration station near Colby, in northwestern Kansas, "for the purpose of advancing and developing the agricultural, horticultural, and irrigation interests of this state and western Kansas." This station was located upon a tract of three hundred and fourteen acres of land bordering upon the townsite of Colby. This land was purchased by the county and deeded to the state for the purposes named above. Operations were begun in March, 1914. Cropping experiments are being conducted under dry-land conditions and under irrigation. Water is being lifted one hundred and fifty feet for irrigating a garden, fruit trees, and a few desirable crops, such as alfalfa, that could not be grown successfully in western Kansas with the natural rainfall. The primary purpose of the Colby Station is to determine the best methods of developing the agriculture of northwestern Kansas and to make it a still more desirable place to live.

TRIBUNE BRANCH STATION

At the Tribune Station experimental and demonstration work is conducted for the benefit of the surrounding territory. Special attention is paid to the problems of producing, storing, and utilizing crops for winter feeding of cattle which in summer graze the extensive range areas of the extreme western part of the state.

The Division of Engineering

ROY ANDREW SEATON, *Dean*

The Division of Engineering offers curricula in agricultural engineering, architectural engineering, architecture, chemical engineering, civil engineering, electrical engineering, landscape architecture, and mechanical engineering, each leading to the degree of Bachelor of Science in the profession selected.

While the curricula, as scheduled, are believed to be sufficient to cover the needs of the average young man, it is possible to combine portions of the work of two or more of them in such a way that one may be prepared to take up a special line of work for which he desires to fit himself. For example, by substituting certain courses from the Departments of Chemistry and Geology for some of those in the curriculum in mechanical engineering, a young man can fit himself for work in connection with the oil industry. By combining some of the courses in civil and mechanical engineering and by taking additional work in chemistry and geology, a young man may fit himself for special work in connection with the development of the coal fields of the country. With the permission of the dean of the division students desiring to do so may substitute work in the reserve officers' training corps for certain subjects in any of the curricula of the division.

It is believed that the curricula as tabulated give the best preparation for students expecting to follow general work in the profession selected and for those who are not certain what particular branch of the profession they will follow. The substitutions and combinations indicated, and others similar to them, will be permitted only when there is good evidence that the student desiring such work is practically certain to follow the branch selected.

In the case of any of these modifications, the degree granted will be that of the curriculum in which the major portion of the work is taken. In no case will the substitution of an additional amount of technical work for any of the general cultural work in the course be allowed.

CURRICULUM IN AGRICULTURAL ENGINEERING

The curriculum in agricultural engineering is designed to qualify men for engineering work in agriculture. The field of the agricultural engineer includes: research, sales, or advertising in the farm-machinery and farm-motor industry; farm structure design, or promotional work with the building materials industry; soil erosion prevention with the federal and state agencies; rural electric service with electric power companies; management of farms where drainage, irrigation, or power-farming methods are of major importance; and as professional engineers in agricultural development.

The curriculum in agricultural engineering includes all of the basic courses which are common to the other engineering curricula, such as mathematics, physics and mechanics. The foundation courses in agriculture are also included in order to familiarize the student with the modern methods of agriculture. Training along engineering lines includes farm machinery, farm power, rural architecture, highway engineering, drainage, irrigation, soil-erosion control, and modern farm and home equipment.

CURRICULUM IN ARCHITECTURAL ENGINEERING

The curriculum in architectural engineering as herein outlined is designed primarily for the student who wishes to specialize in the constructional side of the building profession.

The field of the architectural engineer is wide and varied. It comprises the superintending of building construction, general contracting, the estimating of costs for construction projects, and the designing of the structural members of steel, timber, and concrete.

Because of the nature of the work of the architectural engineer in the profession, it is necessary that he be also well grounded in the underlying principles of art and architectural designs. In addition to the necessary architectural and engineering requirements the curriculum also provides for general cultural courses. These courses are designed to provide the student with the essentials of a liberal education.

CURRICULUM IN ARCHITECTURE

The curriculum in architecture aims to provide the technical training which will give a broad and sound foundation for the needs of the practicing architect, as well as the essentials of a liberal education. Although closely associated with, and somewhat dependent upon, science and engineering, architecture is primarily a fine art; hence the training of the architect, while including the general fundamentals of engineering and science, must be based primarily upon a study and understanding of the basic architectural principles, together with the canons of art and good taste. A major portion of the curriculum is therefore devoted to the study of architectural design, supplemented by those subjects preparatory or contributory to it.

Supporting this line of study the student is given a comprehensive view of the development of civilization, together with a more detailed study of the history of architecture and of art. Throughout the course draftsmanship as applied to architectural design and construction, as well as to free-hand drawing and sketching, is given constant attention. Courses dealing with the fundamental principles of building construction, sanitation, heating, and lighting, together with a careful study of the properties and uses of building materials, are given simultaneously with the courses in design and drawing.

In addition to the above-outlined professional and technical studies, approximately one quarter of the curriculum is devoted to more general studies designed to broaden the student's view and to give him the essentials of a liberal education. Thus it is the aim not only to provide a fundamental training upon which the student may base his professional development and advancement, but to afford a training which is in the broadest sense educational.

Students pursuing the curriculum in architecture are urged to devote a fifth year to the work. By so doing the student can combine the curricula in architectural engineering and architecture and receive the bachelor of science degree in both architectural engineering and architecture.

CURRICULUM IN CHEMICAL ENGINEERING

Though the progress of chemical science and of the chemical industries has been rapid in the last twenty-five years, their development really has only begun. One need but survey briefly the hosts of industries which are dependent upon chemistry for their improvement to realize what opportunities await the trained chemical engineer. Industries which have been more or less empirically developed include those concerned with the manufacture of paints and varnishes, soaps, glass, leather, rubber, and ceramic materials. Industrial products which are the direct result of chemical research include dyes, synthetic essential oils, drugs, food products, and all electrochemical and electrothermal products, such as calcium carbide, carborundum, graphite, caustic soda, chlorine, chlorates, aluminum and other metals, and atmospheric nitrates. Still further improvements are possible in the present processes, and a vast number of entirely new industries are waiting to be developed.

The training offered in the chemical engineering curriculum gives the student knowledge of the theoretical phases of chemistry and engineering which are fundamental to further development in many lines of industrial work. It

is intended to fit him to enter the professional field of chemical engineering. In addition to sound training in chemical laws and processes, considerable work is given in the mathematical and physical sciences, drawing, economics, and engineering methods and operations.

CURRICULUM IN CIVIL ENGINEERING

The aim of the curriculum in civil engineering, as outlined in this catalogue, is to give the young men taking the work the best possible preparation for entering upon the active practice of the profession under present conditions. It will be noted that the first and second years are devoted largely to general cultural studies and the sciences, including mathematics. This follows the arrangement generally found in the engineering curricula in American colleges, and it finds its justification in the well-nigh universally accepted idea that any engineering education worthy of consideration must be grounded upon ample preliminary education in the allied sciences. An introduction to the technical work is given in these years through courses in drawing, surveying, and the elementary phases of engineering.

The last two years are devoted largely to technical work. In recognition of the mechanical trend of the age, liberal provision is made for class and laboratory work in mechanical and electrical engineering. In view of the growing importance of municipal problems, such as paving, sewerage, and water supply, the curriculum in civil engineering includes required courses in these subjects.

Advanced elective courses in railway, highway, and irrigation and drainage engineering are offered in the second semester of the senior year.

CURRICULUM IN ELECTRICAL ENGINEERING

The curriculum in electrical engineering aims to prepare the student for leadership in his chosen profession. The graduate may enter either the power or the communication field of electrical engineering, and he may engage in such line as research, design, application, business management, or plant operation.

In order to qualify for the various divisions of the profession, the student should have a thorough grounding in mathematics and the sciences; practice and theoretical training in drawing, surveying, and shop practice; and a liberal training in the cultural subjects, English, history, and economics. Such a broad foundation serves as the basis for the more technical training in electrical engineering. This technical training begins with a course during the first year in College, is followed by another course during the second year, and is completed by several courses extending through the junior and senior years. The curriculum provides, in addition, elective work, giving the student ample opportunity for the selection of extra work along cultural, economic, or technical lines.

An opportunity for contact with the field of electrical engineering is offered by special lectures and by inspection trips.

CURRICULUM IN LANDSCAPE ARCHITECTURE

The aim of the curriculum in landscape architecture is to give to the student such technical training as will equip him for successful practice as a landscape architect.

The work of the landscape architect embraces the design, construction, execution, planting, and maintenance of farmsteads, estates, and other home grounds. In his work he is also called upon to plan parks, playgrounds, real estate subdivisions, country clubs, and boulevards and street systems. City planning and the laying out of town sites is probably the most important work of the landscape architect.

The function of the landscape architect is the fitting of land for human use, convenience, and enjoyment, whether it be in the city or in the country.

The work requires a thorough knowledge of the fundamentals of architecture, engineering, and horticulture. Because landscape architecture is primarily a fine art, especial emphasis is given to the study of the fundamental principles of design. A major portion of the curriculum is therefore devoted to the study of architectural and landscape design. These courses are supplemented by courses in drafting, free-hand drawing, and sketching, so the student may develop a facility for expressing his ideas on paper. Throughout the course the student is also given intensive training in the study of plant materials, forestry, and soil conditions.

In addition to professional courses of study the curriculum provides general cultural courses. These courses are designed primarily to give the student the basic elements of a liberal education.

CURRICULUM IN MECHANICAL ENGINEERING

The work in mechanical engineering prepares for the successful management and superintendence of factories and power plants; for the design of power machinery installations; for the design and construction of machine tools, steam and gas engines, compressors, hydraulic machinery, etc.; and for the design and erection of engineering buildings and factories, including the selection, purchasing, and location of the equipment.

The curriculum has been laid out with the aim of securing a judicious mixture of theory and practice, such as will not only give the student the technical skill required for engineering operations, but will also endow him with an understanding of the scientific and economic principles necessary for the solution of engineering and industrial problems.

Throughout the four years the theoretical studies in the classroom are supplemented by practical work in the laboratories in such a manner as very materially to strengthen both. In the testing laboratories the work does not end when the test is completed, but the entire problem must be written up in such a manner as would be approved in the best commercial testing laboratories. The laboratory work in the shops not only gives the student practice in operating the machinery and performing the various mechanical operations, but includes a scientific study of the factors of production, so that the loss of material and expenditure of human effort will be a minimum.

Optional and elective courses are available in the senior year and give the student an opportunity for instruction in the more specialized branches of mechanical engineering, including factory engineering, power production, and aëronautical engineering.

Students pursuing a mechanical engineering curriculum are urged to spend at least two summers in some shop or commercial plant in order to broaden their training.

ENGINEERING IN THE SUMMER SCHOOL

The division offers summer courses in free-hand and mechanical drawing, water-color and oil painting, manual training, and shop practice for high-school and grade-school teachers. In addition, various courses required in the several engineering curricula are offered in the Summer School. This enables teachers who wish to take an engineering curriculum to get a considerable start on the work during their summer vacations, and also enables College students who are irregular to make up their back courses.

Full information concerning the courses offered is contained in the Summer School number of the Kansas State College *Bulletin* which may be obtained upon application to the vice-president of the College.

Curriculum in Agricultural Engineering

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
College Algebra, *Math. 104.....	3(3-0)	Plane Analytical Geom., Math. 110..	4(4-0)
Plane Trigonometry, Math. 101.....	3(3-0)	Chemistry E-I, Chem. 107.....	4(3-3)
College Rhetoric I, Engl. 101.....	3(3-0)	College Rhetoric II, Engl. 104.....	3(3-0)
Extm. Speech I, Pub. Spk. 106.....	2(2-0)	El. An. Husbandry, An. Husb. 125...	3(2-4)
Ag. Mach. and Con., Ag. Engr. 122..	2(1-3)	Desc. Geometry, Mach. Des. 106....	2(0-6)
Engr. Drawing, Mach. Des. 101.....	2(0-6)	Artillery II, Mil. Sc. 114A.....	1(0-3)
Forging, Shop 150.....	1(0-3)	Engr. Lectures, Gen. Engr. 101.....	R
Artillery I, Mil. Sc. 113A.....	1(0-3)	Phys. Educ. M, Phys. Ed. 104.....	R(0-2)
Engr. Lectures, Gen. Engr. 101.....	R		
Phys. Educ. M, Phys. Ed. 103.....	R(0-2)		
Total.....	17	Total.....	17

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
Engr. Physics I, Phys. 145.....	5(4-3)	Engr. Physics II, Phys. 150.....	5(4-3)
Calculus I, Math. 250.....	4(4-0)	Calculus II, Math. 251.....	4(4-0)
Chemistry E-II, Chem. 108.....	4(3-3)	Mechanism, Mach. Des. 121.....	3(3-0)
Mach. Drawing I, Mach. Des. 111...	2(0-6)	Metallurgy, Shop 165.....	2(2-0)
Surveying I, Civ. Engr. 102.....	2(0-6)	Surveying II, Civil Engr. 111.....	2(0-6)
Artillery III, Mil. Sc. 115A.....	1(0-3)	Foundry Prod., Shop 161.....	1(0-3)
Seminar, Gen. Engr. 105.....	R	Artillery IV, Mil. Sc. 116A.....	1(0-3)
Phys. Educ. M, Phys. Ed. 105.....	R(0-2)	Seminar, Gen. Engr. 105.....	R
		Phys. Educ. M, Phys. Ed. 106.....	R(0-2)
Total.....	18	Total.....	18

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
Steam and Gas Engr. I, Mech. Engr. 201, 202.....	5(4-3)	Str. of Mat., Ap. Mech. 211, 220.....	6(5-3)
Applied Mechanics, Ap. Mech. 202..	4(4-0)	Farm Motors, Ag. Engr. 225.....	4(2-6)
Fld. and Power Mach., Ag. Engr. 111,	4(2-6)	Farm Crops, Agron. 101.....	4(2-6)
General Geology, Geol. 103.....	3(3-0)	Amer. Ind. History, Hist. 105.....	3(3-0)
Machine Tool Work I, Shop 170....	2(0-6)	Seminar, Gen. Engr. 105.....	R
Seminar, Gen. Engr. 105.....	R		
Total.....	18	Total.....	17

SENIOR

FIRST SEMESTER		SECOND SEMESTER	
Hydraulics, Ap. Mech. 230, 235.....	4(3-3)	Heat. and Ventil. A, || Mech. Engr. 135,	3(3-0)
Farm Structures, Ag. Engr. 203.....	4(2-6)	Land Reclamation, Ag. Engr. 250....	3(2-3)
Soils, Agron. 130.....	4(3-3)	Mod. Farm and Home Equipment,	
Economics I, Econ. 101.....	3(3-0)	Ag. Engr. 210.....	3(2-3)
Highway Engr. I, || Civil Engr. 231..	2(2-0)	Farm Organization, || Ag. Ec. 106....	3(2-3)
Seminar, Gen. Engr. 105.....	R	Elec. Engr. C, Elec. Engr. 102, 106... 3(2-2, 1)	
Inspection Trip, Ag. Engr. 140.....	R	Elective || †.....	2(-)
		Seminar, Gen. Engr. 105.....	R
Total.....	17	Total.....	17

Number of hours required for graduation, 139.

* Students who offer but one unit of algebra for admission take a five-hour course in College Algebra, Math. 107, the first semester, postponing two hours of other work.

† Electives are to be chosen with the advice and approval of the head of the department and the dean.

|| Omitted by students taking Advanced Course, Coast Artillery.

Curriculum in Architectural Engineering

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
College Algebra,* Math. 104.....	3(3-0)	Plane Analytical Geom., Math. 110..	4(4-0)
Plane Trigonometry, Math. 101.....	3(3-0)	Chemistry E-I, Chem. 107.....	4(3-3)
College Rhetoric I, Engl. 101.....	3(3-0)	College Rhetoric II, Engl. 104.....	3(3-0)
Desc. Geometry A, Mach. Des. 107..	3(0-9)	Shades and Shadows, and Perspec- tive, Mach. Des. 108.....	3(0-9)
Extm. Speech I, Pub. Spk. 106.....	2(2-0)	Object Drawing I, Arch. 111.....	2(0-6)
Surveying I, Civil Engr. 102.....	2(0-6)	Artillery II, Mil. Sc. 114A.....	1(0-3)
Artillery I, Mil. Sc. 113A.....	1(0-3)	Engr. Lectures, Gen. Engr. 101.....	R
Engr. Lectures, Gen. Engr. 101.....	R	Phys. Educ. M, Phys. Ed. 104.....	R(0-2)
Phys. Educ. M, Phys. Ed. 103.....	R(0-2)		
Total.....	17	Total.....	17

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
Engr. Physics I, Phys. 145.....	5(4-3)	Engr. Physics II, Phys. 150.....	5(4-3)
Calculus I, Math. 250.....	4(4-0)	Calculus II, Math. 251.....	4(4-0)
Chemistry E-II, Chem. 108.....	4(3-3)	Economics I, Econ. 101.....	3(3-0)
El. of Arch. I, Arch. 106A.....	3(0-9)	El. of Arch. II, Arch. 107A.....	3(0-9)
Artillery III, Mil. Sc. 115A.....	1(0-3)	Object Drawing II, Arch. 114.....	2(0-6)
Seminar, Gen. Engr. 105.....	R	Artillery IV, Mil. Sc. 116A.....	1(0-3)
Phys. Educ. M, Phys. Ed. 105.....	R(0-2)	Seminar, Gen. Engr. 105.....	R
		Phys. Educ. M, Phys. Ed. 106.....	R(0-2)
Total.....	17	Total.....	18

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
Applied Mechanics, Ap. Mech. 202..	4(4-0)	Str. of Mat., Ap. Mech. 211, 220....	6(5-3)
Design I, Arch. 142.....	3(0-9)	Working Draw. and Spec., Arch. 191,	3(0-9)
Pencil Rend. and Sketch., Arch. 116,	2(0-6)	Design II, Arch. 144.....	3(0-9)
Hist. of Arch. I, Arch. 154A.....	2(2-0)	Hist. of Arch. II, Arch. 157A.....	2(2-0)
Foundations, Civil Engr. 121.....	2(2-0)	Water Color I, Arch. 118.....	2(0-6)
Law for Engineers, Hist. 167.....	2(2-0)	Illumination A, Elec. Engr. 116....	2(2-0)
Business Management,|| Econ. 126..	2(2-0)	Seminar, Gen. Engr. 105.....	R
Seminar, Gen. Engr. 105.....	R		
Total.....	17	Total.....	18

SENIOR

FIRST SEMESTER		SECOND SEMESTER	
Design III, Arch. 145.....	5(0-15)	Design IV, Arch. 147.....	5(0-15)
Stres. in Fmd. Struc., Civ. Engr. 201,	4(4-0)	Conc. Design, Civ. Engr. 250, 255....	3(2-3)
Hist. of Arch. III, Arch. 158A.....	2(2-0)	Des. of Fmd. Struc., Civ. Engr. 246..	3(0-9)
Rural Architecture, Arch. 153.....	2(0-6)	Heating and Ventilation A, Mech.	
Civil Engr. Draw. II, Civ. Engr. 205,	2(0-6)	Engr. 135.....	3(3-0)
Elective||†.....	2(-)	Hist. of Arch. IV, Arch. 160A.....	2(2-0)
Seminar, Gen. Engr. 105.....	R	Elective||†.....	2(-)
Inspection Trip, Arch. 199.....	R	Seminar, Gen. Engr. 105.....	R
Total.....	17	Total.....	18

Number of hours required for graduation, 139.

* Students who offer but one unit of algebra for admission take a five-hour course in College Algebra, Math. 107, the first semester, postponing two hours of other work.

† Electives are to be chosen with the advice and approval of the head of the department and the dean.

|| Omitted by students taking Advanced Course, Coast Artillery.

Curriculum in Architecture

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
Collège Algebra,* Math. 104.....	3(3-0)	Plane Trigonometry, Math. 101.....	3(3-0)
College Rhetoric I, Engl. 101.....	3(3-0)	College Rhetoric II, Engl. 104.....	3(3-0)
Desc. Geometry A, Mach. Des. 107..	3(0-9)	Shades and Shadows, and Perspec- tive, Mach. Des. 108.....	3(0-9)
El. of Arch. I, Arch. 106A.....	3(0-9)	El. of Arch. II, Arch. 107A.....	3(0-9)
History of Arch. I, Arch. 154A.....	2(2-0)	History of Arch. II, Arch. 157A.....	2(2-0)
Object Drawing I, Arch. 111.....	2(0-6)	Object Drawing II, Arch. 114.....	2(0-6)
Artillery I, Mil. Sc. 113A (men).....	1(0-3)	Artillery II, Mil. Sc. 114A (men).....	1(0-3)
Engr. Lectures, Gen. Engr. 101.....	R	Engr. Lectures, Gen. Engr. 101.....	R
Phys. Educ. M, Phys. Ed. 103.....	R(0-2)or	Phys. Educ. M, Phys. Ed. 104.....	R(0-2)or
Phys. Educ. W, Phys. Ed. 151A.....	R(0-3)	Phys. Educ. W, Phys. Ed. 152A.....	R(0-3)
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Total, men.....	17	Total, men.....	17
Total, women.....	16	Total, women.....	16

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
General Physics, Phys. 135.....	4(3-3)	General Physics II, Phys. 140.....	4(3-3)
French I, Mod. Lang. 151.....	3(3-0)	French II, Mod. Lang. 152.....	3(3-0)
Design I, Arch. 142.....	3(0-9)	Design II, Arch. 144.....	3(0-9)
Building Mat. and Con., Arch. 187A,	3(3-0)	Work. Drawing and Spec., Arch. 191,	3(0-9)
History of Arch. III, Arch. 158A.....	2(2-0)	History of Arch. IV, Arch. 160A.....	2(2-0)
Pencil Rend. and Sketch., Arch. 116..	2(0-6)	Water Color I, Arch. 118.....	2(0-6)
Artillery III, Mil. Sc. 115A (men)...	1(0-3)	Artillery IV, Mil. Sc. 116A (men)....	1(0-3)
Seminar, Gen. Engr. 105.....	R	Seminar, Gen. Engr. 105.....	R
Phys. Educ. M, Phys. Ed. 105.....	R(0-2)or	Phys. Educ. M, Phys. Ed. 106.....	R(0-2)or
Phys. Educ. W, Phys. Ed. 153.....	R(0-3)	Phys. Educ. W, Phys. Ed. 154.....	R(0-3)
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Total, men.....	18	Total, men.....	18
Total, women.....	17	Total, women.....	17

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
Design III, Arch. 145.....	5(0-15)	Design IV, Arch. 147.....	5(0-15)
Hist. of Paint. and Sculp., Arch. 179,	3(3-0)	Str. of Mat. A, Ap. Mech. 116, 121...	4(3-3)
Applied Mechanics A, Ap. Mech. 102,	3(3-0)	Extens. Speech I, Pub. Spk. 106....	2(2-0)
Economics I, Econ. 101.....	3(3-0)	Law for Engineers, Hist. 167.....	2(2-0)
Rural Architecture, Arch. 153.....	2(0-6)	Life Drawing I, Arch. 121.....	2(0-6)
Still-life Drawing, Arch. 117.....	2(0-6)	Elective† 	2(-)
Seminar, Gen. Engr. 105.....	R	Seminar, Gen. Engr. 105.....	R
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Total.....	18	Total.....	17

SENIOR

FIRST SEMESTER		SECOND SEMESTER	
Design V, Arch. 253.....	8(0-24)	Design VI, Arch. 256.....	8(0-24)
Theory of Structures I, Arch. 192....	4(2-6)	Theory of Structures II, Arch. 194A,	5(3-6)
Interior Design, Arch. 120.....	2(0-6)	Life Drawing II, Arch. 123.....	2(0-6)
Elective†||.....	3(-)	Elective†||.....	2(-)
Seminar, Gen. Engr. 105.....	R	Seminar, Gen. Engr. 105.....	R
Inspection Trip, Arch. 199.....	R		
<hr/>		<hr/>	
Total.....	17	Total.....	17

Number of hours required for graduation: Men, 139; women, 135.

* Students who offer but one unit of algebra for admission take a five-hour course in College Algebra, Math. 107, the first semester, postponing two hours of other work.

† Electives are to be chosen with the advice and approval of the head of the department and the dean.

|| Omitted by students taking Advanced Course, Coast Artillery.

Curriculum in Chemical Engineering

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
Chemistry I, Chem. 101.....	5(3-6)	Chemistry II, Chem. 102.....	5(3-6)
College Algebra,* Math. 104.....	3(3-0)	Plane Analytical Geom., Math. 110..	4(4-0)
Plane Trigonometry, Math. 101.....	3(3-0)	College Rhetoric II, Engl. 104.....	3(3-0)
College Rhetoric I, Engl. 101.....	3(3-0)	Metallurgy, Shop 106.....	2(2-0)
Engr. Drawing, Mach. Des. 101.....	2(0-6)	Desc. Geometry, Mach. Des. 106....	2(0-6)
Artillery I, Mil. Sc. 113A.....	1(0-3)	Artillery II, Mil. Sc. 114A.....	1(0-3)
Engr. Lectures, Gen. Engr. 101.....	R	Engr. Lectures, Gen. Engr. 101.....	R
Phys. Educ. M, Phys. Ed. 103.....	R(0-2)	Phys. Educ. M, Phys. Ed. 104.....	R(0-2)
Total.....	17	Total.....	17

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
Engr. Physics I, Phys. 145.....	5(4-3)	Engr. Physics II, Phys. 150.....	5(4-3)
Calculus I, Math. 250.....	4(4-0)	Quan. Analysis, Chem. 241.....	5(1-12)
Adv. Inorganic Chem., Chem. 207...	3(3-0)	Calculus II, Math. 251.....	4(4-0)
German I, Mod. Lang. 101.....	3(3-0)	German II, Mod. Lang. 102.....	3(3-0)
Mach. Drawing I, Mach. Des. 111...	2(0-6)	Artillery IV, Mil. Sc. 116A.....	1(0-3)
Artillery III, Mil. Sc. 115A.....	1(0-3)	Seminar, Gen. Engr. 105.....	R
Seminar, Gen. Engr. 105.....	R	Phys. Educ. M, Phys. Ed. 105.....	R(0-2)
Phys. Educ. M, Phys. Ed. 105.....	R(0-2)		
Total.....	18	Total.....	18

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
Phys. Chemistry I, Chem. 206.....	5(3-6)	Str. of Mat. E, Ap. Mech. 216, 220...	4(3-3)
Org. Chemistry I, Chem. 218.....	4(2-6)	Org. Chemistry II, Chem. 219.....	4(2-6)
Applied Mechanics, Ap. Mech. 202...	4(4-0)	El. of Chem. Engr. I, Chem. 278....	4(3-3)
Mechanism, Mach. Des. 121.....	3(3-0)	Phys. Chemistry II, Chem. 272.....	3(3-0)
Elective||†.....	2(2-0)	Economics I, Econ. 101.....	3(3-0)
Seminar, Gen. Engr. 105.....	R	Seminar, Gen. Engr. 105.....	R
Total.....	18	Total.....	18

SENIOR

FIRST SEMESTER		SECOND SEMESTER	
Inorg. Chem. Technology, Chem. 203,	5(3-6)	Steam and Gas Engr. II, Mech. Engr.	
Steam and Gas Engr. I, Mech. Engr.		204, 205.....	4(3-3)
201, 202.....	5(4-3)	Chem. Engr. Principles,|| Chem. 282,	4(3-3)
El. of Chem. Engr. II, Chem. 279...	4(3-3)	Org. Chem. Technology, Chem. 212..	3(3-0)
Elec. Engr. C, Elec. Engr. 102, 103...	3(2-2, 1)	Chem. Engr. Problems,|| Chem. 268,	3(0-9)
Seminar, Gen. Engr. 105.....	R	Elective||†.....	2(2-0)
Inspection Trip, Chem. 130.....	R	Seminar, Gen. Engr. 105.....	R
Total.....	17	Total.....	16

Number of hours required for graduation, 139.

* Students who offer but one unit of algebra for admission take a five-hour course in College Algebra, Math. 107, the first semester, postponing two hours of other work.

† Electives are to be chosen with the advice and approval of the head of the department and the dean.

|| Omitted by students taking Advanced Course, Coast Artillery.

Curriculum in Civil Engineering

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
College Algebra,* Math. 104.....	3(3-0)	Plane Analytical Geom., Math. 110..	4(4-0)
Plane Trigonometry, Math. 101.....	3(3-0)	Chemistry E-I, Chem. 107.....	4(3-3)
College Rhetoric I, Engl. 101.....	3(3-0)	College Rhetoric II, Engl. 104.....	3(3-0)
Amer. Ind. History, Hist. 105.....	3(3-0)	Extem. Speech, Pub. Spk. 106.....	2(2-0)
Surveying I, Civ. Engr. 102.....	2(0-6)	Surveying II, Civ. Engr. 111.....	2(0-6)
Engr. Drawing, Mach. Des. 101.....	2(0-6)	Desc. Geometry, Mach. Des. 106....	2(0-6)
Artillery I, Mil. Sc. 113A.....	1(0-3)	Artillery II, Mil. Sc. 114A.....	1(0-3)
Engr. Lectures, Gen. Engr. 101.....	R	Engr. Lectures, Gen. Engr. 101.....	R
Phys. Educ. M, Phys. Ed. 103.....	R(0-2)	Phys. Educ. M, Phys. Ed. 104.....	R(0-2)
Total.....	17	Total.....	18

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
Engr. Physics I, Phys. 145.....	5(4-3)	Engr. Physics II, Phys. 150.....	5(4-3)
Calculus I, Math. 250.....	4(4-0)	Calculus II, Math. 251.....	4(4-0)
Chemistry E-II, Chem. 108.....	4(3-3)	Surveying III, Civ. Engr. 151, 155...	3(2-3)
Metallurgy, Shop 165.....	2(2-0)	C. E. Drawing I, Civ. Engr. 125....	2(0-6)
Mach. Drawing I, Mach. Des. 111...	2(0-6)	Law for Engineers, Hist. 167.....	2(2-0)
Artillery III, Mil. Sc. 115A.....	1(0-3)	Artillery IV, Mil. Sc. 116A.....	1(0-3)
Seminar, Gen. Engr. 105.....	R	Seminar, Gen. Engr. 105.....	R
Phys. Educ. M, Phys. Ed. 105.....	R(0-2)	Phys. Educ. M, Phys. Ed. 106.....	R(0-2)
Total.....	18	Total.....	17

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
Ap. Mechanics, Ap. Mech. 202.....	4(4-0)	Str. of Mat., Ap. Mech. 211, 220....	6(5-3)
Engr. Geology, Geol. 102.....	4(3-3)	Hydraulics, Ap. Mech. 230, 235....	4(3-3)
Surveying IV, Civ. Engr. 156, 157....	3(2-3)	Steam and Gas Engr. C, Mech. Engr.	
Highway Engr. I, Civ. Engr. 231....	2(2-0)	120, 125.....	3(2-3)
Foundations, Civ. Engr. 121.....	2(2-0)	Drain. and Irrig. I, Civ. Engr. 161...	2(2-0)
Water and Sewage Bact., Bact. 125...	2(0-6)	Railway Engr. I, Civ. Engr. 145.....	2(2-0)
Seminar, Gen. Engr. 105.....	R	Seminar, Gen. Engr. 105.....	R
Total.....	17	Total.....	17

SENIOR

FIRST SEMESTER		SECOND SEMESTER	
Stres. in Fmd. Struc., Civ. Engr. 201,	4(4-0)	Concrete Design, Civ. Engr. 250, 255,	3(2-3)
Astr. and Geod.,|| Civ. Engr. 211, 216,	4(2-6)	Elec. Engr. C, Elec. Engr. 102, 106..	3(2-2, 1)
Economics I, Econ. 101.....	3(3-0)	Design of Fmd. Struc., Civ. Engr. 246,	3(0-9)
Water Supply, Civ. Engr. 220.....	2(2-0)	Elective||†.....	8(-)
Sewerage, Civ. Engr. 225.....	2(2-0)	Seminar, Gen. Engr. 105.....	R
C. E. Drawing II, Civ. Engr. 205....	2(0-6)		
Highway Mat. Lab., Ap. Mech. 250,	1(0-3)		
Seminar, Gen. Engr. 105.....	R		
Inspection Trip, Civ. Engr. 180.....	R		
Total.....	18	Total.....	17

Number of hours required for graduation, 139.

* Students who offer but one unit of algebra for admission take a five-hour course in College Algebra, Math. 107, the first semester, postponing two hours of other work.

† Electives are to be chosen with the advice and approval of the head of the department and the dean.

|| Omitted by students taking Advanced Course, Coast Artillery.

Curriculum in Electrical Engineering

FRESHMAN

FIRST SEMESTER

College Algebra,* Math. 104.....	3(3-0)
Plane Trigonometry, Math. 101.....	3(3-0)
College Rhetoric, Engl. 101.....	3(3-0)
Extens. Speech I, Pub. Spk. 106.....	2(2-0)
Elec. Mach. and Construction, Elec. Engr. 112.....	2(0-6)
Engr. Drawing, Mach. Des. 101.....	2(0-6)
Forging I, Shop 150.....	1(0-3)
Artillery I, Mil. Sc. 113A.....	1(0-3)
Engr. Lectures, Gen. Engr. 101.....	R
Phys. Educ. M, Phys. Ed. 103.....	R(0-2)

 Total..... 17

SECOND SEMESTER

Plane Analytical Geom., Math. 110..	4(4-0)
Chemistry E-I, Chem. 107.....	4(3-3)
College Rhetoric II, Engl. 104.....	3(3-0)
Amer. Ind. History, Hist. 105.....	3(3-0)
Desc. Geometry, Mach. Des. 106....	2(0-6)
Artillery II, Mil. Sc. 114A.....	1(0-3)
Engr. Lectures, Gen. Engr. 101.....	R
Phys. Educ. M, Phys. Ed. 104.....	R(0-2)

 Total..... 17

SOPHOMORE

FIRST SEMESTER

Engr. Physics I, Phys. 145.....	5(4-3)
Calculus I, Math. 250.....	4(4-0)
Chemistry E-II, Chem. 108.....	4(3-3)
Mechanism, Mach. Des. 121.....	3(3-0)
Foundry Prod., Shop 161.....	1(0-3)
Artillery III, Mil. Sc. 115A.....	1(0-3)
Seminar, Gen. Engr. 105.....	R
Phys. Educ. M, Phys. Ed. 105.....	R(0-2)

 Total..... 18

SECOND SEMESTER

Engr. Physics II, Phys. 150.....	5(4-3)
Calculus IIA, Math. 252.....	5(5-0)
Prin. of Electronics, Elec. Engr. 120,	2(2-0)
Mach. Drawing I, Mach. Des. 111...	2(0-6)
Surveying I, Civ. Engr. 102.....	2(0-6)
Artillery IV, Mil. Sc. 116A.....	1(0-3)
Seminar, Gen. Engr. 105.....	R
Phys. Educ. M, Phys. Ed. 106.....	R(0-2)

 Total..... 17

JUNIOR

FIRST SEMESTER

Applied Mechanics, Ap. Mech. 202..	4(4-0)
Elec. Meas., Elec. Engr. 227, 229....	4(2-4, 2)
D. C. Mach. I, Elec. Engr. 203.....	3(3-0)
Economics, Econ. 101.....	3(3-0)
Metallurgy, Shop 165.....	2(2-0)
Mach. Drawing II, Mach. Des. 118..	2(0-6)
Seminar, Gen. Engr. 105.....	R

 Total..... 18

SECOND SEMESTER

Str. of Mat. E, Ap. Mech. 216, 220..	4(3-3)
D. C. Mach. II, Elec. Engr. 206, 208,	4(2-4, 2)
A. C. Mach. I, Elec. Engr. 209.....	4(4-0)
Corp. Org. and Fin.,|| Econ. 219....	2(2-0)
Machine Tool I, Shop 170.....	2(0-6)
Elec. Mach. Des., Elec. Engr. 270...	1(0-3)
Seminar, Gen. Engr. 105.....	R

 Total..... 17

SENIOR

FIRST SEMESTER

A. C. Mach. II, Elec. Engr. 214, 215,	5(3-4, 2)
Steam and Gas Engr. I, Mech. Engr. 201, 202.....	5(4-3)
Pub. Util. Managt., Elec. Engr. 290..	3(3-0)or
Elec. Commun. I, Elec. Engr. 217, 218,	3(2-2, 1)
Hydraulics, Ap. Mech. 230.....	3(3-0)
Elective||†.....	2(-)
Seminar, Gen. Engr. 105.....	R
Inspection Trip, Elec. Engr. 190....	R

 Total..... 18

SECOND SEMESTER

A. C. Mach. III, Elec. Engr. 224, 225,	5(3-4, 2)
Steam and Gas Engr. II, Mech. Engr. 204, 205.....	4(3-3)
Business Engl. and Sales,|| Engl. 125,	3(3-0)
Elective||†.....	5(5-0)
Seminar, Gen. Engr. 105.....	R

 Total..... 17

Number of hours required for graduation, 139.

* Students who offer but one unit of algebra for admission take a five-hour course in College Algebra, Math. 107, the first semester, postponing two hours of other work.

† Electives are to be chosen with the advice and approval of the head of the department and the dean.

|| Omitted by students taking Advanced Course, Coast Artillery.

Curriculum in Landscape Architecture

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
Plane Trigonometry,* Math. 101....	3(3-0)	College Algebra,* Math. 104.....	3(3-0)
College Rhetoric I, Engl. 101.....	3(3-0)	College Rhetoric II, Engl. 104.....	3(3-0)
General Botany I, Bot. 101.....	3(1-4, 2)	General Botany II, Bot. 105.....	3(1-4, 2)
Desc. Geometry A, Mach. Des. 107..	3(0-9)	Shades and Shadows, and Perspec-	
Object Drawing I, Arch. 111.....	2(0-6)	tive, Mach. Des. 108.....	3(0-9)
Surveying I, Civ. Engr. 102.....	2(0-6)	Object Drawing II, Arch. 114.....	2(0-6)
Artillery I, Mil. Sc. 113A (men)....	1(0-3)	Surveying II, Civ. Engr. 111.....	2(0-6)
Engr. Lectures, Gen. Engr. 101.....	R	Artillery II, Mil. Sc. 114A (men)....	1(0-3)
Phys. Educ. M, Phys. Ed. 103.....	R(0-2)or	Engr. Lectures, Gen. Engr. 101.....	R
Phys. Educ. W, Phys. Ed. 151A.....	R(0-3)	Phys. Educ. M, Phys. Ed. 104.....	R(0-2)or
		Phys. Educ. W, Phys. Ed. 152A.....	R(0-3)
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Total, men.....	17	Total, men.....	17
Total, women.....	16	Total, women.....	16

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
General Chemistry, Chem. 110.....	5(3-6)	General Geology, Geol. 103.....	3(3-0)
Landscape Gardening I, Hort. 125..	3(3-0)	El. of Horticulture, Hort. 107.....	3(2-3)
Surveying III, Civ. Engr. 151, 155..	3(2-3)	El. of Arch. II, Arch. 107A.....	3(0-9)
El. of Arch. I, Arch. 106A.....	3(0-9)	Water Color I, Arch. 118.....	2(0-6)
History of Arch. I, Arch. 154A.....	2(2-0)	History of Arch. II, Arch. 157A....	2(2-0)
Artillery III, Mil. Sc. 115A (men)...	1(0-3)	Plant Ecology, Bot. 228.....	2(2-0)
Seminar, Gen. Engr. 105.....	R	Artillery IV, Mil. Sc. 116A (men)....	1(0-3)
Phys. Educ. M, Phys. Ed. 105.....	R(0-2)or	Elective†.....	1(-)
Phys. Educ. W, Phys. Ed. 153.....	R(0-3)	Seminar, Gen. Engr. 105.....	R
		Phys. Educ. M, Phys. Ed. 106.....	R(0-2)or
		Phys. Educ. W, Phys. Ed. 154.....	R(0-3)
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Total, men.....	17	Total, men.....	17
Total, women.....	16	Total, women.....	16

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
Plant Physiology I, Bot. 208.....	3(3-0)	Soils, Agron. 130.....	4(3-3)
Plant Materials I, Hort. 224.....	3(2-3)	Plant Materials II, Hort. 226.....	3(2-3)
Design I, Arch. 142.....	3(0-9)	Design II, Arch. 144.....	3(0-9)
Bldg. Mat. and Con., Arch. 187A....	3(3-0)	Work, Draw. and Spec., Arch. 191...	3(0-9)
History of Arch. III, Arch. 158A....	2(2-0)	History of Arch. IV, Arch. 160A....	2(2-0)
Pencil Rend. and Sketch., Arch. 116..	2(0-6)	Extens. Speech I, Pub. Spk. 106....	2(2-0)
Theory of Lands. Des., Hort. 243....	2(2-0)	Seminar, Gen. Engr. 105.....	R
Seminar, Gen. Engr. 105.....	R		
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Total.....	18	Total.....	17

SENIOR

FIRST SEMESTER		SECOND SEMESTER	
Plant Pathology I, Bot. 205.....	3(1-4, 2)	Civic Art, Hort. 223.....	3(1-6)
Silviculture, Hort. 119.....	3(2-3)	Lands. Gardening III, Hort. 246....	3(1-6)
Gr'nhouse Con. and Mngt., Hort. 128,	3(3-0)	City Planning, Arch. 249.....	3(0-9)
Lands. Construction, Hort. 227....	3(2-3)	Economics I, Econ. 101.....	3(3-0)
Lands. Gardening II, Hort. 238....	3(1-6)	Elective†||.....	6(-)
Highway Engr. I, Civ. Engr. 231....	2(2-0)	Seminar, Gen. Engr. 105.....	R
Highway Mat. Lab., Ap. Mech. 250..	1(0-3)		
Seminar, Gen. Engr. 105.....	R		
Inspection Trip, Arch. 199.....	R		
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Total.....	18	Total.....	18

Number of hours required for graduation: Men, 139; women, 135.

* Students who offer but one unit of algebra for admission take a five-hour course in College Algebra, Math. 107, the first semester, postponing plane trigonometry and two hours of other work until the second semester.

† Electives are to be chosen with the advice and approval of the head of the department and the dean.

|| Omitted by students taking Advanced Course, Coast Artillery.

Curriculum in Mechanical Engineering

FRESHMAN

FIRST SEMESTER

College Algebra,* Math. 104.....	3(3-0)
Plane Trigonometry, Math. 101.....	3(3-0)
College Rhetoric I, Engl. 101.....	3(3-0)
Extem. Speech I, Pub. Spk. 106.....	2(2-0)
Engr. Drawing, Mach. Des. 101.....	2(0-6)
Surveying I, Civ. Engr. 102.....	2(0-6)
Forging, Shop 150.....	1(0-3)
Artillery I, Mil. Sc. 113A.....	1(0-3)
Engr. Lectures, Gen. Engr. 101.....	R
Phys. Educ. M, Phys. Ed. 103.....	R(0-2)

 Total..... 17

SECOND SEMESTER

Plane Analytical Geom., Math. 110..	4(4-0)
Chemistry E-I, Chem. 107.....	4(3-3)
College Rhetoric II, Engl. 104.....	3(3-0)
Amer. Ind. History, Hist. 105.....	3(3-0)
Desc. Geometry, Mach. Des. 106....	2(0-6)
Artillery II, Mil. Sc. 114A.....	1(0-3)
Engr. Lectures, Gen. Engr. 101.....	R
Phys. Educ. M, Phys. Ed. 104.....	R(0-2)

 Total..... 17

SOPHOMORE

FIRST SEMESTER

Engr. Physics I, Phys. 145.....	5(4-3)
Calculus I, Math. 250.....	4(4-0)
Chemistry E-II, Chem. 108.....	4(3-3)
Mach. Drawing I, Mach. Des. 111...	2(0-6)
Engr. Woodwork, Shop 101.....	1(0-3)
Artillery III, Mil. Sc. 115A.....	1(0-3)
Seminar, Gen. Engr. 105.....	R
Phys. Educ. M, Phys. Ed. 105.....	R(0-2)

 Total..... 17

SECOND SEMESTER

Engr. Physics II, Phys. 150.....	5(4-3)
Calculus II, Math. 251.....	4(4-0)
Mechanism, Mach. Des. 121.....	3(3-0)
El. Heat Power, Mech. Engr. 131...	2(2-0)
Mach. Drawing II, Mach. Des. 118..	2(0-6)
Foundry Prod., Shop 161.....	1(0-3)
Artillery IV, Mil. Sc. 116A.....	1(0-3)
Seminar, Gen. Engr. 105.....	R
Phys. Educ. M, Phys. Ed. 106.....	R(0-2)

 Total..... 18

JUNIOR

FIRST SEMESTER

Applied Mechanics, Ap. Mech. 202..	4(4-0)
Engr. Thermodynamics, Mech. Engr. 208.....	4(4-0)
Mach. Drawing III, Mach. Des. 119,	2(0-6)
Metallurgy, Shop 165.....	2(2-0)
Machine Tool Work I, Shop 170....	2(0-6)
Heat Power Lab. I, Mech. Engr. 209,	1(0-3)
Elective†.....	2(-)
Seminar, Gen. Engr. 105.....	R

 Total..... 17

SECOND SEMESTER

Str. of Mat., Ap. Mech. 211, 220....	6(5-3)
Hydraulics, Ap. Mech. 230, 235....	4(3-3)
Heat Power Engr., Mech. Engr. 212,	3(3-0)
Economics I, Econ. 101.....	3(3-0)
Metallography I, Shop 167.....	1(0-3)
Heat Power Lab. II, Mech. Engr. 213,	1(0-3)
Seminar, Gen. Engr. 105.....	R

 Total..... 18

SENIOR

FIRST SEMESTER

Mach. Design I, Mach. Des. 204, 205,	5(3-6)
Elec. Engr. M-I, Elec. Engr. 230, 231,	4(3-2, 1)
Factory Option:	
Factory Engr., Shop 245.....	2(2-0)
Machine Tool Work II, Shop 192..	2(0-6)
Elective†.....	5(-)
Power Option:	
Pr. Plant Engr., Mech. Engr. 217..	3(2-3)
Adv. Thermo., Mech. Engr. 230...	2(2-0)
Ht. Pr. Lab. III, Mech. Engr. 219..	1(0-3)
Elective†.....	3(-)
Seminar, Gen. Engr. 105.....	R
Inspection Trip, Mech. Engr. 180....	R

 Total..... 18

SECOND SEMESTER

Elec. Engr. M-II, Elec. Engr. 242,	
243.....	4(3-2, 1)
Heating and Air Cond., Mech. Engr. 225, 226.....	3(2-3)
Mach. Design II, Mach. Des. 210..	2(0-6)
Graphic Statics, Ap. Mech. 225.....	1(0-3)
Factory Options:	
Factory Design, Shop 255.....	2(0-6)
Machine Tool Work III, Shop 193,	1(0-3)
Elective†.....	4(-)
Power Option:	
Elective†.....	7(-)
Seminar, Gen. Engr. 105.....	R

 Total..... 17

Number of hours required for graduation: Men, 139.

 * Students who offer but one unit of algebra for admission take a five-hour course in College Algebra, Math. 107, the first semester, postponing two hours of other work.

† Electives are to be chosen with the advice and approval of the head of the department and the dean.

|| Omitted, together with ten credits of electives, by students taking Advanced Course, Coast Artillery.

Agricultural Engineering

Professor FENTON
Associate Professor ZINK*
Assistant Professor BARGER

Instructor ROBERTS
Instructor OTIS
Graduate Assistant GALE

This department gives instruction in such branches of engineering as are directly related to agriculture. It also correlates and gives general supervision to such courses presented in other engineering departments as are open to students in agriculture and agricultural engineering, in order that the agricultural application and uses of engineering principles, methods, and materials may be kept clearly before the student.

In all the courses given, the time is carefully apportioned between the classroom and laboratory, in order to present the subject in the clearest and most forceful way. The practical application of theoretical principles is emphasized.

The laboratory equipment is ample and complete; modern farm implements and equipment to the value of \$30,000 are available; hence their construction, operation, adjustment, and care may be fully covered in the field and laboratory studies. The study of engines is arranged to cover thoroughly the construction, operation, and repair of the numerous modern tractors which are part of the regular equipment; draft tests in conjunction with various types of farm power machinery are also made. The tractor laboratory is equipped with four tractor power units mounted on bases, with various types of tractor ignition apparatus, and with complete apparatus for power and draft tests. All farm machinery and tractor equipment is kept up to date through a system of exchange with the manufacturers whereby old machines are replaced, when advisable, by new ones.

The comparatively recent development of this work, and its rapidly growing importance, render investigational study very valuable, and special attention is given to the courses covering this phase of the subject.

COURSES IN AGRICULTURAL ENGINEERING

FOR UNDERGRADUATE CREDIT

101. FARM BUILDINGS. 3(2-3)†; II. Mr. Fenton and Mr. Barger.

Requirements, details of arrangements, and materials of construction for barns and storage, and work buildings for the farm; preparation of plans and specifications, bills of material, and estimates of costs.

108. FARM MACHINERY. 3(2-3); I and II. Mr. Zink, Mr. Barger, and Mr. Roberts.

Construction, operation, adjustment, power, requirements, tests, and use of tillage, seeding, harvesting, feed processing and miscellaneous machines, both field and belt operated. (For agricultural students.) Charge, \$2.

111. FIELD AND POWER MACHINERY. 4(2-6); I. Prerequisite: Mach. Des. 121 and Phys. 150. Mr. Zink, Mr. Roberts, and assistants.

Development, design, and utilization of tillage, seeding, harvesting, and crop processing machinery for all forms of farm power. Charge, \$2.

122. AGRICULTURAL MACHINES AND CONSTRUCTION. 2(1-3); I. Mr. Barger.

Introductory principles of mechanics and physics as applied to the construction and operation of farm machinery. (For freshman agricultural engineers.) Charge, \$1.

* Resigned February 15, 1936.

† The number before the parenthesis indicates the number of semester hours of credit; the first number within the parentheses indicates the number of hours of recitation each week; the second shows the number of hours to be spent in laboratory work each week; and the third, where there is one, indicates the number of hours of outside work in connection with the laboratory required each week. I, II, and SS indicate that the course is given the first semester, second semester, and summer session respectively.

130. GAS ENGINES AND TRACTORS. 3(2-3); I, II, and SS. Mr. Barger and assistants.

Principles and application of the internal-combustion engine; engine mechanisms, carburetion, valve timing, ignition, cooling, lubrication, and fuels. Selection and use of tractors in agriculture. (For agricultural students.) Charge, \$2.

140. INSPECTION TRIP. R; I. Prerequisite: Senior classification. Mr. Fenton and assistants.

A trip of three to five days for the purpose of studying farm machinery production and other projects of special interest to agricultural engineers.

FOR GRADUATE AND UNDERGRADUATE CREDIT

201. POWER AND MACHINERY IN AGRICULTURE. 2(-0); I and II. Prerequisite: Junior or senior classification. Mr. Zink.

History and development of machinery in agriculture. The application, selection, management, and cost of machines; future development. A survey course dealing with the mechanization of agriculture. Open to all students who have not taken Ag. Engr. 108 or 130.

203. FARM STRUCTURES. 4(2-6); I. Prerequisite: Ap. Mech. 202. Mr. Fenton and assistants.

Design of farm structures, details and materials of construction; specifications and estimates.

205. AGRICULTURAL ENGINEERING PROBLEMS. Credit to be arranged; I, II, and SS. Prerequisite: Permission of instructors. Mr. Fenton and Mr. Zink.

Problems in the design, construction or application of machinery or power in agriculture, structures, modern conveniences, rural electrification.

210. MODERN FARM AND HOME EQUIPMENT. 3(2-3); II. Prerequisite: Ap. Mech. 230 and 235. Mr. Fenton and Mr. Zink.

Water supply, sewage disposal, lighting, heating, and ventilation of farm buildings; refrigeration; and rural electrification. Charge, \$1.

215. TRACTOR RESEARCH. Credit to be arranged; I. Prerequisite: Ag. Engr. 225 or equivalent. Mr. Zink and Mr. Barger.

Research studies relating to tractor construction and operation.

225. FARM MOTORS. 4(2-6); II. Prerequisite: Phys. 150 and Math. 250. Mr. Zink and Mr. Barger.

Theory, design, operation, adjustment and application of the internal combustion engine in agriculture, special emphasis on tractors; study of manual, animal, wind, and electric power. Charge, \$3.

240. DRAINAGE, EROSION CONTROL, AND IRRIGATION. 3(2-3); I and II. Prerequisite: Agron. 130. Mr. Fenton.

Principles and practices of land improvement by terracing and other methods of erosion control; drainage, irrigation, and land clearing; use of explosives in agriculture. (For agricultural students.) Charge, \$1.

250. LAND RECLAMATION. 3(2-3); II. Prerequisite: Ap. Mech. 230 and Agron. 130. Mr. Fenton and assistants.

Principles and methods of bringing waste lands into production by drainage, irrigation, terracing, and land clearing. Charge, \$1.

FOR GRADUATE CREDIT

301. RESEARCH IN AGRICULTURAL ENGINEERING. Credit to be arranged; I, II, and SS. Prerequisite: Agron. 130 and Phys. 150 or equivalent. Mr. Fenton, Mr. Zink, and Mr. Barger.

The laboratories of the College are available for research in the design, use, and application of machinery and equipment in the development of agriculture. The results of such investigations, if suitable, may be incorporated in bulletins of the Engineering Experiment Station, or the work may furnish material for the master's thesis.

Applied Mechanics

Professor SCHOLER
 Professor ROBERT
 Professor DAWLEY
 Associate Professor CHEEK

Assistant Professor KOENITZER
 Assistant Professor PICKETT
 Instructor TAYLOR
 Graduate Assistant BECKWITH

The aim of the course in applied mechanics is to give to the engineering student a practical working knowledge of those fundamental principles of mechanics upon which his future work in structural and machine design may be based.

The materials-testing laboratory is well equipped with machines and apparatus for making physical tests of materials of construction, such as tension, compression, flexure, shear, torsion, hardness, and impact tests, and tests under repeated load. Some of the machines are of sufficient capacity to test full-size structural and machine members to destruction, among them being a universal machine of 200,000 pounds capacity, with extension members for testing long beams and columns. Facilities are provided for making, curing, and testing concrete and reinforced concrete test specimens.

The materials-testing laboratory also has complete equipment for the testing of highway materials, and has been designated as the official laboratory of the Kansas Highway Department.

The hydraulics laboratory has facilities for furnishing water under a considerable range of pressures and volumes. It contains devices for measuring and recording the flow of water, including measuring pits, water meters, weirs, nozzles, pitometer, and Venturi meters. It is also provided with pumps, a standpipe, water motors, and a turbine water wheel for testing purposes, and a supply of pressure gauges, weighing scales, and other auxiliary apparatus.

COURSES IN APPLIED MECHANICS

FOR UNDERGRADUATE CREDIT

102. APPLIED MECHANICS A. 3(3-0); I. Prerequisite: Math. 101 and Phys. 145. Mr. Robert and Mr. Cheek.

A study of statics, with applications to stress in structures; center of gravity; and moment of inertia.

116. STRENGTH OF MATERIALS A RECITATION. 3(3-0); II. Prerequisite: Ap. Mech. 102. Mr. Robert and Mr. Cheek.

Behavior of materials subjected to tension, compression, and shear; strength and stiffness of simple beams; moment and shear in flexure of beams, with diagrams; designs of beams of wood, steel, and reinforced concrete, and design and investigation of columns.

121. STRENGTH OF MATERIALS A LABORATORY. 1(0-3); II. Prerequisite: Ap. Mech. 102. Mr. Robert and Mr. Cheek.

A study of various testing machines; tension, compression, shear, and bending tests on iron, steel, wood, and concrete; tests on cement and on the fine and coarse aggregates for concrete. Charge, \$2.

150. THESIS. Credit to be arranged; I and II. Mr. Scholer and Mr. Robert.

Experimental work in strength of materials, road materials, concrete and hydraulics, suitable for thesis projects in any branch of engineering; subject of investigation to be selected in consultation with the head of the department at the beginning of the senior year.

FOR GRADUATE AND UNDERGRADUATE CREDIT

202. APPLIED MECHANICS. 4(4-0); I, II, and SS. Prerequisite: Math. 250 and Phys. 145. Mr. Robert, Mr. Dawley, and Mr. Pickett.

Composition, resolution, and conditions of equilibrium of concurrent and nonconcurrent forces; center of gravity; friction; laws of rectilinear and curvi-

linear motion of material points; moments of inertia; relations between forces acting on rigid bodies and the resulting motions; and of work, energy, and power.

211. STRENGTH OF MATERIALS RECITATION. 5(5-0); I, II, and SS. Prerequisite: Ap. Mech. 202. Mr. Scholer, Mr. Robert, and Mr. Koenitzer.

Behavior of materials subjected to tension, compression, and shear; riveted joints; torsion; shafts, and the transmission of power; strength and stiffness of simple and continuous beams; bending moments and shear forces in beams; design of beams; stresses in columns and hooks; and the design of columns.

216. STRENGTH OF MATERIALS E RECITATION. 3(3-0); I, II, and SS. Prerequisite: Ap. Mech. 202. Mr. Robert, Mr. Dawley, Mr. Pickett, and Mr. Cheek.

Similar to Ap. Mech. 211, but much less time given to study of continuous girders and of reinforced concrete.

220. STRENGTH OF MATERIALS LABORATORY. 1(0-3); I, II, and SS. Must accompany or follow Ap. Mech. 211 or 216. Mr. Robert, Mr. Dawley, Mr. Pickett, and Mr. Cheek.

Tension, compression, shear, and bending tests on specimens of iron, steel, wood, and concrete; torsion tests on steel shafting; standard tests on fine and coarse aggregates for concrete. Charge, \$2.

225. GRAPHIC STATICS. 1(0-3); II. Must accompany or follow Ap. Mech. 102 or 202. Mr. Robert.

Graphical solutions of the stresses existing in a number of typical trusses, under a variety of loadings.

230. HYDRAULICS RECITATION. 3(3-0); I, II, and SS. Prerequisite: Ap. Mech. 202. Mr. Robert, Mr. Dawley, and Mr. Pickett.

Fluid pressures, center of pressure, immersion and flotation; Bernoulli's theorem; orifices, weirs, short and long pipes, flow of water in open channels, and its measurement; elements of water power, impulse wheels, reaction turbines, and centrifugal pumps.

235. HYDRAULICS LABORATORY. 1(0-3); I, II, and SS. Prerequisite: Ap. Mech. 202. Mr. Robert, Mr. Dawley, and Mr. Pickett.

Tests to determine the coefficients of weirs and orifices, loss and head in pipes, water wheels, water turbines, rams, and pumps, also use and calibration of water meter. Charge, \$1.

250. HIGHWAY MATERIALS LABORATORY. 1(0-3); I. Prerequisite: Ap. Mech. 220. Mr. Scholer and Mr. Koenitzer.

A comprehensive course in the examination and testing of road materials. Charge, \$1.50.

265. ADVANCED MECHANICS OF MATERIALS. 2(2-0); I. Prerequisite: Ap. Mech. 211 or 216. Mr. Scholer.

Theory of elasticity and its applications; advanced problems in continuous girders involving general three-moment equations.

270. HYDRAULIC MACHINERY. 2(2-0); I. Prerequisite: Ap. Mech. 230. Mr. Robert.

Characteristics and applications of water wheels, turbines, pumps, and other hydraulic machinery.

275. ADVANCED HIGHWAY MATERIALS. 2(1-3); II. Prerequisite: Ap. Mech. 250. Mr. Scholer.

An advanced course in the properties and testing of the various materials used in road construction.

276. DESIGN OF CONCRETE MIXTURES. 3(1-6); II. Prerequisite: Ap. Mech. 220. Mr. Scholer and Mr. Dawley.

Practical applications of the fundamental principles of concrete making, using various kinds of cement and placing special emphasis on the proper designing, mixing and placing of concrete mixtures to meet certain strength and durability requirements. Charge, \$2.50.

280. MECHANICS OF REINFORCED CONCRETE. 2(2-0); I. No credit for students who have had Ap. Mech. 211. Prerequisite: Ap. Mech. 216. Mr. Scholer and Mr. Robert.

The behavior of reinforced concrete structural elements, including slabs, rectangular beams, T-beams, columns, and special floor systems under load.

FOR GRADUATE CREDIT

301. RESEARCH IN MATERIALS OF CONSTRUCTION. Credit to be arranged; I, II, and SS. For prerequisites, consult instructors. Mr. Scholer, Mr. Robert, and Mr. Dawley.

Many problems related to materials used in engineering construction offer attractive fields for research. A number of special pieces of apparatus in addition to the usual equipment of strength-of-materials laboratory are available for this work. The results of such investigations, if suitable, may be incorporated in bulletins of the Engineering Experiment Station; this work may furnish materials for the master's thesis.

305. SOIL MECHANICS. 3(1-6); I. Prerequisite: Ap. Mech. 250. Mr. Scholer.

The physical properties of soil which govern its behavior as a material for highway surfaces or foundations; the behavior of soil when used as a material of construction in fills and dams.

Architecture

Professor WEIGEL
Associate Professor CHEEK
Associate Professor HELM

Associate Professor WICHERS
Associate Professor MORGAN
Assistant Professor WARE

The courses in architecture are offered, not only to provide for the fundamental training necessary for the practice of architecture, but also to give the student a facility and working knowledge which will be of immediate value to him upon graduation. The foundation which the student acquires in college should be supplemented by continual professional study, especially during those years immediately following graduation, when it is desirable that he should acquire practical experience in the employ and under the guidance of capable and experienced members of the profession. Students are most urgently advised to acquire practical experience in an architect's office during the summer vacations of their college course.

Throughout the course the instruction by lectures, recitations, and drafting-room practice is fully amplified and expanded by a free use of the equipment of the Department of Architecture. Within the department is housed a good working library of the standard architectural works and leading professional magazines, together with the collections of lantern slides and photographs, to all of which the student has free access. Placed about the amply lighted and well-equipped rooms of the department is a generous collection of plaster casts, including important examples of architectural fragments and ornaments from historical monuments. On the walls of the drafting rooms, where they are constantly before the student, are hung selected examples from the department's collection of original drawings, including specimens of both academic and current professional work. From time to time this exhibit is changed.

At frequent intervals representative men actually engaged in the practice of architecture and the allied arts and trades are invited to talk to and to advise the student. During the junior or senior years, under the direction of and in company with a member of the departmental faculty, each student is ex-

pected to make a visit to one or more of the neighboring cities, thus enabling him to acquaint himself with the representative work of the profession as well as with the operations and processes involved in the conduct of allied professions and industries.

Students pursuing the curriculum in architecture are urged to devote a fifth year to the work. By so doing a student can combine the curricula in architectural engineering and architecture and receive the bachelor of science degree in both.

All drawings or designs made during the student's course are to become the property of the department, to be used or returned at the discretion of the faculty.

COURSES IN ARCHITECTURE

FOR UNDERGRADUATE CREDIT

106A. ELEMENTS OF ARCHITECTURE I. 3(0-9); I and II. Mr. Morgan and Mr. Ware.

A study of the fundamental principles of design by means of their application in original solutions and presentations of simple architectural problems. Charge, \$1.

107A. ELEMENTS OF ARCHITECTURE II. 3(0-9); I and II. Prerequisite: Arch. 106A. Mr. Morgan and Mr. Ware.

A continuation of Arch. 106A. Charge, \$1.

111. OBJECT DRAWING I. 2(0-6); I, II, and SS. Mr. Helm and Mr. Wichers. The drawing of simple geometric objects; studies from fragments of antique architectural ornament.

114. OBJECT DRAWING II. 2(0-6); I, II, and SS. Prerequisite: Arch. 111. Mr. Helm and Mr. Wichers.

An application and expansion of the principles taught in Object Drawing I.

116. PENCIL RENDERING AND SKETCHING. 2(0-6); I, II, and SS. Prerequisite: Arch. 114. Mr. Helm, Mr. Wichers, and Mr. Morgan.

The drawing of architectural ornament, architectural fragments, and pencil sketches from nature.

117. STILL-LIFE DRAWING. 2(0-6); I and SS. Prerequisite: Arch. 118. Mr. Helm and Mr. Morgan.

Advanced studies from full-length plaster casts in various media.

118. WATER COLOR I. 2(0-6); I, II, and SS. Prerequisite: Arch. 116 or approval of instructor. Mr. Helm.

Exercises in the handling of the medium and of the translation of color; theory of color.

119. WATER COLOR II. 2(0-6); I, II, and SS. Prerequisite: Arch. 118. Mr. Helm.

Advanced study in the technique of the medium. Includes both studio work and out-of-door sketching.

120. INTERIOR DESIGN. 2(0-6); I and SS. Prerequisite: Arch. 118, 145, and 244. Mr. Helm.

The principles of interior architecture, with special attention to period design. Deposit, \$1.

121. LIFE DRAWING I. 2(0-6); II and SS. Prerequisite: Arch. 118. Mr. Helm. Drawing from the living model in various media. Deposit, \$5.

123. LIFE DRAWING II. 2(0-6); II and SS. Prerequisite: Arch. 121. Mr. Helm. A continuation of Arch. 121. Deposit, \$5.

124. DOMESTIC ARCHITECTURE. 2(2-0); II. Mr. Wichers.

The study of the fundamental design and plan problems of the small home.

133. CLAY MODELING. 2(0-6); I and SS. Prerequisite: Arch. 117. Mr. Weigel and Mr. Helm.

The making of clay models, plaster casts of simple decorative fragments and anatomical forms; and construction of relief maps. Charge, \$1.

134. PEN AND INK DRAWING I. 2(0-6); I, II, and SS. Prerequisite: Arch. 116 or approval of instructor. Mr. Helm, Mr. Morgan, and Mr. Ware.

A study of the technique and drawing of fragments, casts, still life, etc., in this medium; also outdoor sketching.

135. PEN AND INK DRAWING II. 2(0-6); I, II, and SS. Prerequisite: Arch. 134. Mr. Helm, Mr. Morgan, and Mr. Ware.

A continuation of Arch. 134.

137. BLOCK PRINTS. 2(0-6); I and SS. Prerequisite: Arch. 114 or approval of instructor. Mr. Helm.

A study of the carving of original compositions in linoleum and wood blocks. Charge, \$1.

142, 144. DESIGN I AND II. 3(0-9) each; I and II each. Prerequisite: For I, Arch. 107A and 114; for II, Arch. 142. Mr. Morgan and Mr. Ware.

An analysis of architectural composition and rendering. Charge, \$1 for each course.

145, 147. DESIGN III AND IV. 5(0-15) each; I and II each. Prerequisite: For III, Arch. 117 and 144; for IV, Arch. 145. Mr. Weigel, Mr. Morgan, and Mr. Ware.

Continuation of Arch. 144; time problems and rapid design sketches required at frequent intervals. Charge, \$1 for each course.

153. RURAL ARCHITECTURE. 2(0-6); I. Prerequisite: Arch. 144 and 191. Mr. Wichers.

A study of the architectural needs of rural communities, with special emphasis on the small home, using architectural models as a medium.

154A, 157A. HISTORY OF ARCHITECTURE I AND II. 2(2-0) each; I and II, respectively. Mr. Ware.

I, the history of architecture from the dawn of civilization to the end of the Roman Empire; II, the Gothic period to 1400.

158A, 160A. HISTORY OF ARCHITECTURE III AND IV. 2(2-0) each; I and II, respectively. Prerequisite: Arch. 114 and 157A. Mr. Ware.

Continuation of Arch. 157A; the history of architecture to modern times.

163, 164. HISTORIC ORNAMENT I AND II. 2(1-3) each; I and II, respectively. Prerequisite: Arch. 118 and 160A. Mr. Weigel and Mr. Helm.

The study and analysis of historic ornament and its application to architectural and decorative design. Charge, \$1 for each course.

165, 170. COMMERCIAL ILLUSTRATION I AND II. 2(0-6) each; I, II, and SS, each. Mr. Helm.

The principles of advertising arrangements; making various types of advertising design, such as newspaper advertisements, lettering, and posters; making cover designs for magazines, books, and trade catalogues; for headings, tail pieces, and decorative page arrangements; drawings carried out in black and white and in one or more colors.

179. HISTORY OF PAINTING AND SCULPTURE. 3(3-0); I. Mr. Helm.

A study of development of painting and sculpture.

187A. BUILDING MATERIALS AND CONSTRUCTION. 3(3-0); I. Prerequisite: Arch. 107A. Mr. Cheek.

An introduction to the properties and uses of the materials of construction; also plumbing, heating, and lighting systems; occasional visits to buildings under construction.

191. WORKING DRAWINGS AND SPECIFICATIONS. 3(0-9); II. Prerequisite: Arch. 142 and 187A. Mr. Weigel and Mr. Wichers.

Preparing working drawings and specifications for suburban residences; drawing complete details for buildings, working out heating, plumbing, and structural problems.

192. THEORY OF STRUCTURES I. 4(2-6); I. Prerequisite: Arch. 191, Ap. Mech. 102, 116, and 121. Mr. Cheek.

Mathematical and graphical solutions of stresses in framed structures under static loading; practical problems in the design of wood construction; occasional inspection trips to buildings under construction.

194A. THEORY OF STRUCTURES II. 5(3-6); II. Prerequisite: Arch. 192. Mr. Cheek.

A continuation of Theory of Structures I applied to steel and masonry structures.

199. INSPECTION TRIP. R; I. Prerequisite: Senior classification. Mr. Weigel and assistants.

An inspection trip is made to one of the larger cities of the Middle West by the senior students in Architectural Engineering, Architecture, and Landscape Architecture. The inspection party is under the charge of one or more faculty members of the Department of Architecture. Time allotted to the trip is from three days to one week. Cost to each student for trip, including meals, lodging and transportation, approximately \$50.

FOR GRADUATE AND UNDERGRADUATE CREDIT

201, 206. ADVANCED FREEHAND DRAWING I AND II. 2(0-6) each; I, II, and SS, each. Prerequisite: Arch. 117 and 118. Mr. Helm.

Advanced studies of original compositions in various media.

208. FURNITURE DESIGN. 3(1-6); I. Prerequisite: Arch. 120 and 160A. Mr. Helm.

A study of the history of furniture design and its relationship to architectural development.

211, 216. ADVANCED HISTORY OF CIVILIZATION AND ART I AND II. 2(2-0) each; I and II, respectively. Prerequisite: Arch. 182. Mr. Weigel.

I, a detailed study of civilization from prehistoric times to the fifteenth century, tracing the artistic development of each epoch; II, a continuation to recent times.

217, 218. ETCHING I AND II. 2(0-6) each; I, II, and SS, each. Prerequisite: Arch. 117 and 134. Mr. Helm.

Instruction is given in the technical principles of etching on copper and zinc plate. Charge, \$1 for each course.

221. PROBLEMS IN ARCHITECTURAL DEVELOPMENT. Credit to be arranged; I, II, and SS. Mr. Weigel.

Under direct supervision of some member of the departmental staff, study of specific architectural problems. Deposit, \$1.

230, 235. OIL PAINTING I AND II. 2(0-6) each; I and II, each, and SS. Prerequisite: Arch. 118 or approval by instructor. Mr. Helm.

Rudiments of painting in oil; sketching of simple objects and drapes. In course 235, painting of larger still-life groups and outdoor sketching.

240, 241. LANDSCAPE PAINTING I AND II. 1(0-3) each; SS only. Prerequisite, Arch. 118 or Arch. 230, or equivalent. Mr. Helm.

Outdoor sketching and painting in oil or water color.

244. GENERAL HISTORY OF ARCHITECTURE. 3(3-0); II. Mr. Ware.

The historic architectural styles of the world studied and analyzed; written papers, with sketches, required of each student. (Elective for nonarchitectural students.)

249. CITY PLANNING. 3(0-9); II. Prerequisite: Arch. 144, Hort. 223 and 245. Mr. Weigel.

A detailed study of city planning, including transportation and street systems, parks and recreation facilities, public buildings and civic centers, subdivisions of land, restrictions and zoning.

253, 256. DESIGN V AND VI. 8(0-24) each; I and II each. Prerequisite: For V, Arch. 118 and 147; for VI, Arch. 253. Mr. Weigel and Mr. Morgan.

Continuation of Arch. 147. Charge, \$1 for each course.

296, 298. STRUCTURAL DESIGN I AND II. 3(1-6) each; I and II, respectively. Prerequisite: Arch. 194A. Mr. Cheek.

Application of the principles covered under Theory of Structures to the coordinated, grouped design of an entire structure, with complete working drawings and details; preferably a problem simultaneously under consideration in an architectural design course.

FOR GRADUATE CREDIT

301, 304. ADVANCED DESIGN I AND II. Credit to be arranged; I, II, and SS, each. Mr. Weigel.

A study of the planning of important buildings and groups of buildings. II, a continuation of I, may furnish material for the master's thesis. Deposit, \$1 each.

324. RESEARCH IN ARCHITECTURE. Credit to be arranged; I, II, and SS.

The study of a research problem in architecture, determined by conferences between Mr. Weigel and the student and approved by the Graduate Council. This course may furnish material for the master's thesis. Deposit, \$1.

Civil Engineering

Professor CONRAD
Professor FRAZIER
Professor FURR

Associate Professor WHITE
Assistant Professor CRAWFORD
Assistant Professor MORSE

The purpose of the instruction in the Department of Civil Engineering is to give the student a thorough knowledge of the fundamental principles of engineering and to develop his ability to analyze engineering problems, and thus prepare the graduate to enter any one of the many special fields which are usually included under the title of civil engineering.

In addition to the laboratory equipment of the other engineering departments, which is available to civil-engineering students, the Department of Civil Engineering possesses a good assortment of transits, levels, plane tables, compasses, tapes, and chains. It also owns a precise level, a direction theodolite, a repeating theodolite, four different kinds of solar attachments, and a base-line outfit. A Beggs deformeter set has been added to the equipment of the department.

Approximately 90 percent of the graduates of this department are now engaged in engineering work in cities, in the oil fields, in the government reclamation and valuation service, in consulting engineering, in highway work, in construction work, and in other work in which a knowledge of civil engineering is a prerequisite.

COURSES IN CIVIL ENGINEERING

FOR UNDERGRADUATE CREDIT

102. SURVEYING I. 2(0-6); I and II. Prerequisite or parallel: Math. 101. Mr. White, Mr. Crawford, and Mr. Morse.

The use and care of engineer's surveying instruments, and plane surveying practice. Charge, \$1

111. SURVEYING II. 2(0-6); I and II. Prerequisite: Civ. Engr. 102. Mr. White and Mr. Morse.

Land surveying, the U. S. system of public land surveys, route surveying, the legal survey, the stadia survey, and calculations of areas and boundaries. Charge, \$1.

121. FOUNDATIONS. 2(2-0); I. Prerequisite or parallel: Ap. Mech. 202. Mr. Frazier.

Design and construction of foundations.

125. CIVIL ENGINEERING DRAWING I. 2(0-6); II. Prerequisite: Mach. Des. 111. Mr. White.

Stereotomy, shades and shadows, isometric and perspective drawing; copying working drawings of engineering structures.

145. RAILWAY ENGINEERING I. 2(2-0); II. Prerequisite: Civ. Engr. 156 and 157. Mr. Frazier.

Railway engineering based on Wellington's economic theory; study of track construction and maintenance; design of yards and terminals.

151, 155.* SURVEYING III. 3(2-3); I and II. Prerequisite: Civ. Engr. 111. Mr. White and Mr. Crawford.

Topographic, municipal and underground surveying; the celestial sphere; elements of horizontal and vertical curves and earthwork.

Laboratory.—Topographic surveying and topographic mapping. Charge, \$1.

156, 157. SURVEYING IV. 3(2-3); I and II. Prerequisite: Civ. Engr. 151 and 155. Mr. Furr.

Field engineering; various problems in curve selection and location; including pertinent curve, spiral and earthwork computations; railway track and cross-over exercises. Charge, \$1.

161. DRAINAGE AND IRRIGATION I. 2(2-0); II. Prerequisite or parallel: Ap. Mech. 230 and 235. Mr. Furr and Mr. White.

Design and construction of drainage and irrigation works.

170. THESIS. Credit to be arranged; I and II. Mr. Conrad.

A report on a proposed design and original investigation, or a library research. With approval of Mr. Conrad, thesis work may be taken in some other department, the thesis subject to be selected and approved by the department head before the October first next preceding the student's graduation. An equivalent amount of work in an elective subject approved by the dean of this division may be substituted for thesis.

180. INSPECTION TRIP. R; I. Prerequisite: Senior classification. Mr. Conrad and assistants.

A trip of three to four days to Kansas City and other near-by industrial centers for the purpose of inspecting industrial plants and projects of special interest to civil engineers. The plants inspected are carefully selected to exemplify various engineering applications in practice.

FOR GRADUATE AND UNDERGRADUATE CREDIT

201. STRESSES IN FRAMED STRUCTURES. 4(4-0); I, II, and SS. Prerequisite: Ap. Mech. 211. Mr. Conrad and Mr. Morse.

Computation of stresses in bridges and buildings.

205. CIVIL ENGINEERING DRAWING II. 2(0-6); I and SS. Prerequisite or parallel: Civ. Engr. 201. Mr. Conrad and Mr. Morse.

Graphic statics and design of simple roof trusses in timber and steel.

* In the case of many of the engineering courses, one course number is used for the recitation and another for the laboratory part of the course.

207. ADVANCED BRIDGE STRESSES. 3(3-0); I. Prerequisite: Civ. Engr. 201. Mr. Conrad.

A study of deflections; stresses in continuous, movable, cantilever, suspension, and steel-arch bridges; and secondary stresses.

211, 216. ASTRONOMY AND GEODESY. 4(2-6); I. Prerequisite: Civ. Engr. 151 and 155 and Math. 251. Mr. Frazier.

The elements of practical astronomy; precise methods of surveying and leveling.

Laboratory.—Astronomical observations, principally for determining true meridian and latitude; base-line measurements and triangulation work.

220. WATER SUPPLY. 2(2-0); I and SS. Prerequisite: Ap. Mech. 230 and 125, and Bact. 125. Mr. Frazier.

Water supply from the standpoint of consumption, collection, storage, distribution, and purification.

225. SEWERAGE. 2(2-0); I and SS. Prerequisite: Ap. Mech. 230 and Bact. 125. Mr. Crawford.

A study of sewer systems and sewage treatment.

228. SANITARY ENGINEERING DESIGN. 2(0-6); II. Prerequisite: Civ. Engr. 220 and 225. Mr. Frazier.

Design of water purification plants, sewage treatment plants, water distribution systems, and sewage collecting systems. Estimates of cost and methods of financing.

231. HIGHWAY ENGINEERING I. 2(2-0); I and SS. Prerequisite: Civ. Engr. 111. Mr. Furr.

Fundamental principles, location, design, construction, and maintenance of roads and pavements.

246. DESIGN OF FRAMED STRUCTURES. 3(0-9); II and SS. Prerequisite: Civ. Engr. 201. Mr. Conrad.

The making of general drawings for a highway truss bridge, a railroad truss bridge, and a railroad deck-plate girder.

247. ECONOMICS OF DESIGN AND CONSTRUCTION. 4(4-0); II. Prerequisite: Civ. Engr. 201 and 231. Mr. Conrad.

Primarily a study of methods, equipment, construction costs, and economy in design.

250, 255. REINFORCED CONCRETE DESIGN. 3(2-3); II and SS. Prerequisite: Ap. Mech. 211. Mr. Frazier and Mr. Morse.

Design of reinforced concrete retaining walls, dams, slab bridges, and girder bridges.

Laboratory.—Drawing reinforced concrete retaining walls, dams, slab bridges, and girder bridges.

256. REINFORCED CONCRETE ARCHES. 3(3-0); II. Prerequisite: Civ. Engr. 250 and 255. Mr. Conrad.

Various types of reinforced concrete arches adapted for use in bridges, buildings, and dams; computation of stresses; arrangement of details.

260, 265. RAILWAY ENGINEERING II. 4(2-6); II. Prerequisite: Civ. Engr. 145. Mr. Frazier.

Railway operation and maintenance.

Laboratory.—A reconnoissance and survey of a short railroad; making the maps, profiles, and estimates from the survey. Charges, \$2.

266. RAILROAD TRANSPORTATION. 3(3-0); II. Prerequisite: Civ. Engr. 145. Mr. Frazier.

A study of the function of the railway system; its relation to industrial development, and its correlation with other methods of transportation.

270, 275. HIGHWAY ENGINEERING II. 4(2-6); II. Prerequisite: Civ. Engr. 230. Mr. Furr.

Highway laws, highway administration, and highway economics.

Laboratory.—A reconnoissance and survey for a highway a few miles long; making maps, profiles, and estimates from the survey. Charge, \$2.

276. HIGHWAY ECONOMICS. 3(3-0); I. Prerequisite: Civ. Engr. 231. Mr. Furr.

Economic concepts, highway transport, design, and construction problems as affected by recent findings of research agencies.

280, 285. DRAINAGE AND IRRIGATION II. 4(2-6); II. Prerequisite: Civ. Engr. 161. Mr. Conrad.

Design of irrigation structures and management of irrigation projects.

Laboratory.—Making the survey for a drainage or irrigation project; making maps, estimates, and designs, using the survey as a basis. Charge, \$2.

FOR GRADUATE CREDIT

304. RESEARCH IN CIVIL ENGINEERING. Credit to be arranged; I, II, and SS. For prerequisites, consult instructors. Mr. Conrad, Mr. Frazier, or Mr. Furr.

Original investigation or advanced study in some field relating to the practice of civil engineering.

Electrical Engineering

Professor KLOEFFLER
Professor BRENNEMAN
Professor KERCHNER
Associate Professor HUNT
Associate Professor JORGEYSON

Assistant Professor SITZ
Assistant Professor PASLAY
Instructor SCHUMANN
Graduate Research Assistant ARCHER

Instruction in the Department of Electrical Engineering is planned to give the student a thorough training in the underlying principles of electrical phenomena, direct and alternating current, and in the application of electrical theory to the solution of the practical problems in the many fields of the industry. The textbook, lectures, and classroom instruction are accompanied by extended courses in the laboratories.

The main dynamo laboratory contains examples of many types of electrical machinery and control apparatus, including more than 50 direct- and alternating-current generators and motors ranging from 1 to 15 kilowatts capacity. The instrument room in connection contains more than 140 instruments for the measurement of current, voltage, power, frequency, and other electrical quantities. The dynamo laboratory also includes a complete electric-railway test set, consisting of two railway motors, geared to a load and operated by a pneumatic type of control equipment.

An electrical measurement laboratory is equipped with standards of resistance, electromotive force, self-induction, and capacity, and many types of bridges and apparatus for the measurement of magnetic and electric quantities. The main electrical measurement laboratory is supplemented by a standardizing laboratory which contains all the necessary precision instruments, sine wave generating equipment and control apparatus for calibrating voltmeters, ammeters, wattmeters, instrument transformers, watt-hour meters, and rotating standards.

There are three communication laboratories: The wire communication laboratory contains several demonstration panels and switchboards for magneto, common battery (manual) and automatic telephone systems and oscillators, bridges, and artificial telephone lines for making measurements at the various frequencies encountered in telephone practice. The radio communication laboratory is supplied with equipment for high frequency measurements and the study of radio phenomena. A short-wave laboratory is equipped with a

short-wave transmitter and receiver for experimental broadcasting and reception of short-wave communications.

An illumination laboratory is equipped with bar, spherical, and portable photometers and accessory equipment such as lamps, reflectors, and luminares.

The wiring laboratory for the freshman course contains sixteen booths or rooms, in imitation of buildings both finished and in process of construction, and a complete stock of supplies for concealed knob and tube, conduit, and conduit construction which provides students with actual practice in wiring buildings.

Two special laboratories are provided for the research conducted by the electrical engineering staff and for television and other special investigations made by graduate students. One of the laboratories contains the television broadcasting station W9XAK of the Kansas State College.

COURSES IN ELECTRICAL ENGINEERING

FOR UNDERGRADUATE CREDIT

102, 106. ELECTRICAL ENGINEERING C. 3(2-2, 1); II and SS. Prerequisite: Phys. 150. Mr. Jorgenson and Mr. Sitz.

The fundamental principles of direct-current and alternating-current electricity, with emphasis upon proper installation and operation of different classes of machines.

Laboratory.—Practice to give a knowledge of the most important commercial tests; proper use of electrical instruments; a written report of each test. Charge, \$1.50.

112. ELECTRICAL MACHINERY AND CONSTRUCTION. 2(0-6); I and II. Mr. Hunt, Mr. Jorgenson, and Mr. Sitz.

An introductory course in applied electricity; various modern methods of interior wiring, and installation, care, operation, and repair of electrical machinery. Charge, \$3.

116. ILLUMINATION A. 2(2-0); II. Prerequisite: Phys. 150 or 140. Mr. Hunt.

The various methods used for interior wiring; methods of calculating the necessary number and size of electric circuits in a building; wiring specifications; and fundamental principles of illumination. For architects and architectural engineers.

120. PRINCIPLES OF ELECTRONICS. 2(2-0); I and II. Prerequisite: Chem. 107 and 108 and Math. 101. Mr. Kloeffer and Mr. Schumann.

The fundamental principles of electronics.

190. INSPECTION TRIP. R; I. Prerequisite: Senior classification. Mr. Kloeffer and assistants.

A trip of four to six days to Kansas City, St. Louis, and other cities for the purpose of making inspections of power plants and various industries illustrating the application of electrical engineering principles.

195. THESIS. Credit to be arranged; I and II. Mr. Kloeffer, Mr. Brenne-
man, Mr. Kerchner, Mr. Hunt, Mr. Schumann, and Mr. Paslay.

Subject for thesis work selected in consultation with the department head at the beginning of the senior year; every opportunity given to work out original ideas as to design and operation of electrical apparatus and machinery.

FOR GRADUATE AND UNDERGRADUATE CREDIT

203. DIRECT-CURRENT MACHINES I. 3(3-0); I, II, and SS. Prerequisite: Math. 250 and Phys. 150. Mr. Brenne-
man, Mr. Hunt, and Mr. Sitz.

A detailed study of the fundamental principles of magnetic and electric circuits and their application to the various types of direct-current machines.

206, 208. DIRECT-CURRENT MACHINES II. 4(2-4, 2); I, II, and SS. Prerequisite: Elec. Engr. 203. Mr. Brenneman, Mr. Hunt, Mr. Jorgenson, and Mr. Sitz.

A detailed study of special types of direct-current machinery, dynamo losses, and commutation.

Laboratory.—A series of experiments to show the fundamental principles, characteristics, and operation of direct-current machines. Charge, \$3.

209. ALTERNATING-CURRENT MACHINES I. 4(4-0); I, II, and SS. Prerequisite: Math. 252 and Elec. Engr. 203. Mr. Kerchner, Mr. Hunt, and Mr. Jorgenson.

A mathematical treatment of alternating-current phenomena.

214, 215. ALTERNATING-CURRENT MACHINES II. 5(3-4, 2); I, II, and SS. Prerequisite: Elec. Engr. 209. Mr. Kerchner, Mr. Hunt, and Mr. Jorgenson.

Principles of design, construction, and operation of transformers and alternating-current generators.

Laboratory.—A series of experiments illustrating the characteristics of alternating-current circuits, transformers, and alternating-current generators. Charge, \$3.

217, 218. ELECTRICAL COMMUNICATION I. 3(2-2, 1); I. Prerequisite: Elec. Engr. 209. Mr. Kloeffer and Mr. Schumann.

The principles of telephone communications as applied to the apparatus and circuits used on magneto, common battery (manual), Strowger automatic, and machine switching systems; toll telephone practice, involving the use of line loading, repeaters, and carrier currents.

Laboratory.—Study of telephone apparatus and circuits on magneto, common battery, and automatic systems; measurements made on artificial telephone lines. Charge, \$1.50.

219, 223. RADIO COMMUNICATION. 3(2-3); II. Prerequisite: Elec. Engr. 209. Mr. Schumann.

The production, measurement, and control of high-frequency alternating currents and electromagnetic waves, and their application to radio telegraphy and telephony and carrier current transmission; principles of operation of thermionic vacuum tubes and a proper consideration of these principles in their application to the generation, modulation, amplification, and detection of continuous waves.

Laboratory.—Characteristics of vacuum tubes; high frequency measurements. Charge, \$1.50.

224, 225. ALTERNATING-CURRENT MACHINES III. 5(3-4, 2); I, II, and SS. Prerequisite: Elec. Engr. 214 and 215. Mr. Kerchner, Mr. Hunt, Mr. Jorgenson, and Mr. Paslay.

Continuation of Elec. Engr. 214, including synchronous motors, parallel operation of alternators, converters, induction and commutator alternating-current motors, rectifiers, alternating-current instruments, and accessory apparatus.

Laboratory.—Continuation of Elec. Engr. 215. Tests on machines listed in Elec. Engr. 224. Charge, \$2.

227, 229. ELECTRICAL MEASUREMENTS. 4(2-4, 2); I and II. Prerequisite: Math. 250, Phys. 150, and Elec. Engr. 120. Mr. Brenneman and Mr. Schumann.

Methods for electric and magnetic measurements; resistance, quantity, current, electromotive force, capacity, inductance.

Laboratory.—Characteristics of electron tubes; measurement of resistance, inductance, and capacity. Charge, \$3.

230, 231. ELECTRICAL ENGINEERING M-I. 4(3-2); I. Prerequisite: Math. 250 and Phys. 150. Mr. Hunt and Mr. Sitz.

Direct-current machines with reference to the fundamental laws of the electric circuit, the principles of direct-current machinery, and the more important commercial tests; and introduction to alternating-current circuits.

Laboratory.—A series of experiments covering the fundamental principles and characteristics of direct-current machines. Charge, \$1.50.

232, 233. ELECTRICAL COMMUNICATION II. 3(2-3); II. Prerequisite: Elec. Engr. 209. Mr. Schumann.

Transmission problems, telephonic efficiencies, telephone repeaters, wave filters, and carrier currents.

Laboratory.—High frequency measurements as applied to wire communication. Charge, \$1.50.

235, 236. ILLUMINATING ENGINEERING. 3(2-3); I. Prerequisite: Math. 250 and Phys. 150. Mr. Hunt.

Photometry, light standards, principles of illumination, and illumination design.

Laboratory.—Photometric measurements of light intensity, luminous flux, brightness, and illumination; the determination of light distribution about various illuminants. Charge, \$1.50.

242, 243. ELECTRICAL ENGINEERING M-II. 4(3-2, 1); II. Prerequisite: Elec. Engr. 230 and 231. Mr. Hunt.

The important principles of alternating-current machinery of primary importance to mechanical engineers.

Laboratory.—Standard tests of alternators, motors, and transformers, and methods of operating the different types of alternating-current machinery. Charge, \$1.50.

245. INDUSTRIAL ELECTRONICS. 2(2-0); I. Prerequisite: Elec. Engr. 120 and 209.

Electronic devices as utilized in industry. Control circuits employing amplifier, photo-electric, thyratron, glow, and other types of tubes. Rectifiers and inverters.

270. ELECTRICAL MACHINE DESIGN. 1(0-3); I and II. Prerequisite: Elec. Engr. 203. Mr. Brenneman and Mr. Hunt.

The principles of electrical design; each student makes calculation for electromagnets and a direct-current motor.

280. TRANSMISSION AND DISTRIBUTION OF ELECTRICAL ENERGY. 3(3-0); II. Prerequisite: Elec. Engr. 214. Mr. Brenneman.

Transmission line design, economic and technical features; and properties of cables and insulators.

284. TRANSIENT ELECTRICAL PHENOMENA. 3(3-0); II. Prerequisite: Elec. Engr. 209, 214, and 215, and Math. 201. Mr. Brenneman.

Two phases of electrical phenomena; (a) transients in time, and (b) transients in space.

287. ADVANCED ILLUMINATING ENGINEERING. 3(3-0); II. Prerequisite: Phys. 150 and Math. 252. Mr. Hunt.

The various theories on the property of light, the theoretical distribution curves from light sources of various shapes, psychological and physiological phases of lighting, daylight illumination in buildings, and spectrophotometry.

288. ELECTRON TUBES. 3(3-0); I and SS. Prerequisite: Elec. Engr. 120 and 209. Mr. Schumann.

Thermionic tubes in class A, B, and C amplification. Applications in oscillator, modulator, and detector circuits. Efficiencies of tubes as used in various transmitting functions.

290. PUBLIC UTILITY MANAGEMENT. 3(3-0); II. Prerequisite: Econ. 101 and 219. Mr. Kloeffer.

The problems of depreciation, finance, rates, and public regulation in gas, electric, and telephone properties.

FOR GRADUATE CREDIT

301. ELECTRIC CIRCUITS I. 3(3-0); I. Prerequisite: Elec. Engr. 224. Mr. Kerchner.

Methods of determining short-circuit currents in networks; equivalent impedances of multicircuit transformers; symmetrical components for analysis of unbalanced polyphase circuits and analysis of induction motor performance on unbalanced voltages; short transmission lines in steady state.

304. ELECTRIC CIRCUITS II. 3(3-0); II. Prerequisite: Elec. Engr. 301. Mr. Kerchner.

Long transmission lines in steady state with various terminal conditions; transmission charts; harmonics in circuits; general circuit constants; transmission problems involving synchronous machines.

307. OPERATIONAL CIRCUIT ANALYSIS. 3(3-0); I or II. Prerequisite: Elec. Engr. 209. Mr. Brenneman and Mr. Paslay.

Heaviside's Operational Calculus applied to electric circuit theory.

312. HIGH FREQUENCY ALTERNATING CURRENTS. 3(3-0); II. Prerequisite: Elec. Engr. 209 and 219 or equivalent. Mr. Paslay.

An advanced study of high-frequency currents in coupled and resonant circuits; the analytical treatment of vacuum tubes as used for amplification, modulation, and detection.

316. ADVANCED ELECTRICAL THEORY. Credit to be arranged; I and II. Prerequisite: Elec. Engr. 224. Mr. Kloeffer.

An advanced course in electrical theory designed to meet the needs of graduate students.

336. RESEARCH IN ELECTRICAL ENGINEERING. Credit to be arranged; I or II. Prerequisite: Elec. Engr. 214. Mr. Kloeffer, Mr. Brenneman, Mr. Kerchner, and Mr. Paslay.

Special investigations adapted to the needs of individual students; may be used as the basis of a master's thesis. The laboratory work is correlated with the work of the Engineering Experiment Station.

General Engineering

Dean SEATON

Assistant Dean DURLAND

101. ENGINEERING LECTURES. R(1-0); entire freshman year. Dean Seaton, other members of the engineering faculty, and visiting practicing engineers.

Designed to acquaint freshman engineers and architects with fundamental principles of their profession and to give a general survey of the field. Charge, 75 cents.

105. SEMINAR. R(1-0); sophomore, junior, and senior years. Members of the engineering faculty.

Presentation by students of abstracts and reviews of articles appearing in the journals of their respective societies or in the technical press of their profession; as far as possible conducted by the student branches of the professional engineering societies. Occasionally these individual groups unite in the General Engineering Society, under whose auspices lectures are given by practicing engineers and by members of the engineering and college faculty on topics of general interest to engineering students. Charge, 75 cents.

Machine Design

Professor PEARCE
 Professor DURLAND
 Professor SMUTZ
 Associate Professor GINGRICH

Instructor BRANIGAN
 Instructor ADAIR
 Instructor BRUBAKER

The courses in engineering drawing and machine drawing deal principally with the training of the freshman and sophomore students in visualization, and the application of graphical language to engineering problems, with particular reference to commercial drafting-room methods. The object of these courses is primarily to develop this graphical language as a tool to be used in all future engineering work.

The courses in machine design deal with mechanical transmission of power, analysis of the action of machine parts, and design of machine elements and of complete machines, with careful regard to strength, stiffness, and general operating efficiency. They consider also aërodynamic forces and airplane structures.

COURSES IN DRAWING AND MACHINE DESIGN

FOR UNDERGRADUATE CREDIT

101. ENGINEERING DRAWING. 2(0-6); I, II, and SS. Mr. Smutz, Mr. Gingrich, Mr. Branigan, and Mr. Brubaker.

The selection and use of drawing instruments, construction of geometrical figures, lettering, orthographic projections and sections, and pictorial methods of representation.

106. DESCRIPTIVE GEOMETRY. 2(0-6); I, II, and SS. Prerequisite: Math. 102 or equivalent and Mach. Des. 101. Mr. Smutz, Mr. Gingrich, Mr. Branigan, and Mr. Brubaker.

More advanced problems than in Engineering Drawing, involving the point, line, and plane; the intersection and development of the surfaces of geometric solids; practical applications of the principles involved; emphasis on developing the student's ability to visualize drawings in the third angle.

107. DESCRIPTIVE GEOMETRY A. 3(0-9); I and II. Prerequisite: Solid Geometry. Mr. Smutz and Mr. Gingrich.

This course is primarily for architectural students, and its problems are all related to their work.

108. SHADES AND SHADOWS, AND PERSPECTIVE. 3(0-9); I and II. Prerequisite: Mach. Des. 107 and Arch. 106A. Mr. Smutz.

Conventional shades and shadows of common geometrical solids and solids of revolution; simple architectural problems; the theory of perspective as applied to the same simple solids and to problems from architectural practice. Charge, \$1.50.

111. MACHINE DRAWINGS I. 2(0-6); I, II, and SS. Prerequisite: Mach. Des. 106. Mr. Branigan and Mr. Adair.

Conventional representations, working drawings, dimensioning, modern drafting-room systems, and the reproduction of drawings; checking for errors, and the subject matter and arrangement of titles and notes.

118. MACHINE DRAWING II. 2(0-6); I, II, and SS. Prerequisite: Mach. Des. 111. Mr. Pearce and Mr. Adair.

Machine sketching from parts of actual machines; complete working and assembly drawings. Practice is given in tracing and blue printing.

119. MACHINE DRAWING III. 2(0-6); I, II, and SS. Prerequisite: Mach. Des. 121 and Mech. Engr. 131. Mr. Pearce and Mr. Adair.

Kinematic problems, including belting, cams, linkages, and gears to fulfil specified conditions; valve gears and valve diagrams; and governors and governor diagrams.

121. MECHANISM. 3(3-0); I, II, and SS. Prerequisite: Math. 101 and Mach. Des. 106. Mr. Pearce, Mr. Durland, and Mr. Adair.

A careful study of the fundamental elements of machinery with reference to the transmission of motion and force, and to their forms and arrangements in actual machines; the solution of a large number of graphical and mathematical problems is required.

126. THESIS. Credit to be arranged; I and II. Mr. Pearce and Mr. Durland.

Excellent material for thesis study is furnished by projects in machine design or aërodynamics; subject of the investigation is selected in consultation with the head of the department at the beginning of the senior year.

FOR GRADUATE AND UNDERGRADUATE CREDIT

204, 205. MACHINE DESIGN I. 5(3-6); I and II. Prerequisite: Ap. Mech. 211, Mach. Des. 119, and Mech. Engr. 204 or 212. Mr. Pearce, Mr. Durland, and Mr. Adair.

The straining actions in machine elements; friction and lubrication; the action of reciprocating parts in engines; problems arising in the transmission of power and in the design of high-speed machinery.

Laboratory.—Riveted joints of a steam boiler designed in strict conformity to the A. S. M. E. Boiler Code; calculations for a number of simple machines and machine parts, paralleling the recitation class assignments.

210. MACHINE DESIGN II. 2(0-6); I and II. Prerequisite: Mach. Des. 204, 205. Mr. Pearce, Mr. Durland, and Mr. Adair.

Design of a small power shear; calculations made for all parts; a graphical analysis made of the stress in the shaft; working drawings made; and the rotative effect diagram of a steam engine.

225. GRAPHICS OF ENGINEERING FORMULAS. 2(2-0); II. Prerequisite: Math. 110. Mr. Pearce.

Design of empirical equations according to the methods of selected points, averages, or least squares, and a consideration of general methods of plotting; the diagramming of formulas; construction of nomographic or alignment charts, in which all the variables of a formula are along any straight transversal cutting the lines of the diagram.

250, 251. AÉRODYNAMICS. 4(3-3); I. Prerequisite: Ap. Mech. 202. Mr. Pearce and Mr. Durland.

A general introduction into aërodynamics, particularly as regards action of air foils, effects of parasite drag, prediction of performance, and analysis of stability and control.

Laboratory.—Determination of performance curves and the stability of an airplane.

255. AIRPLANE DESIGN. 2(0-6); II. Prerequisite: Mach. Des. 250 and 251 and Ap. Mech. 211 and 220. Mr. Pearce and Mr. Durland.

A general presentation of the problems involved in the design and stress analysis of an airplane structure, particularly as regards the requirements of the United States Department of Commerce.

FOR GRADUATE CREDIT

301. ADVANCED MACHINE DESIGN. Credit to be arranged; I or II. For prerequisites, consult instructors. Mr. Pearce and Mr. Durland.

At the option of the student this course may include (a) the design of a machine, (b) a study of the advanced dynamics of machinery, with special reference to inertia effects, torque characteristics, fly-wheel design, and balancing of multiple cylinder engines and compressors, the design of turbine drums and disks, the critical speed of rotating parts, and gyroscopic action, or (c) a study of some phase of aërodynamics.

310. RESEARCH IN DESIGN. Credit to be arranged; I, II, and SS. For prerequisites, consult instructors. Mr. Pearce and Mr. Durland.

Original investigation in the analysis, design, or test of machines and machine elements, or into some phase of aërodynamics. This work may furnish material for the master's thesis.

Mechanical Engineering

Professor HELANDER
Professor MACK
Associate Professor BRAINARD

Assistant Professor FLINNER
Graduate Research Assistant GOLD
Graduate Assistant HINKLE

The object of the instruction in this department is to give to the student the fundamental principles underlying the design, construction, selection, operation, and testing of steam boilers; steam engines and steam turbines; gas producers; gas and petroleum engines; compressed-air and refrigerating machinery; condensers and evaporators. These subjects are developed by courses in engineering thermodynamics and in steam and gas engineering, and are followed in the fourth year by courses in power-plant engineering, in refrigeration, and in heating and air conditioning. The classroom instruction of every course consists of lectures and recitations, which are paralleled by work in the drafting room and laboratory, and supplemented by numerous practical problems, trade catalogues, notes, and inspection trips requiring written reports.

The mechanical-engineering laboratories are well equipped for the testing of boilers, steam engines, internal combustion engines, refrigeration machinery, fuels, lubricants, airplane motors, and other equipment and materials met with in the practice of mechanical engineering. In addition to the equipment installed especially for experimental purposes, all the heating, power, ventilating and pumping equipment of the College subserves the further purpose of experimental work.

COURSES IN MECHANICAL ENGINEERING

FOR UNDERGRADUATE CREDIT

120, 125. STEAM AND GAS ENGINEERING C. 3(2-3); I and II. Prerequisite: Math. 250 and Phys. 145. Mr. Brainard and Mr. Flinger.

Steam boilers, steam engines, steam turbines, gas and oil engines, including the various auxiliaries.

Laboratory.—Study and calibration of steam gauges, indicators, and planimeters; valve-setting and steam-engine operation; study of calorimeters; determination of the indicated and brake horsepower of engines; timing and operation of internal combustion engines; and flue gas analyses. Charge, \$1.50.

131. ELEMENTS OF HEAT POWER. 2(2-0); II. Prerequisite: Phys. 145. Mr. Helander, Mr. Mack, Mr. Brainard, and Mr. Flinger.

Principles and practices underlying the conversion of fuel energy into mechanical or electrical energy, and essential equipment in heat power plants.

135. HEATING AND VENTILATION A. 3(3-0); II. Prerequisite: Phys. 145 or 135. Mr. Mack.

Fundamental principles of heating, cooling, and ventilating; heat transmission through buildings; equipment used for heating, cooling, and ventilating.

170, 175. DAIRY REFRIGERATION. 2(1-3); I. Mr. Mack and Mr. Brainard.

The elementary theory and principles of operation of various refrigerating and ice-making machinery and cold storage, with special reference to the dairy industry.

Laboratory.—Various types of refrigeration systems and their operation; steam engine operation; tests of refrigeration machines. Charge, \$1.

180. INSPECTION TRIP. R; I. Prerequisite: Senior classification. Mr. Helander and assistants.

A trip of three to four days to Kansas City and other near-by industrial centers for the purpose of inspecting industrial plants of special interest to mechanical engineering students. The plants inspected are carefully selected to exemplify various engineering applications in practice.

195. THESIS. Credit to be arranged; I and II. Mr. Helander and Mr. Mack.

The department laboratories are well equipped with apparatus suitable for experimental and research work in the field of heat-power engineering. Subject for investigation to be selected in consultation with the department head at the beginning of the senior year.

FOR GRADUATE AND UNDERGRADUATE CREDIT

201, 202. STEAM AND GAS ENGINEERING I. 5(4-3); I and II. Prerequisite: Mach. Des. 121 and Math. 250. Mr. Helander, Mr. Mack, Mr. Brainard, and Mr. Flinner.

Heat-power engineering, including valve gears and thermodynamics, with special stress upon the thermodynamics of gases and vapors, and gas and vapor cycles.

Laboratory.—Study and calibration of steam gauges, indicators, and planimeters; valve-setting and steam-engine operation; study of calorimeters; determination of the indicated and brake horsepower of engines; timing and operation of internal combustion engines; and flue gas analyses. Charge, \$1.50.

204, 205. STEAM AND GAS ENGINEERING II. 4(3-3); I and II. Prerequisite: Mech. Engr. 201. Mr. Helander, Mr. Mack, Mr. Brainard, and Mr. Flinner.

A detailed study of steam engines, steam boilers, steam turbines, internal-combustion engines, fuels and combustion, and other power-plant equipment.

Laboratory.—Proximate analysis of coal; determination of the calorific values of solid, liquid and gaseous fuels, evaporative tests of steam boilers; tests of internal-combustion engines; test of compressed air and refrigerating machinery. Charge, \$1.50.

208. ENGINEERING THERMODYNAMICS. 4(4-0); I and II. Prerequisite: Math. 251 and Mech. Engr. 131. Mr. Helander, Mr. Mack, Mr. Brainard, and Mr. Flinner.

Fundamentals of engineering thermodynamics; laws of the conversion of heat energy into mechanical energy; properties of fluids; gases, vapors, and gas and vapor mixtures; flow of fluids; and power generating cycles.

209. HEAT POWER LABORATORY I. 1(0-3); I and II. Prerequisite: Mech. Engr. 131. Mr. Brainard and Mr. Flinner.

Study and calibration of steam gauges, indicators, and planimeters; valve-setting and steam-engine operation; calorimeters; determination of indicated and brake horsepower and mechanical efficiency of engines; timing and operation of internal combustion engines; and flue-gas analyses. Charge, \$1.50.

212. HEAT POWER ENGINEERING. 3(3-0); I and II. Prerequisite: Mech. Engr. 208. Mr. Helander, Mr. Mack, Mr. Brainard, and Mr. Flinner.

Application of thermodynamic principles to power generation, flow of fluids, turbines, engines, compressors and blowers, and a study of prime movers, steam generating equipment, auxiliaries, fuels and combustion, and evaporators.

213. HEAT POWER LABORATORY II. 1(0-3); I and II. Prerequisite: Mech. Engr. 208 and 209. Mr. Brainard and Mr. Flinner.

Proximate analysis of coal; determination of the calorific value of solid, liquid, and gaseous fuels; tests of steam boilers, internal combustion engines, heat transfer equipment, and compressed air and refrigerating equipment. Charge, \$1.50.

217. POWER-PLANT ENGINEERING. 3(2-3); I. Prerequisite: Mech. Engr. 204 and 205, or 212 and 213. Mr. Helander and Mr. Brainard.

Industrial and central station power generation practices, means for effecting economies in central station and industrial plants that use process steam; preliminary design of a power plant, selection of pressures, temperatures, and equipment, including an evaluation of economic factors; and a complete determination of the station heat balance.

219. HEAT POWER LABORATORY III. 1(0-3); I. Prerequisite: Mech. Engr. 204 and 205, or 212 and 213. Mr. Brainard and Mr. Flinner.

Comprehensive over-all tests of power generating equipment, internal combustion engines, steam engines, turbines, and other power plant equipment. Students are required to organize and conduct tests and to submit complete reports. Charge, \$1.50.

221. REFRIGERATION. 2(2-0); I. Prerequisite: Mech. Engr. 201 or 208. Mr. Mack.

Thermodynamics of refrigeration; systems of refrigeration and their operation; application of refrigeration to ice making, cold storage and the cooling of gases, liquids, and solids.

225, 226. HEATING AND AIR CONDITIONING. 3(2-3); II. Prerequisite: Mech. Engr. 201 or 208. Mr. Mack and Mr. Brainard.

Fundamental principles of heating and ventilation; study of heat losses from buildings, different methods of heating, layout of piping and duct systems, temperature control, air conditioning, and artificial cooling.

Laboratory.—Tests of fans, blowers, radiators, house-heating boilers, and automatic ventilators; the design of heating, cooling, and ventilating systems for buildings. Charge, \$1.

230. ADVANCED THERMODYNAMICS. 2(2-0); I. Prerequisite: Mech. Engr. 201 or 208. Mr. Helander and Mr. Brainard.

The advanced phases of engineering thermodynamics.

235. STEAM TURBINES. 2(2-0); II. Prerequisite: Mech. Engr. 204 or 212. Mr. Helander and Mr. Flinner.

The theoretical principles involved in the various important types of steam turbines and the construction and operation of some of the commercial types; the selection of a steam turbine as a prime mover for power plants operating under particular operating conditions; the effect of factors such as superheat, vacuum, and pressure.

240. INTERNAL COMBUSTION ENGINES. 2(2-0); II. Prerequisite: Mech. Engr. 201 or 208. Mr. Flinner.

General principles of internal combustion engines; types; cycles of operation; fuels; carburetors; ignition systems; performance and reliability.

250. HEAT TRANSFER AND FLUID FLOW. 3(3-0); II. Prerequisite: Mech. Engr. 204 or 212. Mr. Helander.

A study of heat transfer and fluid flow, with particular reference to heat exchangers, air preheaters, economizers, boilers, condensers, evaporators, and similar equipment.

260. ADVANCED POWER-PLANT ENGINEERING. Credit to be arranged. Prerequisite: Mech. Engr. 217. Mr. Helander.

An advanced course in the economic problems met with in the design of power plants and in the generation of power. A study is made of the selection of equipment, the choice of station heat balances, the generation of by-product power in industries, and interconnections between utilities and industrial plants for the economical interchange of power.

FOR GRADUATE CREDIT

305. RESEARCH IN MECHANICAL ENGINEERING. Credit to be arranged; I, II, and SS. For prerequisite, consult instructors. Mr. Helander and Mr. Mack.

The laboratory work is correlated with the work of the Engineering Experiment Station. Investigations of lubricants, fuels, combustion, internal-combustion engines, steam engines, steam turbines, steam boilers, refrigeration, heat-insulating materials, air conditioning, compressed air, and similar subjects are carried on. Data secured in this course may be used as the basis for a master's thesis.

Shop Practice

Professor CARLSON
Professor SELLERS
Associate Professor GRAHAM
Assistant Professor JONES
Assistant Professor LYNCH

Assistant Professor AIMAN
Instructor STUTZMAN
Instructor GRANT
Instructor MCCOLLUM
Instructor MOORE

The work in the department is planned to meet the needs of two classes of students: (1) those who are preparing for the teaching field and need a general knowledge of the principles of industrial arts work in metal and wood, of the materials and equipment used, including their control and arrangement, and of methods of handling work and students in the laboratory, together with sufficient skill in the performance of the various tool operations to be able to instruct others; and (2) those in the courses in engineering who need to secure a general knowledge of machine operations and methods used in job shops and mass-production factories, and of the economical selection and control of the materials, machinery, buildings, and personnel used in the manufacturing industries.

The shop and laboratory work is supplemented by classroom discussion and lectures, by the study of library references and trade catalogues, and by inspection trips.

The shops and laboratories are well equipped for instruction and research work in ferrous and nonferrous foundry operations, forging and heat treatment of steel, sheet-metal work, machine-tool work, bench and machine wood work, farm-shop work, gas and electric welding, and metallography.

COURSES IN SHOP PRACTICE

FOR UNDERGRADUATE CREDIT

101. ENGINEERING WOODWORK. 1(0-3); I and II. Mr. Graham.

Importance of the use of methods, machinery, and men in connection with an industrial woodworking plant; forest conditions, wastage, the structural growth of wood, and the kiln drying of lumber. Charge, \$1.25.

117. MANUAL TRAINING FOR PRIMARY GRADES. 2(0-6); SS. Mr. Graham.

Exercises suitable for pupils from the primary to the eighth grade; selection of suitable problems, material, and equipment; special instruction in methods of teaching this work. Charge, \$2.50.

119. REED FURNITURE CONSTRUCTION. 2(0-6); I and SS. Mr. Graham and Mr. Moore.

Exercises with reed and art fiber in constructing commercial articles; special instruction in methods of teaching this work. Charge, \$2.50.

120. WOODWORKING FOR GRAMMAR GRADES. 2(0-6); I and SS. Mr. Graham and Mr. Moore.

Elementary manual training for those who are preparing to teach problems suitable for grammar grades. Charge, \$2.50.

125. WOODWORKING I FOR HIGH SCHOOLS. 2(0-6); II and SS. Prerequisite: Shop 120. Mr. Graham and Mr. Moore.

Continuation of Shop 120; problems suitable for high-school students; special attention to the study of woods, methods of finishing, and use and care of tools. Charge, \$2.50.

130. WOODWORKING II FOR HIGH SCHOOLS. 2(0-6); I and SS. Prerequisite: Shop 125. Mr. Graham and Mr. Moore.

Advanced work in cabinet construction by the use of woodworking machinery, and such bench work as is necessary; both quantity and quality are emphasized, in order that proper use may be made of time; the use, care, and erection of machines for a manual training shop. Charge, \$2.50.

135. WOOD TURNING. 2(0-6); I and SS. Mr. Graham and Mr. Moore. Practice in handling the lathe and turning tools. Charge, \$2.50.

140. ADVANCED WOODWORK. 2(0-6); II and SS. Prerequisite: Shop 130. Mr. Graham and Mr. Moore.

An opportunity to specialize in wood finishing, cabinet work, or some other work of special interest to the student. Charge, \$2.50.

147. FARM CARPENTRY I. 3(1-6); I and SS. Mr. Graham.

Rafter cutting and erection, studding and siding work, making window and door frames, hanging doors, and similar operations on full-size construction work; making out bill of material; care and upkeep of tools; designed for training of teachers who must solve problems in connection with carpentry work on the farm. Charge, \$2.50.

150. FORGING. 1(0-3); I and II. Mr. Lynch.

Practice, demonstrations, and discussions covering: (a) forging of iron and steel; (b) production equipment as used in the commercial forge shop; (c) operation of gas, oil, and electric furnaces, heat-treating steel, and oxyacetylene and electric welding. Charge, \$2.50.

157, 158. FARM BLACKSMITHING I and II. 1(0-3) each; I and SS, and II and SS, respectively. Mr. Lynch.

In I, preliminary work same as in Shop 150; exercises closely related to work on the farm; designed to train teachers for work in rural communities. Charge, \$2.50.

In II, more advanced instruction in the working of iron and steel, and in the annealing, hardening, and tempering of tools. Charge, \$2.50.

161. FOUNDRY PRODUCTION. 1(0-3); I and II. Mr. Grant.

(a) Bench, floor, and pit molding, use of molding and core machines, operating nonferrous furnaces and cupola; (b) study of commercial foundry equipment and the operation and control of the foundry. Charge, \$1.

165. METALLURGY. 2(2-0); I and II. Prerequisite: Chem. 107 and 108, or may be taken with Chem. 108. Mr. Sellers.

Manufacture and use of iron, steel, copper, and their alloys; proper selection and use of these in the manufacturing industries.

167. METALLOGRAPHY I. 1(0-3); I and II. Prerequisite: Shop 150 and 165, or may be taken with the latter. Mr. Sellers and Mr. Stutzman.

The microscopic constituents of the different grades of iron, steel, and the more common nonferrous alloys; changes in the structure and properties of the metals as produced by heat treatment, mechanical working, and composition. Charge, \$2.50.

170. MACHINE TOOL WORK I. 2(0-6); I, II, and SS. Prerequisite: Shop 161. Mr. Jones and Mr. McCollum.

Practice in chipping, filing, shaper and planer work; scraping, drilling, and turning on the lathe. Charge, \$5.

171. OXYACETYLENE WELDING. 1(0-3); I and II. Prerequisite: Shop 150. Mr. Lynch.

The theory and practice of oxyacetylene welding, including a microscopic study of welds. Charge, \$2.50.

172. ARC WELDING. 1(0-3); I and II. Prerequisite: Shop 150. Mr. Lynch. The theory and practice of arc welding, including a microscopic study of welds. Charge, \$2.50.

173. SHEET METAL WORK. 2(0-6); I, II, and SS. Prerequisite: Mach. Des. 101 or equivalent. Mr. Jones and Mr. McCollum.

Covers developments, the use of templates, practice in soldering, brazing, folding, wiring, flanging, seaming, rolling, and the more common operations on sheet metal. Charge, \$2.50.

175. FARM SHOP METHODS. 3(1-6); II and SS. Prerequisite: Shop 147 and 157. Mr. Graham.

Babbitting, soldering, drilling and drill grinding, thread cutting with dies and taps, tool sharpening, belt lacing, repair of machinery, and other practical operations; designed to train teachers in farm-shop work. Charge, \$2.50.

192, 193. MACHINE TOOL WORK II AND III. 2(0-6) and 1(0-3), respectively; I, II, and SS. Prerequisite: Shop 170. Mr. Jones and Mr. McCollum.

In II, progressive problems in turning, calipering, boring, reaming, taper turning, threading on the lathe, in chucking, use of forming tools, gear cutting; study of cutting edges and tool adjustments best suited to the different metals, cutting speeds and feeds. Charge, \$5.

In III, work on the turret lathe, boring mill, hand and automatic screw machines, and grinder; practical work with jigs and fixtures and a study of rapid production of duplicate parts. Charge, \$2.50.

195. THESIS. Credit to be arranged; I and II. Mr. Carlson and Mr. Sellers.

The student works out problems of interest and value to himself under his own initiative, but subject to the supervision of his instructors. Ample facilities are available for carrying on work of a constructive or investigative nature.

FOR GRADUATE AND UNDERGRADUATE CREDIT

245. FACTORY ENGINEERING. 2(2-0); I. Prerequisite: Shop 170 and Ap. Mech. 211. Mr. Carlson.

Problems of the factory executive, such as the selection, installation, and arrangement of direct and indirect equipment, the standardization of machines and tools, stock and store methods, and the various other factors that have to do with the design and control of factories.

255. FACTORY DESIGN. 2(0-6); II. Prerequisite: Shop 245. Mr. Carlson. Knowledge gained in shops and laboratories and in Shop 245 is used in the design of a factory.

261. ADVANCED SHOP PRACTICE. Credit to be arranged; I, II, and SS. Mr. Carlson and assistants.

Continuation of courses Shop 101, 135, 140, 147, 150, 158, 161, 171, 172, 173, 175, 193, 255, or 265. Opportunity is also offered to specialize to a limited degree along certain lines of shop practice, such as heat treatment of steel, oxyacetylene and electric welding, jig fixtures and die work, pattern making and any shop work that may be of special interest to the student. All assignments must be approved by the head of the Department of Shop Practice. Charge varies with subject matter.

264. STRUCTURE AND PROPERTIES OF METALS. 3(2-3); I, II, and SS. Not open to students who have credit in Shop 165 or Shop 167. Prerequisite: Chem. 107 and 108, or parallel with Chem. 108. Mr. Sellers.

A study of the structure and properties of the more common metals and alloys. Charge, \$2.50.

265. METALLOGRAPHY II. 2(0-6); I and II. Prerequisite: Shop 167. Mr. Sellers and Mr. Stutzman.

A continuation of Shop 167, with work in brass, bronze, and aluminum, and advanced work in steel. Charge, \$5.

286. SHOP PRACTICE TEACHING. Credit to be arranged; I, II, and SS. For prerequisites, consult instructor. Mr. Carlson and assistants.

Actual laboratory teaching experience under the supervision of an instructor. Work covers the outlining, preparation, and presentation of assignments and the supervision of the work; procurement of materials and equipment. shop layouts and upkeep, and general considerations. In so far as possible the course is adapted to the particular needs of the student. All assignments must be approved by the head of the department.

FOR GRADUATE CREDIT

301. RESEARCH IN SHOP PRACTICE. Credit to be arranged; I, II, and SS. For prerequisites, consult instructors. Mr. Carlson, Mr. Sellers, and assistants.

The problems related to shop practice offer a broad field for research. Authoritative data are needed by industry in many fields dealing with metallurgy, metallography, foundry, blacksmithing, woodworking, machine-shop practice, the farm shop and the automobile. The results of such investigations, if suitable, may be incorporated in bulletins of the Engineering Experiment Station; this work may furnish material for the master's thesis. All assignments must be approved by the head of the Department of Shop Practice.

The Engineering Experiment Station

ROY ANDREW SEATON, *Director*

The Engineering Experiment Station was established for the purpose of carrying on tests and research work of engineering and manufacturing value to the state of Kansas, and of collecting, preparing, and presenting technical information in a form readily available for the use of the various industries and the people of the state. It is the intention to make all the work of the Experiment Station of direct importance to Kansas.

All the equipment of the various engineering and scientific laboratories, the shops, and the College power plant are available for the work, while the personnel of the station consists of members of the teaching staff from the various departments of the Division of Engineering and from other scientific departments whose work is directly related to the work of this division, and others employed especially for the work of the station.

Among the investigations now being carried on are: Quality of concrete in Kansas highway construction; atmospheric resistance of automobiles; farm sewage-disposal systems; Lewis factors for nonstandard gear teeth; road-material resources of Kansas; *pisé de terre* construction; durability of concrete; processing and handling grain and forage; deterioration of concrete in silos; harvesting and storage of grain crops; volume changes in concrete; harvesting and baling hay; rural electrification; farm refrigeration; elastic properties of concrete; relation of potential gradient to meteorological elements; tool rooms and storerooms of school shops; air conditioning for residences; use of electricity in hot beds; cost and depreciation of farm machinery; wind pressures on farm buildings; cutting edges of tillage implements; blending lubricating oils; tractor fuels; television apparatus; electrical grounds; wind-electric plants; low-cost residential construction; gear tooth stresses; residential construction units; ductility of welded joints; cutting tool performance; and binders for foundry cores.

The testing laboratories of this station have been made available by law† for the use of the State Highway Commission and the state highway engineer, and the road materials for use in state road construction are tested in these laboratories.

Some of the results of the investigations are published as bulletins of the Engineering Experiment Station, which are sent free to any citizen of the state upon request. Thirty-two such bulletins have been published. Besides issuing these bulletins, the station answers yearly many hundreds of requests for information upon matters coming within its field.

Requests for bulletins and general correspondence should be addressed to Engineering Experiment Station, Manhattan, Kan. Requests for information in specific matters should be addressed, as far as possible, to the heads of departments in whose fields the particular matters lie.

† Chapter 281, Laws of 1931.

The Division of General Science

RODNEY WHITTEMORE BABCOCK, *Dean*

In the land-grant colleges, of which this institution is one, the classical studies of the older type of college are replaced by work in the sciences and in professional and vocational subjects. A sound basis for technical training includes thorough training in mathematics, physical science, and biological science. It is believed, also, that education should include some preparation for the discharge of one's duties to the state and to the community in which he lives. It should afford him that discipline and culture which alone can give him a grasp of the relations among persons and activities, peoples and events, with breadth of view and tolerance of attitude, and hence an influence over his associates and fellow citizens of every station of life.

It is the province of the departments grouped in this division of the College to give this basic, scientific, cultural, and disciplinary training. Their work is not only foundational, but it penetrates through all of the characteristic vocational courses of the institution, as the structural steel of the modern skyscraper penetrates the entire building and forms a secure framework and support for the more readily visible and evidently important parts. The departments of this division thus give unity to all of the four-year curricula offered in this institution. Nine of these are in charge of this division, and some of them, by means of electives and options, are susceptible of manifold modification and application.

CURRICULUM IN GENERAL SCIENCE

The curriculum in general science includes the fundamental training in English, mathematics, science, history, economics, military science, and physical training required in the several specialized curricula now offered by the College. Its required subjects constitute the central educational basis of the institution. By means of a number of groups of electives, it gives an opportunity to students to advance themselves still further in these fundamental lines and to give special attention to some, instead of taking the technical subjects characterizing other courses. This opportunity meets the needs of several types of young people, among whom are: (1) Those who have not yet fully decided as to their vocation, but who wish an education that is strong and well balanced in respect to modern science and cultural subjects, as a foundation for further education or as a preparation for sound citizenship and intellectual, esthetic, and ethical satisfaction in life. (2) Those who are looking forward to teaching in the high schools of the state. The electives offered allow one to give special attention to mathematics, physical science, biological science, agriculture, home economics, history, economics, English, journalism, music, professional educational subjects, and several other lines. (3) Those who are fitting themselves for research work in the sciences, especially as applied to agriculture, engineering, and other industries. (4) Those for whom a good general education is required or desirable before studying a profession such as law or medicine.

The electives are to be chosen in groups, approved by the dean, and in such a manner as to give logical coherence to the curriculum as a whole. Special combinations in home economics and mechanic arts have been planned to meet the needs of prospective teachers of household arts and manual training. Students changing from other curricula to that in general science receive credit for work done in the other curricula in so far as it can be fitted into the general plan of this one.

CURRICULUM IN INDUSTRIAL JOURNALISM

The aim of the curriculum is to present such subjects as will enable the writer to see his work in proper perspective, to obtain authoritative knowledge of some field of industrial activity, and to write acceptably. The curriculum consequently offers, in the first place, fundamental studies of literary, social, and scientific character. Because of the materials with which journalism deals it is highly desirable that the student obtain a clear knowledge of the social sciences and be able to read at least one current foreign language. In the second place, the student is required to elect subjects in agriculture, mechanic arts, applied science, or home economics, depending on the portion of the field of industrial journalism which he desires to enter, it being expected that every student graduated from the curriculum shall have special knowledge of some prominent line of industry. In the third place, the theory and practice of journalism are presented in a series of courses extending throughout the sophomore, junior, and senior years, and opportunity is offered for taking additional electives in journalism simultaneously with the required courses.

CURRICULUM IN INDUSTRIAL CHEMISTRY

The facilities for instruction in chemistry are ample, and the demand of students for a curriculum planned especially to give chemical training is such that a formulation has been made to meet the needs of those desiring to specialize in industrial chemistry. A curriculum in chemical engineering is also offered in the Division of Engineering. The instruction facilities of the Department of Chemistry, reinforced by opportunities for practical work in connection with the researches of the experiment stations, are such as to provide amply for this specialized training.

CURRICULA IN MUSIC

A knowledge of music contributes to the satisfaction in life of practically all cultivated people. This college throughout its history has maintained a department of music for the purpose of affording culture in this art to any of its students. In recent years the excellence of the instruction offered has created a demand for curricula in music.

A four-year curriculum is offered in applied music, preparing the student with a major in voice, piano, violin, organ, or other instrument, and with a minor in another of these subjects. Students completing this curriculum are awarded the degree of Bachelor of Music, and are eligible to receive a three-year special state certificate in music renewable for three-year terms if they have elected the required subjects in education.

A four-year curriculum in music education is also offered, with specialization in voice, instrument, or public-school band or orchestra. Students completing this curriculum are awarded the degree of Bachelor of Science in Music Education, and are eligible to receive a special state certificate to teach music and permission to teach any nonmusic subject in which they have completed fifteen or more college hours; students completing this curriculum with sufficient extra hours so that not more than forty hours in music are submitted to the State Board of Education, are eligible to receive the state three-year, renewable-for-life certificate.

CURRICULA IN PHYSICAL EDUCATION

Within recent years a great awakening has taken place in respect to physical development. The prevalence of bodily conditions and defects that systematic and intelligently directed exercise would have corrected has been found to be serious. Since the situation has been recognized there has been in schools of all grades a great increase in the provision for physical education and training. Success in teaching this work requires vigorous health, a normal condition of the hands, feet, joints, muscles, and internal organs, and eyes that do not re-

quire glasses. The curricula offered at this institution are designed to prepare teachers of physical education who are fundamentally trained. This is a much broader field than mere coaching of athletics. At the same time it is fully recognized that the impulse to play is instinctive, and that wisely chosen games, conducted under adequate supervision, constitute attractive and effective agencies for physical development. The theoretical and practical instruction given in these curricula amply prepares students for coaching athletic games. The curricula are also so planned as to enable the student to get the work in professional education necessary for a state certificate, and to elect work in English, Mathematics, history, or some other subject which one may teach in connection with physical education in the smaller schools.

CURRICULA IN COMMERCE

The curriculum in commerce was established chiefly because of the relationship of this College to the business activities of the state and nation. The commercial prosperity of Kansas depends primarily upon the business success of its population. A knowledge of the economic, financial, social, and business principles which affect the country and the towns, in themselves and in their interrelations, is of the greatest importance. The curriculum in commerce is designed primarily to train men and women for citizenship and business service in these communities, and the information acquired and the general principles involved are applicable everywhere in all lines of business.

The curriculum in commerce, with special training in accounting, furnishes a course of study for those who wish preparation in this important activity of business and government. The basic subjects of the four-year curriculum in commerce are included, and a sequence of courses in accounting extends through the last three years. Modern tax laws have made accounting imperative in all branches of industry, and the graduate from this curriculum is prepared to take a place in this part of the commercial relations of the world.

SIX-YEAR CURRICULUM IN GENERAL SCIENCE AND VETERINARY MEDICINE

A six-year curriculum has been formulated which combines many of the advantages of a course of general scientific study with preparation for the profession of veterinary medicine. During the first four years, science work of a general character is combined with subjects fundamental in veterinary medicine, and on completion of these four years the degree of Bachelor of Science is conferred. The last two years are given almost exclusively to professional veterinary subjects, and complete the requirements for the degree of Doctor of Veterinary Medicine.

Curriculum in General Science

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
College Rhetoric I, Engl. 101.....	*3(3-0)	College Rhetoric II, Engl. 104.....	3(3-0)
Chemistry I, Chem. 101.....	5(3-6)	Chemistry II, Chem. 102.....	5(3-6)
College Algebra,† Math. 104.....	3(3-0)	Plane Trigonometry, Math. 101.....	3(3-0)
General Botany I, Bot. 101.....	3(1-4, 2)	General Botany II, Bot. 105.....	3(1-4, 2)
Library Methods, Lib. Ec. 101.....	1(1-0)	Current History, Hist. 126.....	1(1-0)
Infantry I, Mil. Sc. 101A (men).....	1(0-3)	Infantry II, Mil. Sc. 102A (men).....	1(0-3)
Phys. Educ. M, Phys. Ed. 103.....	R(0-2) or	Phys. Educ. M, Phys. Ed. 104.....	R(0-2) or
Phys. Educ. W, Phys. Ed. 151A.....	R(0-3)	Phys. Educ. W, Phys. Ed. 152A.....	R(0-3)
Total.....	15 or 16	Total.....	15 or 16

* The number before the parenthesis indicates the number of hours of credit; the first number within the parentheses indicates the number of hours of recitation each week; the second shows the number of hours to be spent in laboratory work each week; and the third, where there is one, indicates the number of hours of outside work in connection with the laboratory each week.

† Students who offer but one unit of algebra for admission take a five-hour course in College Algebra, Math. 107. The additional hours are applied against electives.

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
English Literature, Engl. 172.....	3(3-0)	American Literature, Engl. 175.....	3(3-0)
English History, Hist. 121.....	3(3-0)	Modern Europe II, Hist. 223.....	3(3-0)
General Physics I, Phys. 135.....	4(3-3)	General Physics II, Phys. 140.....	4(3-3)
General Zoölogy, Zoöl. 105.....	5(3-6)	General Psychology, Educ. 184.....	3(3-0)
		Elective‡.....	2(-)
Infantry III, Mil. Sc. 103A (men)...	1(0-3)	Infantry IV, Mil. Sc. 104A (men)...	1(0-3)
Phys. Educ. M, Phys. Ed. 105.....	R(0-2) <i>or</i>	Phys. Educ. M, Phys. Ed. 106.....	R(0-2) <i>or</i>
Phys. Educ. W, Phys. Ed. 153.....	R(0-3)	Phys. Educ. W, Phys. Ed. 154.....	R(0-3)
Total.....	15 or 16	Total.....	15 or 16

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
Hist. of Engl. Literature, Engl. 181...	3(3-0)	American History I, Hist. 201.....	3(3-0)
Amer. Govt., Hist. 151, 152 or 153...	3(3-0)	Economics I, Econ. 101.....	3(3-0)
Current History, Hist. 126.....	1(1-0)		
Extens. Speech I, Pub. Spk. 106.....	2(2-0)	Gen. Microbiology, Bact. 101.....	3(1-6)
Elective‡.....	6(-)	Elective‡.....	6(-)
Total.....	15	Total.....	15

SENIOR

FIRST SEMESTER	SECOND SEMESTER
Elective‡.....	Elective‡.....
15(-)	15(-)

Summary.—Men: Physical education, two years required; military science, 4 hours; other prescribed subjects, 76 hours; elective, 44 hours; total, 124 hours. Women: The same, except no military science; total, 120 hours.

Pre-Medical and Pre-Pharmaceutical Adaptation of Curriculum in General Science

The following arrangement of required and elective subjects is prepared for students who wish to enter medical or pharmaceutical schools at the end of two years. Students preparing to enter a school of medicine may elect French, 9 hours, instead of German, 10 hours. Students preparing to enter a school of pharmacy must substitute General Botany I, General Botany II, and General Microbiology for General Zoölogy, Comparative Anatomy, and English Literature. At least 60 hours must be completed in the two years.

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
College Rhetoric I, Engl. 101.....	3(3-0)	College Rhetoric II, Engl. 104.....	3(3-0)
Chemistry I, Chem. 101.....	5(3-6)	Chemistry II, Chem. 102.....	5(3-6)
College Algebra, Math. 104.....	3(3-0)	Plane Trigonometry, Math. 101.....	3(3-0)
German I, Mod. Lang. 101.....	3(3-0)	German II, Mod. Lang. 102.....	3(3-0)
Extens. Speech I, Pub. Spk. 106.....	2(2-0)	Elective.....	2(-)
Infantry I, Mil. Sc. 101A (men).....	1(0-3)	Infantry II, Mil. Sc. 102A (men).....	1(0-3)
Phys. Educ. M, Phys. Ed. 103.....	R(0-2) <i>or</i>	Phys. Educ. M, Phys. Ed. 104.....	R(0-2) <i>or</i>
Phys. Educ. W, Phys. Ed. 151A.....	R(0-3)	Phys. Educ. W, Phys. Ed. 152A.....	R(0-3)
Total.....	16 or 17	Total.....	16 or 17

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
English Literature, Engl. 172.....	3(3-0)	Organic Chemistry, Chem. 220.....	5(3-6)
Scientific German, Mod. Lang. 237..	4(4-0)	General Physics II, Phys. 140.....	4(3-3)
General Physics I, Phys. 135.....	4(3-3)	Comp. Anat. of Vert., Zoöl. 246.....	4(2-6)
General Zoölogy, Zoöl. 105.....	5(3-6)	Elective.....	3(-)
Infantry III, Mil. Sc. 103A (men)...	1(0-3)	Infantry IV, Mil. Sc. 104A (men)...	1(0-3)
Phys. Educ. M, Phys. Ed. 105.....	R(0-2) <i>or</i>	Phys. Educ. M, Phys. Ed. 106.....	R(0-2) <i>or</i>
Phys. Educ. W, Phys. Ed. 153.....	R(0-3)	Phys. Educ. W, Phys. Ed. 154.....	R(0-3)
Total.....	16 or 17	Total.....	16 or 17

‡ Electives are to be chosen, with the advice and approval of the dean, in groups of not fewer than eight hours, or in courses which extend fields already entered in the required work.

Curriculum in Industrial Chemistry

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
College Rhetoric I, Engl. 101.....	3(3-0)	College Rhetoric II, Engl. 104.....	3(3-0)
Chemistry I, Chem. 101.....	5(3-6)	Chemistry II, Chem. 102.....	5(3-6)
College Algebra, Math. 104.....	3(3-0)	Plane Trigonometry, Math. 101.....	3(3-0)
Engr. Drawing, Mach. Des. 101.....	2(0-6)	Des. Geometry, Mach. Des. 106.....	2(0-6)
General Geology, Geol. 103.....	3(3-0)	Machine Drawing I, Mach. Des. 111,	2(0-6)
		Library Methods, Lib. Ec. 101.....	1(1-0)
Infantry I, Mil. Sc. 101A (men).....	1(0-3)	Infantry II, Mil. Sc. 102A (men).....	1(0-3)
Phys. Educ. M, Phys. Ed. 103.....	R(0-2)or	Phys. Educ. M, Phys. Ed. 104.....	R(0-2)or
Phys. Educ. W, Phys. Ed. 151A.....	R(0-3)	Phys. Educ. W, Phys. Ed. 152A.....	R(0-3)
Total.....	16 or 17	Total.....	16 or 17

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
Inorg. Preparations, Chem. 202.....	2(0-6)	Quant. Analysis, Chem. 241.....	5(1-12)
Plane Anal. Geometry, Math. 110...	4(4-0)	Calculus I, Math. 250.....	4(4-0)
Engr. Physics I, Phys. 145.....	5(4-3)	Engr. Physics II, Phys. 150.....	5(4-3)
Adv. Inorg. Chemistry, Chem. 207...	3(3-0)	Elective†.....	2(-)
Commercial Law, Hist. 160.....	1(1-0)	Infantry IV, Mil. Sc. 104A (men)....	1(0-3)
Infantry III, Mil. Sc. 103A (men)...	1(0-3)	Phys. Educ. M, Phys. Ed. 106.....	R(0-2)or
Phys. Educ. M, Phys. Ed. 105.....	R(0-2)or	Phys. Educ. W, Phys. Ed. 154.....	R(0-3)
Phys. Educ. W, Phys. Ed. 153.....	R(0-3)		
Total.....	15 or 16	Total.....	16 or 17

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
German I, Mod. Lang. 101.....	3(3-0)	German II, Mod. Lang. 102.....	3(3-0)
Organic Chemistry I, Chem. 218....	4(2-6)	Organic Chemistry II, Chem. 219....	4(2-6)
Physical Chemistry I, Chem. 206....	5(3-6)	Physical Chemistry II, Chem. 272...	3(3-0)
Calculus II, Math. 251.....	4(4-0)	Elec. Engr. C, Elec. Engr. 102, 106..	3(2-2, 1)
		Elective†.....	4(-)
Total.....	16	Total.....	17

SENIOR

FIRST SEMESTER		SECOND SEMESTER	
Amer. Govt., Hist. 151, 152, or 153...	3(3-0)	Economics I, Econ. 101.....	3(3-0)
Inorg. Chem., Tech. Chem. 203.....	5(3-6)	Org. Chem., Tech. Chem. 212.....	3(3-0)
Scientific German, Mod. Lang. 237..	4(4-0)	Prob. in Chemistry, Chem. 270.....	3(0-9)
Fire Assaying, Chem. 242.....	2(0-6)	Hist. of Chemistry, Chem. 208.....	1(1-0)
Inspection Trip, Chem. 130.....	R	Elective†.....	6(-)
Elective†.....	3(-)		
Total.....	17	Total.....	16

Summary.—Men: Physical education, two years required; military science, 4 hours; chemistry, 50 hours; engineering, 9 hours; other prescribed subjects, 55 hours; electives, 15 hours; total, 133 hours. Women: The same, except no military science; total, 129 hours.

† Electives are to be chosen, with the advice and approval of the dean, in groups of not fewer than eight hours, or in courses which extend fields already entered in the required work.

Curriculum in Industrial Journalism

FRESHMAN

FIRST SEMESTER

College Rhetoric I, Engl. 101.....	3(3-0)
General Chemistry, Chem. 110.....	5(3-6)
Modern Language I*.....	3(3-0)
Library Methods, Lib. Ec. 101.....	1(1-0)
General Psychology, Educ. 184.....	3(3-0)
Infantry I, Mil. Sc. 101A (men).....	1(0-3)
Industrial Journalism Lecture.....	R
Phys. Educ. M, Phys. Ed. 103.....	R(0-2) <i>or</i>
Phys. Educ. W, Phys. Ed. 151A.....	R(0-3)
Total.....	15 or 16

SECOND SEMESTER

College Rhetoric II, Engl. 104.....	3(3-0)
General Geology, Geol. 103.....	3(3-0)
Modern Language II*.....	3(3-0)
Journalistic Vocations, Ind. Jour. 140,	2(2-0)
Option*.....	4(-)
Infantry II, Mil. Sc. 102A (men).....	1(0-3)
Industrial Journalism Lecture.....	R
Phys. Educ. M, Phys. Ed. 104.....	R(0-2) <i>or</i>
Phys. Educ. W, Phys. Ed. 152A.....	R(0-3)
Total.....	15 or 16

SOPHOMORE

FIRST SEMESTER

Elem. Journalism, Ind. Jour. 151....	2(2-0)
Prin. of Typography, Ind. Jour. 101,	3(2-3)
Biological Science.....	5(-)
Modern Language III*.....	3(3-0)
Option*.....	2(-)
Industrial Journalism Lecture.....	R
Infantry III, Mil. Sc. 103A (men)....	1(0-3)
Phys. Educ. M, Phys. Ed. 105.....	R(0-2) <i>or</i>
Phys. Educ. W, Phys. Ed. 153.....	R(0-3)
Total.....	15 or 16

SECOND SEMESTER

Industrial Writing, Ind. Jour. 161....	2(2-0)
English Literature, Engl. 172.....	3(3-0)
Extens. Speech I, Pub. Spk. 106.....	2(2-0)
Current History, Hist. 126.....	1(1-0)
Option*.....	7(-)
Industrial Journalism Lecture.....	R
Infantry IV, Mil. Sc. 104A (men)....	1(0-3)
Phys. Educ. M, Phys. Ed. 106.....	R(0-2) <i>or</i>
Phys. Educ. W, Phys. Ed. 154.....	R(0-3)
Total.....	15 or 16

JUNIOR

FIRST SEMESTER

Adv. Reporting, Ind. Jour. 163.....	3(3-0)
Ind. Feature Writing, Ind. Jour. 167,	2(2-0)
Prin. of Adv., Ind. Jour. 178.....	4(4-0)
American Literature, Engl. 175.....	3(3-0)
Option*.....	3(-)
Industrial Journalism Lecture.....	R
Total.....	15

SECOND SEMESTER

Jour. for Women, Ind. Jour. 172.....	2(2-0) <i>or</i>
The Rural Press, Ind. Jour. 181.....	2(2-0) <i>or</i>
Radio Writing, Ind. Jour. 162.....	2(2-0)
Copy Reading, Ind. Jour. 254.....	2(0-0)
Hist. of English Lit., Engl. 181.....	3(3-0)
Elective and Option*.....	8(-)
Industrial Journalism Lecture.....	R
Total.....	15

SENIOR

FIRST SEMESTER

Current History, Hist. 126.....	1(1-0)
Editorial Practice, Ind. Jour. 257....	2(2-0)
Contem. Thought, Ind. Jour. 255....	3(3-0)
Elective and Option*.....	9(-)
Industrial Journalism Lecture.....	R
Total.....	15

SECOND SEMESTER

History and Ethics of Journalism,	
Ind. Jour. 273.....	3(3-0)
American Government, Hist. 151....	3(3-0)
Elective and Option*.....	9(-)
Industrial Journalism Lecture.....	R
Total.....	15

Summary.—Men: Physical education, two years required; military science, 4 hours; industrial journalism, 30 hours; restricted options, 27 hours; modern language, 9 hours; other prescribed subjects, 39 hours; general electives, 15 hours; total, 124 hours. Women: The same, except no military science; total, 120 hours.

* The options and electives are chosen with the advice and approval of the dean. The options are in two general groups: (1) fifteen hours in courses related to an industry or to applied science, and (2) twelve hours in courses in political or social science, history, government, economics, or sociology. The options taken in the freshman year, and a large part of those in the sophomore year, must be those related to an industry or applied science. In the tabulated presentation of electives for students in the Division of General Science, groups may be found that will be accepted as the required options and electives. These are printed following the tabulation of the curricula. The fifteen-hour option related to an industry or to applied science must be selected from one of the following groups: Group 31 (applied science), group 32 (home economics), group 35 (agriculture), group 36 (drawing and art), group 37 (manual and industrial arts), and group 38 (printing). The twelve-hour option in social science may be selected by any combination formed from the following groups: Group 15 (history, government and law), group 16 (economics and sociology), and group 30 (social science).

Proficiency equivalent to nine hours of study in a modern language is required. Each unit of German, French, or Spanish offered for entrance reduces this requirement in that language by three hours, an equal amount of additional electives being chosen.

Electives are to be chosen in groups of usually not fewer than eight hours, unless they are selected in subjects which extend fields already entered through the required subjects or the options.

Curriculum in Music Education

Students wishing special training in Band or Orchestra make the following substitution:

Instrument, 16 hours, for Voice, 6 hours, Piano, 2 hours, and Voice or Instrument, 8 hours, and take Chorus, R (1-0), throughout the senior year.

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
College Rhetoric I, Engl. 101.....	3(3-0)	College Rhetoric II, Engl. 104.....	3(3-0)
Harmony I, Mus. 101.....	2(2-0)	Harmony II, Mus. 102.....	2(2-0)
Ear Tr. and St. Sing. I, Mus. 105...	2(1-3)	Ear Tr. and St. Sing. II, Mus. 106...	2(1-3)
Piano Mus. 161.....	2(1-6)	Piano, Mus. 161.....	2(1-6)
Voice, Mus. 156.....	2(1-6)	Voice, Mus. 156.....	2(1-6)
Orch. Instruments I, Mus. 151A.....	$\frac{1}{2}$ (1-)	Orch. Instruments II, Mus. 151B...	$\frac{1}{2}$ (1-)
Choral Ensemble, Mus. 194.....	$\frac{1}{2}$ (0-2)	Choral Ensemble, Mus. 194.....	$\frac{1}{2}$ (0-2)
General Psychology, Educ. 184.....	3(3-0)	Phys. or Biol. Science.....	3(-)
Infantry I, Mil. Sc. 101A (men).....	1(0-3)	Infantry II, Mil. Sc. 102A (men)....	1(0-3)
Phys. Educ. M, Phys. Ed. 103.....	R(0-2) <i>or</i>	Phys. Educ. M, Phys. Ed. 104.....	R(0-2) <i>or</i>
Phys. Educ. W, Phys. Ed. 151A.....	R(0-3)	Phys. Educ. W, Phys. Ed. 152A.....	R(0-3)
Total.....	15 or 16	Total.....	15 or 16

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
Harmony III, Mus. 103.....	2(2-0)	Harmony IV, Mus. 104.....	2(2-0)
Ear Tr. and St. Sing. III, Mus. 107..	2(1-3)	Ear Tr. and St. Sing. IV, Mus. 108...	2(1-3)
Piano, Mus. 161.....	1($\frac{1}{2}$ -6)	Piano, Mus. 161.....	1($\frac{1}{2}$ -6)
Voice, Mus. 156.....	1($\frac{1}{2}$ -6)	Voice, Mus. 156.....	1($\frac{1}{2}$ -6)
Orch. Instr. III, Mus. 151C.....	$\frac{1}{2}$ (1-)	Orch. Instr. IV, Mus. 151D.....	$\frac{1}{2}$ (1-)
Choral Ensemble, Mus. 194.....	$\frac{1}{2}$ (0-2)	Choral Ensemble, Mus. 194.....	$\frac{1}{2}$ (0-2)
School Music I, Mus. 138.....	2(2-0)	School Music II, Mus. 139.....	2(2-0)
Choral Conducting, Mus. 133.....	1(1-0)	English Literature, Engl. 172.....	3(3-0)
Phys. or Biol. Science.....	5(-)	Nonmusic elective.....	3(-)
Infantry III, Mil. Sc. 103A (men)...	1(0-3)	Infantry IV, Mil. Sc. 104A (men)...	1(0-3)
Phys. Educ. M, Phys. Ed. 105.....	R(0-2) <i>or</i>	Phys. Educ. M, Phys. Ed. 106.....	R(0-2) <i>or</i>
Phys. Educ. W, Phys. Ed. 153.....	R(0-3)	Phys. Educ. W, Phys. Ed. 154.....	R(0-3)
Total.....	15 or 16	Total.....	15 or 16

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
Counterpoint, Mus. 108A.....	2(2-0)	Musical Form and Analysis, Mus. 111,	1(1-0)
Voice or Instrument.....	2(1-6)	Voice or Instrument.....	2(1-6)
Hist. and Ap. of Mus. I, Mus. 130...	2(2-0)	Hist. and Ap. of Mus. II, Mus. 131...	2(2-0)
Rad. Mus. Ap. Programs, Mus. 115...	1(1-0)	Pub. Spk. for Teachers, Pub. Spk. 138,	1(1-0)
Instrumental Conducting, Mus. 134,	1(1-0)	School Music III, Mus. 143.....	2(2-0)
Orch. Instr. V, Mus. 151E.....	$\frac{1}{2}$ (1-)	Orch. Instr. VI, Mus. 151F.....	$\frac{1}{2}$ (1-)
Choral Ensemble, Mus. 194.....	$\frac{1}{2}$ (0-2)	Choral Ensemble, Mus. 194.....	$\frac{1}{2}$ (0-2)
Educational Psychology, Educ. 109..	3(3-0)	Educ. Admin., Educ. 105.....	3(3-0)
Education Elective.....	3(3-0)	American Literature, Engl. 175.....	3(3-0)
Total.....	15	Total.....	15

SENIOR

FIRST SEMESTER		SECOND SEMESTER	
Voice or Instrument.....	2(1-6)	Voice or Instrument.....	2(1-6)
Orch. Instr. VII, Mus. 151G.....	$\frac{1}{2}$ (1-)	Orch. Instr. VIII, Mus. 151H.....	$\frac{1}{2}$ (1-)
Choral Ensemble, Mus. 194.....	$\frac{1}{2}$ (0-2)	Choral Ensemble, Mus. 194.....	$\frac{1}{2}$ (0-2)
Teach. Part. in Grade School, Educ. 129.....	3(3-0)	Education elective.....	3(3-0)
Instr. and Orches., Mus. 136.....	3(3-0)	Nonmusic elective.....	9(-)
English elective.....	3(3-0)		
Nonmusic elective.....	3(-)		
Total.....	15	Total.....	15

Summary.—Women: Physical education, two years required; theoretical music, 39 hours; applied music, 24 hours; other prescribed subjects, 36 hours; restricted electives, 6 hours; nonmusic electives, 15 hours; total, 120 hours. Men: The same, except that military science, 4 hours, is also required; total, 124 hours.

Curriculum in Applied Music

Students majoring in piano or pipe organ are required to take Piano Ensemble, R (1-0), each semester.

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
College Rhetoric I, Engl. 101.....	3(3-0)	College Rhetoric II, Engl. 104.....	3(3-0)
Music Major.....	4(1-12)	Music Major.....	4(1-12)
Ear Tr. and St. Sing. I, Mus. 105....	2(1-3)	Ear Tr. and St. Sing. II, Mus. 106....	2(1-3)
Harmony I, Mus. 101.....	2(2-0)	Harmony II, Mus. 102.....	2(2-0)
Modern Language.....	3(3-0)	Modern Language.....	3(3-0)
Orch. Instr. I, Mus. 151A.....	$\frac{1}{2}$ (1-)	Orch. Instr. II, Mus. 151B.....	$\frac{1}{2}$ (1-)
Ensemble, Mus. 183.....	$\frac{1}{2}$ (0-2)	Ensemble, Mus. 183.....	$\frac{1}{2}$ (0-2)
Infantry I, Mil. Sc. 101A (men).....	1(0-3)	Infantry II, Mil. Sc. 102A (men).....	1(0-3)
Phys. Educ. M, Phys. Ed. 103.....	R(0-2) <i>or</i>	Phys. Educ. M, Phys. Ed. 104.....	R(0-2) <i>or</i>
Phys. Educ. W, Phys. Ed. 151A.....	R(0-3)	Phys. Educ. W, Phys. Ed. 152A.....	R(0-3)
Total.....	15 or 16	Total.....	15 or 16

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
Music Major.....	4(1-12)	Music Major.....	4(1-12)
Music Minor.....	2(1-6)	Music Minor.....	2(1-6)
Harmony III, Mus. 103.....	2(2-0)	Harmony IV, Mus. 104.....	2(2-0)
Orch. Instr. III, Mus. 151C.....	$\frac{1}{2}$ (1-)	Orch. Instr. IV, Mus. 151D.....	$\frac{1}{2}$ (1-)
Ensemble, Mus. 183.....	$\frac{1}{2}$ (0-2)	Ensemble, Mus. 183.....	$\frac{1}{2}$ (0-2)
Recital I, Mus. 181A.....	R(-)	Recital II, Mus. 181B.....	R(-)
Hist. and Ap. of Mus. I, Mus. 130....	2(2-0)	Hist. and Ap. of Mus. II, Mus. 131..	2(2-0)
Rad. Mus. Ap. Programs, Mus. 115..	1(1-0)	Pub. Spk. for Teachers, Pub. Spk. 138,	1(1-0)
Modern Language.....	3(3-0)	Modern Language.....	3(3-0)
Infantry III, Mil. Sc. 103A (men)....	1(0-3)	Infantry IV, Mil. Sc. 104A (men)....	1(0-3)
Phys. Educ. M, Phys. Ed. 105.....	R(0-2) <i>or</i>	Phys. Educ. M, Phys. Ed. 106.....	R(0-2) <i>or</i>
Phys. Educ. W, Phys. Ed. 153.....	R(0-3)	Phys. Educ. W, Phys. Ed. 154.....	R(0-3)
Total.....	15 or 16	Total.....	15 or 16

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
Music Major.....	4(1-12)	Music Major.....	4(1-12)
Music Minor.....	2(1-6)	Music Minor.....	2(1-6)
Counterpoint, Mus. 108A.....	2(2-0)	Musical Form and Analysis, Mus. 111,	1(1-0)
Orch. Instr. V, Mus. 151E.....	$\frac{1}{2}$ (1-)	Orch. Instr. VI, Mus. 151F.....	$\frac{1}{2}$ (1-)
Ensemble, Mus. 183.....	$\frac{1}{2}$ (0-2)	Ensemble, Mus. 183.....	$\frac{1}{2}$ (0-2)
Recital III, Mus. 181C.....	R(-)	Recital IV, Mus. 181D.....	R(-)
Choral Conducting, Mus. 133.....	1(1-0)	General Psychology, Educ. 184.....	3(3-0)
Physics for Musicians I, Phys. 158...	5(4-3)	Nonmusic elective.....	4(-)
Total.....	15	Total.....	15

SENIOR

FIRST SEMESTER		SECOND SEMESTER	
Music Major.....	4(1-12)	Music Major.....	4(1-12)
Orch. Instr. VII, Mus. 151G.....	$\frac{1}{2}$ (1-)	Orch. Instr. VIII, Mus. 151H.....	$\frac{1}{2}$ (1-)
Ensemble, Mus. 183.....	$\frac{1}{2}$ (0-2)	Ensemble, Mus. 183.....	$\frac{1}{2}$ (0-2)
Recital V, Mus. 181E.....	R(-)	Recital VI, Mus. 181F.....	R(-)
Methods and Materials for the Studio,		Instr. and Orches., Mus. 136.....	3(3-0)
Mus. 149.....	1(2-0)	Practice Teach. of Music, Mus. 187..	R(1-)
English Literature, Engl. 172.....	3(3-0)	American Literature, Engl. 175.....	3(3-0)
Nonmusic elective.....	6(-)	Nonmusic elective.....	4(-)
Total.....	15	Total.....	15

Summary.—Women: Physical education, two years required; theoretical music, 25 hours; applied music, 48 hours; other prescribed subjects, 33 hours; nonmusic electives, 14 hours; total, 120 hours. Men: The same, except that military science, 4 hours, is also required; total, 124 hours.

Curriculum in Physical Education for Men

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
Gymnastics I, Phys. Ed. 115A.....	2(1-3)	Gymnastics II, Phys. Ed. 117A.....	2(0-6)
Basketball, Phys. Ed. 130A.....	2(1-3)	Football, Phys. Ed. 125.....	3(2-3)
College Rhetoric I, Engl. 101.....	3(3-0)	General Zoölogy, Zoöl. 105.....	5(3-6)
Extm. Speech I, Pub. Spk. 106.....	2(2-0)	College Rhetoric II, Engl. 104.....	3(3-0)
General Chemistry, Chem. 110.....	5(3-6)	Elem. Org. Chemistry, Chem. 123...	3(2-3)
Library Methods, Lib. Ec. 101.....	1(1-0)	Infantry II, Mil. Sc. 102A.....	1(0-3)
Infantry I, Mil. Sc. 101A.....	1(0-3)	Phys. Educ. M, Phys. Ed. 104.....	R(0-2)
Phys. Educ. M, Phys. Ed. 103.....	R(0-2)		
Total.....	16	Total.....	17

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
Apparatus, Phys. Ed. 109.....	1(0-3)	Boxing, Phys. Ed. 132.....	1(0-3)
Swimming M I, Phys. Ed. 121.....	1(0-3)	Baseball, Phys. Ed. 133.....	2(1-3)
Human Anatomy, Zoöl. 123A.....	5(3-6)	Swimming M II, Phys. Ed. 122.....	1(0-3)
Embryology A, Zoöl. 135.....	3(2-3)	Kinesiology M, Phys. Ed. 141B.....	3(3-0)
General Psychology, Educ. 184.....	3(3-0)	Physiology, Zoöl. 130.....	4(3-3)
Elem. Jour., Ind. Jour. 151.....	2(2-0)	History and Principles of Phys.	
Infantry III, Mil. Sc. 103A.....	1(0-3)	Educ., Phys. Ed. 192.....	3(3-0)
Current History, Hist. 126.....	1(1-0)	Playground Management and Games	
Phys. Educ. M, Phys. Ed. 105.....	R(0-2)	M, Phys. Ed. 145A.....	2(2-0)
		Infantry IV, Mil. Sc. 104A.....	1(0-3)
		Phys. Educ. M, Phys. Ed. 106.....	R(0-2)
Total.....	17	Total.....	17

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
Extm. Speech II, Pub. Spk. 108...	2(2-0)	Sociology, Econ. 151.....	3(3-0)
Personal Hygiene, Phys. Ed. 119...	2(2-0)	Track and Field Sports, Phys. Ed.	
First Aid and Mas., Phys. Ed. 113A,	3(3-0)	140A.....	2(1-3)
Org. and Admin. of Phys. Educ. M,		Educ. Admin., Educ. 210.....	3(3-0)
Phys. Ed. 146B.....	2(2-0)	School Hygiene, Phys. Ed. 148.....	3(3-0)
Psych. Child. and Adol., Educ. 250..	3(3-0)		
Practice Teaching in Phys. Educ. I,		Practice Teaching in Phys. Educ. II,	
Phys. Ed. 135.....	1(0-3)	Phys. Ed. 136B.....	2(0-6)
Wrestling, Phys. Ed. 128.....	1(0-3)	Elective*.....	3(-)
Elective*.....	3(-)		
Total.....	17	Total.....	16

SENIOR

FIRST SEMESTER		SECOND SEMESTER	
Phys. Diagnosis and Prescript.,		Gen. Microbiology, Bact. 101.....	3(1-6)
Phys. Ed. 124A.....	3(3-0)	Teach. Partic. in H. S. Educ. 163...	3(3-0)
Physiol. of Exercise, Phys. Ed. 123..	2(2-0)	Public-school Program in Physical	
Educ. Psychology, Educ. 109.....	3(3-0)	Educ., Phys. Ed. 142.....	2(2-0)
Practice Teaching in Phys. Educ. III,		Educ. Sociology, Educ. 239.....	3(3-0)
Phys. Ed. 136C.....	2(0-6)	Elective*.....	4(-)
Elective*.....	5(-)		
Total.....	15	Total.....	15

Summary.—Military science, 4 hours; physical education, 48 hours; professional education, 18 hours; other prescribed subjects, 45 hours; general electives, 15 hours; total, 130 hours.

* Electives are to be chosen with the advice and approval of the dean, in groups of not fewer than eight hours, and from departments other than physical education.

Curriculum in Physical Education for Women

FRESHMAN

FIRST SEMESTER

College Rhetoric I, Engl. 101.....	3(3-0)
General Chemistry, Chem. 110.....	5(3-6)
Extem. Speech I, Pub. Spk. 106.....	2(2-0)
Fund. Rhythms, Phys. Ed. 155.....	1(0-3)
Personal Health, Child Welfare 101..	2(2-0)
Phys. Educ. W, Phys. Ed. 151A.....	R(0-3)
Gen. Technic I, Phys. Ed. 157A.....	2(1-3)

 Total..... 15

SECOND SEMESTER

College Rhetoric II, Engl. 104.....	3(3-0)
Elem. Org. Chemistry, Chem. 123...	3(2-3)
Dram. Prod. I, Pub. Spk. 130.....	2(2-0)
General Zoölogy, Zoöl. 105.....	5(3-6)
Phys. Educ. W, Phys. Ed. 152A.....	R(0-3)
Gen. Technic II, Phys. Ed. 157B....	2(1-3)

 Total..... 15

SOPHOMORE

FIRST SEMESTER

Human Anatomy, Zoöl. 123A.....	5(3-6)
English Literature, Engl. 172.....	3(3-0)
General Psychology, Educ. 184.....	3(3-0)
Playground Management and Games	
W, Phys. Ed. 182A.....	2(1-3)
Phys. Educ. W, Phys. Ed. 153.....	R(0-3)
Gen. Technic III, Phys. Ed. 157C...	2(1-3)

 Total..... 15

SECOND SEMESTER

Kinesiology W, Phys. Ed. 184.....	2(2-0)
Physiology, Zoöl. 130.....	4(3-3)
History and Prin. of Phys. Educ.,	
Phys. Ed. 192.....	3(3-0)
American Literature, Engl. 175.....	3(3-0)
Pub. Spk. for Teachers, Pub. Spk. 138,	1(1-0)
Phys. Educ. W, Phys. Ed. 154.....	R(0-3)
Gen. Technic IV, Phys. Ed. 157D...	2(1-3)

 Total..... 15

JUNIOR

FIRST SEMESTER

Prin. Health Educ., Phys. Ed. 163...	3(3-0)
Psych. of Child. and Adol., Educ. 250,	3(3-0)
Folk Dancing I, Phys. Ed. 160.....	1(0-3)
Phys. Educ. W, Phys. Ed. 151A.....	R(0-3)
Gen. Technic V, Phys. Ed. 157E....	2(1-3)
Health Exam. W, Phys. Ed. 171....	2(0-6)
Elective†.....	4(-)

 Total..... 15

SECOND SEMESTER

Educ. Admin., Educ. 210.....	3(3-0)
Sociology, Econ. 151.....	3(3-0)
Folk Dancing II, Phys. Ed. 161.....	1(0-3)
Phys. Educ. W, Phys. Ed. 152A.....	R(0-3)
Gen. Technic VI, Phys. Ed. 157F....	2(1-3)
Therap. and Mas., Phys. Ed. 172....	2(0-6)
Elective†.....	4(-)

 Total..... 15

SENIOR

FIRST SEMESTER

Amer. Hist. Survey, Hist. 104.....	3(3-0)
Educ. Psychology, Educ. 109.....	3(3-0)
Ap. Nutrition, Food and Nutr. 121..	2(2-0)
Teach. and Adapt. of Phys. Educ.,	
Phys. Ed. 188.....	3(3-0)
Phys. Educ. W, Phys. Ed. 153.....	R(0-3)
Gen. Technic VII, Phys. Ed. 157G...	2(1-3)
Elective†.....	2(-)

 Total..... 15

SECOND SEMESTER

Educ. Sociology, Educ. 239.....	3(3-0)
Organization and Administration of	
Phys. Educ. W, Phys. Ed. 176...	2(2-0)
Teach. Partic. in H. S., Educ. 163...	3(3-0)
Phys. Educ. W, Phys. Ed. 154.....	R(0-3)
Gen. Technic VIII, Phys. Ed. 157H..	2(1-3)
Elective†.....	5(-)

 Total..... 15

Summary.—Physical education, 40 hours; professional education, 18 hours; other prescribed subjects, 47 hours; general electives, 15 hours; total, 120 hours.

† Electives are to be chosen with the advice and approval of the dean, in groups of not fewer than eight hours, and from departments other than physical education.

Curriculum in Commerce

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
College Rhetoric I, Engl. 101.....	3(3-0)	College Rhetoric II, Engl. 104.....	3(3-0)
Phys. or Biol. Science*.....	3(-)	Phys. or Biol. Science*.....	5(-)
Modern Language*.....	3(3-0)	Modern Language*.....	3(3-0)
Current History, Hist. 126.....	1(1-0)	Current History, Hist. 126.....	1(1-0)
Extern. Speech I, Pub. Spk. 106.....	2(2-0)	American Ind. History, Hist. 105....	3(3-0)or
College Algebra, Math. 104.....	3(3-0)	Hist. of Comm. and Ind., Hist. 110....	3(3-0)
Infantry I, Mil. Sc. 101A (men)....	1(0-3)	Infantry II, Mil. Sc. 102A (men)....	1(0-3)
Phys. Educ. M, Phys. Ed. 103.....	R(0-2)or	Phys. Educ. M, Phys. Ed. 104.....	R(0-2)or
Phys. Educ. W, Phys. Ed. 151A.....	R(0-3)	Phys. Educ. W, Phys. Ed. 152A.....	R(0-3)
Total.....	15 or 16	Total.....	15 or 16

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
Coml. Correspondence, Engl. 122....	3(3-0)	General Psychology, Educ. 184.....	3(3-0)
Accounting I, Econ. 133.....	3(2-3)	Accounting II, Econ. 134.....	3(2-3)
Modern Language.....	3(3-0)	English Literature, Engl. 172.....	3(3-0)
Economics I, Econ. 101.....	3(3-0)	Economics II, Econ. 104.....	3(3-0)
History Elective.....	3(-)	Amer. Govt., Hist. 151, 152 or 153....	3(3-0)
Infantry III, Mil. Sc. 103A (men)....	1(0-3)	Infantry IV, Mil. Sc. 104A (men)....	1(0-3)
Phys. Educ. M, Phys. Ed. 105.....	R(0-2)or	Phys. Educ. M, Phys. Ed. 106.....	R(0-2)or
Phys. Educ. W, Phys. Ed. 153.....	R(0-3)	Phys. Educ. W, Phys. Ed. 154.....	R(0-3)
Total.....	15 or 16	Total.....	15 or 16

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
Elements of Statistics, Math. 126....	3(3-0)	Investments, Econ. 222.....	3(3-0)
Business Management, Econ. 126....	2(2-0)	Sociology, Econ. 151.....	3(3-0)
Money and Banking, Econ. 116.....	3(3-0)		
Marketing, Econ. 246.....	3(3-0)		
Elective†.....	4(-)	Elective†.....	9(-)
Total.....	15	Total.....	15

SENIOR

FIRST SEMESTER		SECOND SEMESTER	
Business Law I, Hist. 163.....	3(3-0)	Business Law II, Hist. 164.....	3(3-0)
Public Finance, Econ. 214.....	3(3-0)	Business Finance, Econ. 217.....	3(3-0)
Elective†.....	9(-)	Elective†.....	9(-)
Total.....	15	Total.....	15

Summary.—Men: Physical education, two years required; military science, 4 hours; commerce courses, 44 hours; other prescribed courses, 45 hours; special and general electives, 31 hours; total, 124 hours. Women: The same, except military science; total, 120 hours.

* Eight hours of physical or biological science are to be elected in this curriculum, if possible in the freshman year. Subject to any prerequisites, chemistry, physics, botany, zoölogy, entomology, and geology are available.

† If Chemistry I, Chem. 101, is taken, Chemistry II, Chem. 102, is required also. Proficiency equivalent to nine hours of study in a modern language is required. Each unit of German, French, or Spanish offered for entrance reduces this requirement in that language by three hours, an equal amount of additional electives being chosen. Students who have had only one year of high-school algebra are assigned to a five-hour course in College Algebra, Math. 107. Because of the various contingencies and elective possibilities in the science and modern languages, the proper planning of the work of the freshman year requires great care and foresight.

† Twelve hours of special electives must be chosen from the following group: Economics 223, Credits and Collections; 229, Transportation Problems; 233, Labor Problems; 242, Property Insurance; 244, Life Insurance; 248, Economic Problems; 251, Advanced Economics; 257, Social Problems; 280, Advanced Accounting I; 281, Advanced Accounting II; 282, Income Tax Accounting; 283, Accounting Systems; 284, Institutional Accounting; 285, Auditing; 287, Cost Accounting; 289, Government Accounting; Education 265, Psychology of Advertising and Selling; 273, Psychology and Personnel Management; English 123, Written and Oral Salesmanship; 223, Advanced Problems in Commercial Correspondence; History and Government 260, Government Regulation of Business; Industrial Journalism 178, Principles of Advertising; and Mathematics 150, Mathematics of Investment.

Curriculum in Commerce with Special Training in Accounting

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
College Rhetoric I, Engl. 101.....	3(3-0)	College Rhetoric II, Engl. 104.....	3(3-0)
Phys. or Biol. Science*.....	3(-)	Phys. or Biol. Science*.....	5(-)
Modern Language*.....	3(3-0)	Modern Language*.....	3(3-0)
Current History, Hist. 126.....	1(1-0)	Current History, Hist. 126.....	1(1-0)
College Algebra, Math. 104.....	3(3-0)	American Ind. History, Hist. 105....	3(3-0) <i>or</i>
Extens. Speech I, Pub. Spk. 106.....	2(2-0)	Hist. of Com. and Indus., Hist. 110..	3(3-0)
Infantry I, Mil. Sc. 101A (men).....	1(0-3)	Infantry II, Mil. Sc. 102A (men)....	1(0-3)
Phys. Educ. M, Phys. Ed. 103.....	R(0-2) <i>or</i>	Phys. Educ. M, Phys. Ed. 104.....	R(0-2) <i>or</i>
Phys. Educ. W, Phys. Ed. 151A.....	R(0-3)	Phys. Educ. W, Phys. Ed. 152A.....	R(0-3)
Total.....	15 or 16	Total.....	15 or 16

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
Accounting I, Econ. 133.....	3(2-3)	Accounting II, Econ. 134.....	3(2-3)
Modern Language*.....	3(3-0)	Economics II, Econ. 104.....	3(3-0)
Economics I, Econ. 101.....	3(3-0)	Amer. Govt., Hist. 151, 152, <i>or</i> 153...	3(3-0)
Coml. Correspondence, Engl. 122....	3(3-0)	English Literature, Engl. 172.....	3(3-0)
General Psychology, Educ. 184.....	3(3-0)	Math. of Investments, Math. 150....	3(3-0)
Infantry III, Mil. Sc. 103A (men)...	1(0-3)	Infantry IV, Mil. Sc. 104A (men)....	1(0-3)
Phys. Educ. M, Phys. Ed. 105.....	R(0-2) <i>or</i>	Phys. Educ. M, Phys. Ed. 106.....	R(0-2) <i>or</i>
Phys. Educ. W, Phys. Ed. 153.....	R(0-3)	Phys. Educ. W, Phys. Ed. 154.....	R(0-3)
Total.....	15 or 16	Total.....	15 or 16

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
Adv. Accounting I, Econ. 280.....	3(3-0)	Cost Accounting, Econ. 287.....	3(3-0)
Elements of Statistics, Math. 126...	3(3-0)	Income Tax Accounting, Econ. 282..	2(2-0)
Money and Banking, Econ. 116.....	3(3-0)	Business Finance, Econ. 217.....	3(3-0)
Business Management, Econ. 126....	2(2-0)	Electives†.....	7(-)
Electives†.....	4(-)		
Total.....	15	Total.....	15

SENIOR

FIRST SEMESTER		SECOND SEMESTER	
Auditing, Econ. 285.....	3(3-0)	Adv. Accounting II, Econ. 281.....	3(3-0)
Govt. Accounting, Econ. 289.....	2(2-0)	Accounting Systems, Econ. 283.....	2(2-0)
Public Finance, Econ. 214.....	3(3-0)	Business Law II, Hist. 164.....	3(3-0)
Business Law I, Hist. 163.....	3(3-0)	Electives†.....	7(-)
Electives†.....	4(-)		
Total.....	15	Total.....	15

Summary.—Men: Physical education, two years required; military science, 4 hours; commerce courses, 56 hours; other prescribed courses, 42 hours; electives, 22 hours; total, 124 hours. Women: The same, except military science; total, 120 hours.

* Eight hours of physical or biological science are to be elected in this curriculum, if possible in the freshman year. Subject to any prerequisites, chemistry, physics, botany, zoölogy, entomology, and geology are available.

If Chemistry I, Chem. 101, is taken, Chemistry II, Chem. 102, is required also. Proficiency equivalent to nine hours of study in a modern language is required. Each unit of German, French, or Spanish offered for entrance reduces this requirement in that language by three hours, an equal amount of additional electives being chosen. Students who have had only one year of high-school algebra are assigned to a five-hour course in College Algebra, Math. 107. Because of the various contingencies and elective possibilities in the sciences and modern languages, the proper planning of the work of the freshman year requires great care and foresight.

† Attention is called to the list of special electives for the curriculum in commerce, *ante*.

**Groups of Electives and Options for Students in the
Division of General Science**

In addition to the courses included in the following groups, others will be found described in the exposition of the work of the respective departments. From any group elected a sufficient number of courses to constitute an effective block of knowledge must be taken. At least eight hours in any new field are usually required, but a smaller number will be honored if in a field already entered upon. In a modern language a student must reach a point equivalent to that obtained by college courses aggregating at least eight or nine hours. For strong preparation in any field the student should take a total of twenty to forty hours in a department, or in closely related departments; a large part of this work should be in courses designed for juniors and seniors.

Any student desiring to major in a certain field should confer with the head of the department in which most of the work is given. This conference should be held in the sophomore year, or earlier, so that a decision may be made in respect to the subjects that should be taken in that and other departments, and their proper sequence. These will vary with the objective of the student, which may be general culture, or preparation for teaching, research, or some other profession.

In connection with some of the groups listed below are brief statements giving the order in which the earlier courses in a field should be taken. Department heads should be consulted for additional advice.

1. English Language

Students majoring in English should elect courses 219 and 220, and twelve to twenty additional hours of English language and literature, under the guidance of the head of the department. Twelve hours of a modern foreign language is strongly recommended.

Engineering English, Engl. 110.....	2(2-0)	Adv. Composition II, Engl. 220.....	3(3-0)
Coml. Correspondence, Engl. 122....	3(3-0)	Adv. Prob. in Coml. Correspondence,	
Writ. and Oral Salesmanship, Engl.		Engl. 223.....	3(3-0)
123.....	3(3-0)	The Short Story I, Engl. 228.....	3(3-0)
Agricultural English, Engl. 137.....	3(3-0)	The Short Story II, Engl. 230.....	3(3-0)
Technical Writing, Engl. 207.....	2(2-0)	Oral English, Engl. 232.....	3(3-0)
Adv. Composition I, Engl. 219.....	3(3-0)	Advanced Grammar, Engl. 243.....	3(3-0)

2. English Literature

Chaucer, Engl. 260.....	3(3-0)	Milton and the Puritan Revolt, Engl.	
The English Bible, Engl. 271.....	3(3-0)	262.....	3(3-0)
Shakespearean Drama I, Engl. 273..	3(3-0)	American Survey, Engl. 265.....	2(2-0)
Wordsworth, Shelley, and Keats,		Shakespearean Drama II, Engl. 274,	3(3-0)
Engl. 278.....	3(3-0)	English Essayists of the Eighteenth	
World Classics I, Engl. 280.....	3(3-0)	and Nineteenth Cent., Engl. 276,	3(3-0)
Contemporary Fiction, Engl. 283....	3(3-0)	World Classics II, Engl. 281.....	3(3-0)
The Novel I, Engl. 286.....	3(3-0)	Contemporary Drama, Engl. 284....	3(3-0)
English Survey I, Engl. 288.....	2(2-0)	The Novel II, Engl. 287.....	3(3-0)
American Literature, Engl. 175.....	3(3-0)	English Survey II, Engl. 290.....	2(2-0)
The Literature of the Middle West,		Browning and Tennyson, Engl. 293..	3(3-0)
Engl. 268.....	3(3-0)	Contemporary Poetry, Engl. 297....	3(3-0)

3. German

German I, Mod. Lang. 101.....	3(3-0)	German IV, Mod. Lang. 202.....	3(3-0)
German II, Mod. Lang. 102.....	3(3-0)	Schiller, Mod. Lang. 209.....	3(3-0)
German III, Mod. Lang. 111.....	3(3-0)	Scientific German, Mod. Lang. 237..	4(4-0)

4. French and Spanish

Students who wish to major in Romance Languages should take such of the following courses as they have not already pursued: In French, courses 151, 152, 161, 251, and 261; in Spanish, courses 176, 177, 180, 272, 275, and 280. In each group the courses should be taken approximately in the order here shown and always in conformity with requirements as to prerequisites.

French I, Mod. Lang. 151.....	3(3-0)	Spanish I, Mod. Lang. 176.....	3(3-0)
French II, Mod. Lang. 152.....	3(3-0)	Spanish II, Mod. Lang. 177.....	3(3-0)
French III, Mod. Lang. 161.....	3(3-0)	Spanish III, Mod. Lang. 180.....	3(3-0)
French IV, Mod. Lang. 251.....	3(3-0)	Spanish IV, Mod. Lang. 272.....	3(3-0)
French Drama I, Mod. Lang. 257...	3(3-0)	Spanish Novel, Mod. Lang. 275....	3(3-0)
French Drama II, Mod. Lang. 258...	3(3-0)	Spanish Drama, Mod. Lang. 280....	3(3-0)
French Comp. and Conv., Mod.		Spanish Comp. and Conv. I, Mod.	
Lang. 261.....	3(3-0)	Lang. 194.....	3(3-0)
		Spanish Comp. and Conv. II, Mod.	
		Lang. 197.....	3(3-0)

5. Mathematics

Students continuing work in mathematics beyond trigonometry are advised to take courses in the following order: Math. 110, 250, 251, 201, 210, 213, and 216, and in any event strictly in accordance with the stated prerequisites.

Plane Anal. Geometry, Math. 110....	4(4-0)	Theory of Statistics, Math. 203.....	3(3-0)
Calculus I, Math. 250.....	4(4-0)	Advanced Calculus I, Math. 210....	3(3-0)
Calculus II, Math. 251.....	4(4-0)	Theory of Equations, Math. 216....	3(3-0)
Differential Equations, Math. 201....	3(3-0)	Modern Plane Geometry, Math. 225,	3(3-0)
Advanced Calculus II, Math. 213....	3(3-0)	Vector Analysis, Math. 230.....	3(3-0)
Higher Algebra, Math. 202.....	3(3-0)	Fourier Series, Math. 223.....	3(3-0)

6. Inorganic and Physical Chemistry

Students desiring extensive training in chemistry are advised to take the curriculum in industrial chemistry, supplementing the required work by electives chosen with the advice of the head of the department. Those who wish to prepare for teaching chemistry in high schools, in addition to courses 101 and 102, should elect courses 218 and 219, and courses 207, 241 and 206. Math. 110, 250, and 251 are very desirable, and Physics 135 and 140, or 145 and 150 are essential.

Adv. Inorg. Chemistry, Chem. 207...	3(3-0)	Ind. Electrochem, Chem. 205.....	2(2-0)
Inorg. Chem. Tech., Chem. 203.....	5(3-6)	Physical Chem. II, Chem. 272.....	3(3-0)
Org. Chem. Teach., Chem. 212.....	3(3-0)	Colloidal Chem., Chem. 213.....	2(2-0)
Physical Chemistry I, Chem. 206....	5(3-6)	Chemical Thermodyn., Chem. 215...	3(3-0)
Surf. Tension and Rel. Phenomena,		Theoret. Electrochem., Chem. 216..	3(3-0)
Chem. 209.....	2(2-0)	Electrochemistry Lab., Chem. 217..	2(0-6)
		Selected Topics in Inorg. Chemistry,	
		Chem. 271.....	2(2-0)

7. Organic and Physiological Chemistry

Preparation for work in biological chemistry or nutrition should include courses Chem. 101, 102, 121, 241, 206, 231, 237, and 239; Physics 135 and 140; Zoöl. 105 and 235, and Bact. 101, 106 or 121.

Organic Chemistry I, Chem. 218....	4(2-6)	Organic Chemistry II, Chem. 219...	4(2-6)
		Stereoisomeric and Tautomeric	
		Compounds, Chem. 225.....	2(2-0)
Organic Preparations, Chem. 223....	5(0-15)	Carbocyclic and Heterocyclic	
		Compounds, Chem. 226.....	2(2-0)
Physiological Chem., Chem. 231.....	5(3-6)	Qual. Org. Analysis, Chem. 224....	2(0-6)
Pathological Chem., Chem. 235.....	2(2-0)	Laboratory Technique in Animal	
Biochemical Analysis, Chem. 237....	2(0-6)	Nutrition, Chem. 239.....	2(0-6)

8. Analytical Chemistry

After completing Chem. 241 or 250 and 251, the student may take one or more courses in several different fields of analysis, such as soils, fertilizers, gases, feeds, foods, dairy products, etc.

Adv. Qual. Analysis, Chem. 240.....	3(1-6)	Quan. Analysis, Chem. 241.....	5(1-12)
Quan. Analysis A, Chem. 250.....	3(1-6)	Quan. Analysis B, Chem. 251.....	3(1-6)

9. Physics

Students who expect to teach physics in high schools should complete a course in college physics and at least ten hours additional as advised by the head of the department. Students who wish to major in physics may, with the advice of the major instructor, choose from courses 219, 222, 230, 232, 234, 252, 254, 257, 258, 259, and 260. Math. 110, 250, and 251 are desirable or necessary for the more advanced courses. Physics 110, 120, 133, and 155 are available for commerce or journalism students.

Household Physics, Phys. 101.....	4(3-3)	Spectroscopy, Phys. 229.....	3(2-3)
Descriptive Physics, Phys. 110.....	3(3-0)	Light, Phys. 230.....	3(3-0)
Photography, Phys. 120.....	2(1-3)	Light Laboratory, Phys. 232.....	1(0-3)
General Radio, Phys. 131.....	2(2-0)	Electron Theory, Phys. 234.....	3(3-0)
Meteorology, Phys. 133.....	3(3-0)	Radio Measurements, Phys. 245....	2(1-3)
Descriptive Astronomy, Phys. 155...	3(3-0)	History of Physics, Phys. 247.....	2(2-0)
Architectural Acoustics, Phys. 214...	1(1-0)	Modern Physics, Phys. 249.....	3(3-0)
Theoretical Astronomy, Phys. 216...	3(3-0)	Advanced Mechanics Laboratory,	
Heat, Phys. 219.....	3(3-0)	Phys. 252.....	1(0-3) or 2(0-6)
Heat Laboratory, Phys. 222.....	1(0-3)	Elec. and Magnetism, Phys. 257....	2(2-0)
X-Rays, Phys. 226.....	3(2-3)	Elec. Lab., Phys. 259.....	1(0-3) or 2(0-6)
		Probs. in Physics, Phys. 261.....	Cr. Ar.

10. Microbiology

Courses 101, 106, or 121 may be followed in order by 202, 204, 211, and 206.

Gen. Microbiology, Bact. 101.....	3(1-6)	Household Micro., Bact. 121.....	3(1-6)
Agric. Microbiology, Bact. 106.....	3(1-6)	Soil Micro., Bact. 202.....	3(3-0)
Hyg. Bacteriology, Bact. 206.....	4(2-6)	Soil Micro. Lab., Bact. 204.....	2(0-6)
Patho. Bacteriology II, Bact. 116...	4(2-6)	Pathogenic Bact. I, Bact. 111.....	4(2-6)
		Dairy Bact., Bact. 211.....	3(1-6)
		Poultry Bact. Bact. 216.....	3(1-6)

11. Botany

Courses 101 and 105 are prerequisite to all other courses, except 110. Students specializing in plant diseases should take, in order, courses 205, 202, and 232; those in plant physiology, courses 208, 210, and 232; those in taxonomy and ecology, courses 225, 228 or 234 and 232. For general training, all are available if the prerequisites have been taken.

General Botany I, Bot. 101.....	3(1-4, 2)	General Botany II, Bot. 105.....	3(1-4, 2)
Plant Pathology I, Bot. 205.....	3(1-4, 2)	Nat. and Dev. of Plants, Bot. 110...	3(3-0)
Morph. of the Fungi, Bot. 206.....	3(1-6)	Plant Histology, Bot. 216.....	3(1-6)
Plant Physiology I, Bot. 208.....	3(3-0)	Plant Physiology II, Bot. 210.....	3(1-4, 2)
Fruit Crop Diseases, Bot. 202.....	2(1-2, 1)	Plant Ecology, Bot. 228.....	2(2-0)
Problems in Botany, Bot. 232.....	Cr. Ar.	Field Crop Diseases, Bot. 241.....	3(1-6)
Taxonomic Botany of the Flowering Plants, Bot. 225.....	3(1-4, 2)	Plant Cytology, Bot. 268.....	3(1-6)
Literature of Botany, Bot. 266.....	2(2-0)		

12. Zoölogy

A student who wishes to major in zoölogy should, in connection with the required work in this field or after completing it, elect from the courses listed below subjects varying with his special interest, such as parasitology, embryology, genetics, etc. Consult the head of the department.

Human Physiology, Zoöl. 235.....	4(3-3)	Comp. Anat. of Vertebs., Zoöl. 246..	4(2-6)
Cytology, Zoöl. 214.....	4(2-6)	Evol. and Heredity, Zoöl. 217, 3(2-3) or	4(2-6)
Parasitology, Zoöl. 208.....	3(2-3)	Embryology B, Zoöl. 219A.....	4(3-3)
Comp. and Human Neur., Zoöl. 250..	3(2-3)	Adv. Embryology, Zoöl. 220.....	4(2-6)
Taxonomy of Parasites, Zoöl. 240...	2(1-3)	Human Parasitology, Zoöl. 218.....	3(3-0)
Field Zoölogy, Zoöl. 205.....	3(1-6)	Zoölogy Technic, Zoöl. 206.....	1 or 2 (-)
Heredity and Eugenics, Zoöl. 216...	2(2-0)	Zoöl. and Ent. Seminar, Zoöl. 225...	1(1-0)
Problems in Zoölogy, Zoöl. 203.....	Cr. Ar.	Genetics Seminar, Zoöl. 207.....	1(1-0)

13. Geology

The basic courses in geology are 103, 203, and 209. Students who expect to major in Geology should take these three courses as early in their collegiate careers as possible.

Engineering Geology, Geol. 102.....	4(3-3)	General Geology, Geol. 103.....	3(3-0)
Economic Geology, Geol. 207.....	4(3-3)	Historical Geology, Geol. 203.....	4(3-3)
Crystal. and Mineralogy, Geol. 209..	4(2-6)	Physiographic Geol., Geol. 110.....	3(3-0)
Invert. Paleontology, Geol. 220.....	4(3-3)	Structural Geology, Geol. 215.....	4(3-3)
Prin. of Geography, Geol. 240.....	3(3-0)	Vert. Paleontology, Geol. 255.....	3(3-0)
Optical Mineralogy, Geol. 234.....	4(2-6)	Field Meth. in Geology, Geol. 230...	3(1-6)

14. Entomology

Students majoring in entomology, with due regard for prerequisites, should take courses Ent. 203, 211, 212, 231, 216, 217, 218, 226, 206, 221, and 238, and preferably in this order.

Gen. Entomology, Ent. 101.....	3(3-0)	Prin. of Taxonomy, Ent. 216.....	1(1-0)
Gen. Econ. Entomology, Ent. 203...	3(2-3)	Taxonomy of Insects I, Ent. 217...	2(0-6)
Extl. Insect Morphology, Ent. 211...	3(1-6)	Taxonomy of Insects II, Ent. 218...	3(0-9)
Intl. Insect Morphology, Ent. 212...	3(0-9)	Adv. Gen. Entomology, Ent. 221...	3(3-0)
Ent. and Zoöl. Literature, Ent. 231...	2(2-0)	Staple Crop Entomology, Ent. 206...	3(2-3)
Medical Entomology, Ent. 226.....	3(2-3)	Entom. Problems, Ent. 238.....	2 to 4 hrs.
Advanced Apiculture, Ent. 229.....	3(2-3)	General Apiculture, Ent. 208.....	3(2-3)
		Insect Physiology, Ent. 240.....	3(3-0)

15. History, Government, and Law

To prepare for teaching history in high school the student should have at least fifteen hours of college history following two years of history in high school or its equivalent in college. The advice of the head of the department should be followed in each case.

Ancient Civilizations, Hist. 101.....	3(3-0)	Medieval Europe, Hist. 102.....	3(3-0)
English History, Hist. 121.....	3(3-0)	Current History, Hist. 126.....	1(1-0)
American History I, Hist. 201.....	3(3-0)	Am. Indust. History, Hist. 105.....	3(3-0)
American History II, Hist. 202.....	3(3-0)	American History III, Hist. 203.....	3(3-0)
American Agr'l History, Hist. 204...	3(3-0)	Latin America, Hist. 208.....	3(3-0)
Modern Europe I, Hist. 115.....	3(3-0)	Modern Europe II, Hist. 223.....	3(3-0)
The Far East, Hist. 236.....	3(3-0)	20th Century Europe, Hist. 234.....	3(3-0)
Hist. of Com. and Ind., Hist. 110....	3(3-0)	The British Empire, Hist. 226.....	2(2-0)
Am. Political Parties, Hist. 206.....	2(2-0)	History of the Home, Hist. 225.....	3(3-0)
Immig. and Intern'l Rel., Hist. 228..	2(2-0)	International Law, Hist. 256.....	2(2-0)
Am. Government, Hist. 151.....	3(3-0)	Gov't Regulation of Bus., Hist. 260..	2(2-0)
Am. Nat'l Government, Hist. 152...	3(3-0)	Am. State Government, Hist. 153....	3(3-0)
Comp. Government, Hist. 252.....	2(2-0)	History of Religions, Hist. 231.....	2(2-0)
Farm Law, Hist. 175.....	2(2-0)	Commercial Law, Hist. 160.....	1(1-0)
Business Law I, Hist. 163.....	3(3-0)	Business Law II, Hist. 164.....	3(3-0)
Land Law, Hist. 276.....	2(2-0)	International Law, Hist. 256.....	2(2-0)

16. Economics and Sociology

Some of the subjects in this list are required in the several curricula of the institution, and the others are available as electives if any prerequisites have been satisfied. Additional work is offered in the Department of Agricultural Economics.

Economics I, Econ. 101.....	3(3-0)	Money and Banking, Econ. 116.....	3(3-0)
Public Finance, Econ. 214.....	3(3-0)	Business Finance, Econ. 217.....	3(3-0)
Labor Problems, Econ. 233.....	2(2-0)	Transportation Probs., Econ. 229....	2(2-0)
Marketing, Econ. 246.....	3(3-0)	Business Management, Econ. 126....	2(2-0)
Advanced Economics, Econ. 251....	3(3-0)	Problems in Economics, Econ. 248...	Cr. Ar.
Sociology, Econ. 151.....	3(3-0)	Com. Org. and Lead., Econ. 267.....	3(3-0)
Rural Sociology, Econ. 156.....	3(3-0)	Adv. Sociology, Econ. 273.....	3(-)
Social Problems, Econ. 257.....	2(2-0)	Adv. Rural Sociology, Econ. 270....	3(-)
Property Insurance, Econ. 242.....	2(2-0)	Investments, Econ. 222.....	3(3-0)
Economics II, Econ. 104.....	3(3-0)	Life Insurance, Econ. 244.....	2(2-0)

17. Accounting

Accounting I, Econ. 133.....	3(2-3)	Accounting Systems, Econ. 283.....	2(2-0)
Accounting II, Econ. 134.....	3(2-3)	Institutional Accounting, Econ. 284..	2(2-0)
Adv. Accounting I, Econ. 280.....	3(3-0)	Auditing, Econ. 285.....	3(3-0)
Adv. Accounting II, Econ. 281.....	3(3-0)	Cost Accounting, Econ. 287.....	3(3-0)
Income Tax Accounting, Econ. 282..	2(2-0)	Governmental Accounting, Econ. 289,	2(2-0)

18. Education and Psychology

Students desiring to qualify for the state teacher's certificate based on sixty hours of college work should take course 184 in Psychology, and courses 107, 111, and 129 in Education. Those desiring to qualify for the certificate based on graduation from a four-year curriculum should take course 184 in Psychology, and courses 109, 163, and 210 in Education. Advice should be obtained from the head of the Department of Education in respect to additional courses necessary. See, also, "Education" in this catalogue for information concerning certificates.

Gen. Psychology, Educ. 184.....	3(3-0)	Statist. Meth. Applied to Education,	
School Management, Educ. 107.....	3(3-0)	Educ. 223.....	3(3-0)
Educational Psychology, Educ. 109..	3(3-0)	Principles of Secondary Education,	
Methods of Teaching, Educ. 111....	3(3-0)	Educ. 236.....	3(3-0)
Teach. Participation in Grade School,		Educ. Psychology, Educ. 239.....	3(3-0)
Educ. 129.....	1(1-0) to 4(4-0)	The Psychology of Childhood and	
Meth. of Teaching Home Economics,		Adolescence, Educ. 250.....	3(3-0)
Educ. 132.....	3(3-0)	Abnormal Psychology, Educ. 254....	3(3-0)
Meth. of Teach. Agric., Educ. 136...	3(3-0)	Adv. Gen. Psychology, Educ. 257...	3(3-0)
Teach. Participation in High School,		Experimental Psychology, Educ. 259,	3(3-0)
Educ. 163.....	1(1-0) to 4(4-0)	Mental Tests, Educ. 260.....	3(3-0)
Rural Life and Educ., Educ. 201....	3(3-0)	Psyc. of Excep. Children, Educ. 266,	3(3-0)
Extracur. Activities, Educ. 202.....	3(3-0)	Animal Psychology, Educ. 269.....	3(3-0)
Educ. Admin., Educ. 210.....	3(3-0)	Social Psychology, Educ. 270.....	3(3-0)
Educ. Measurements, Educ. 212.....	3(3-0)	Psychology of Art, Educ. 276.....	3(3-0)

20. Industrial Journalism

While those who wish to give much attention to journalism will choose the curriculum in industrial journalism, many in other curricula desire some training in this field. Selection from the following list may be made in so far as the prerequisites permit.

Journalistic Voca., Ind. Jour. 140...	2(2-0)	Industrial Writing, Ind. Jour. 161...	2(2-0)
Elem. Journalism, Ind. Jour. 151...	2(2-0)	Jour. for Women, Ind. Jour. 172...	2(2-0)
Ind. Feature Writing, Ind. Jour. 167,	2(2-0)	Magazine Features, Ind. Jour. 270..	2(2-0)
Materials of Jour., Ind. Jour. 265...	2(2-0)	Jour. Surveys, Ind. Jour. 278.....	2(0-6)

23. Music

Students in the various curricula are permitted to study theoretical or applied music, but the acceptability for elective credit of work in voice or instrumental music is contingent upon the attainment of an effective degree of proficiency.

APPLIED MUSIC

Instrument, Mus. 153.....	0-4 hours	Double Bass, Mus. 167.....	0-4 hours
Voice, Mus. 156.....	0-4 hours	Organ, Mus. 172.....	0-4 hours
Violin, Mus. 158.....	0-4 hours	Choral Ensemble, Mus. 194.....	½(0-2)
Piano, Mus. 161.....	0-4 hours	Orchestra, Mus. 195.....	½(0-2)
Violoncello, Mus. 163.....	0-4 hours	Band, Mus. 198.....	½(0-2)

THEORETICAL MUSIC

Harmony I, Mus. 101.....	2(2-0)	Harmony II, Mus. 102.....	2(2-0)
Harmony III, Mus. 103.....	2(2-0)	Harmony IV, Mus. 104.....	2(2-0)
Counterpoint, Mus. 108A.....	2(2-0)	Mus. Form and Analysis, Mus. 111..	1(1-0)
Hist. and Appre. of Music I, Mus. 130.....	2(2-0)	Hist. and Appre. of Music II, Mus. 131.....	2(2-0)
School Music I, Mus. 138.....	2(2-0)	School Music II, Mus. 139.....	2(2-0)
Instrn. and Orchestrn., Mus. 136.....	3(3-0)	School Music III, Mus. 143.....	2(2-0)

25. Military Science and Tactics

Men who have completed the basic course in infantry may elect the advanced course if approved by the president, the dean, and the head of the Department of Military Science and Tactics.

Infantry V, Mil. Sc. 109.....	3(2-3)	Infantry VI, Mil. Sc. 110.....	3(2-3)
Infantry VII, Mil. Sc. 111.....	3(2-3)	Infantry VIII, Mil. Sc. 112.....	3(2-3)

26. Physical Education and Athletics

In connection with the required work or after its completion, students may elect courses in physical education. For a special state certificate at least forty hours are required. The courses listed below, and others on the advice of the head of the department, are available.

FOR MEN

Gymnastics I, Phys. Ed. 115A.....	2(1-3)	Gymnastics II, Phys. Ed. 117A.....	2(0-6)
Football, Phys. Ed. 125.....	3(2-3)	Track and Field Sports, Phys. Ed. 140A.....	2(1-3)
Basketball, Phys. Ed. 130A.....	2(1-3)	Baseball, Phys. Ed. 133.....	2(1-3)
Swimming M I, Phys. Ed. 121.....	1(0-3)	Wrestling, Phys. Ed. 128.....	1(0-3)
Boxing, Phys. Ed. 132.....	1(0-3)	Swimming M II, Phys. Ed. 122.....	1(0-3)
School Hygiene, Phys. Ed. 148.....	3(3-0)	Playground Management and Games M, Phys. Ed. 145A.....	2(2-0)
Apparatus, Phys. Ed. 109.....	1(0-3)	Personal Hygiene, Phys. Ed. 119....	2(2-0)
First Aid and Mas., Phys. Ed. 113A..	3(3-0)		

FOR WOMEN

The following courses are available after completing the two years of required work:

Folk Dancing I, Phys. Ed. 160.....	1(0-3)	Folk Dancing II, Phys. Ed. 161.....	1(0-3)
Playground Management and Games W, Phys. Ed. 182A.....	2(1-3)	Gen. Technic IV, Phys. Ed. 157D...	2(1-3)
Gen. Technic III, Phys. Ed. 157C...	2(1-3)	Gen. Technic VI, Phys. Ed. 157F...	2(1-3)
Gen. Technic V, Phys. Ed. 157E....	2(1-3)	Prin. Health Education W, Phys. Ed. 163.....	3(3-0)

27. Public Speaking

Courses covering various aspects of public speech are open for election after completing any prerequisites. The head of the department should be consulted for advice as to the individual needs.

Extm. Speech I, Pub. Spk. 106.....	2(2-0)	Extm. Speech II, Pub. Spk. 108....	2(2-0)
Oral Interpretation, Pub. Spk. 101..	2(2-0)	Dramatic Reading, Pub. Spk. 102...	2(2-0)
Parl. Proceed., Pub. Spk. 126.....	1(1-0)	Lecture Recital, Pub. Spk. 115.....	2(2-0)
Dramatic Produc. I, Pub. Spk. 130..	2(2-0)	Dramatic Produc. II, Pub. Spk. 135,	2(2-0)
Argum. and Debate, Pub. Spk. 121..	2(2-0)	Advanced Debate, Pub. Spk. 222...	2(2-0)
Pageantry, Pub. Spk. 205.....	3(3-0)	The Public Program, Pub. Spk. 225,	2(2-0)

30. Social Science

(Political and Social History, Government, Economics, and Sociology.)

In the curriculum in industrial journalism students are required to elect twelve hours in a social science option. The following list includes some subjects, and many more are offered by the several departments. See, also, groups 15 and 16.

American History I, Hist. 201.....	3(3-0)	Am. Hist. II or III, Hist. 202 or 203..	3(3-0)
Am. Pol. Parties, Hist. 206.....	2(2-0)	Am. State Government, Hist. 153....	3(3-0)
Am. Natl. Government, Hist. 152...	3(3-0)	Modern Europe I, Hist. 115.....	3(3-0)
Latin America, Hist. 208.....	3(3-0)	Modern Europe II, Hist. 223.....	3(3-0)
Agric. Economics, Ag. Ec. 101.....	3(3-0)	English History, Hist. 121.....	3(3-0)
Money and Banking, Econ. 116.....	3(3-0)	Economics I, Econ. 101.....	3(3-0)
Business Finance, Econ. 217.....	3(3-0)	Public Finance, Econ. 214.....	3(3-0)
Markt. of Farm Prod., Ag. Ec. 202..	3(3-0)	Labor Problems, Econ. 233.....	2(2-0)
Agric. Land Probs., Ag. Ec. 218.....	3(3-0)	Sociology, Econ. 151.....	3(3-0)

31. Applied Science

Students in the curriculum of industrial journalism who do not wish to elect subjects directly related to a single industry are permitted to elect sciences that support industries and subjects that involve applications of the sciences, in so far as they have satisfied requirements as to prerequisites.

General Botany I, Bot. 101.....	3(1-4, 2)	General Botany II, Bot. 105.....	3(1-4, 2)
Plant Pathology I, Bot. 205.....	3(1-4, 2)	Field Crop Diseases, Bot. 241.....	3(1-6)
Fruit Crop Diseases, Bot. 202.....	2(1-2, 1)	Plant Ecology, Bot. 228.....	2(2-0)
Farm Forestry, Hort. 114.....	3(2-3)	Nature and Dev. of Plants, Bot. 110,	3(3-0)
Seed Iden. and Weed Cont., Agron.		El. of Horticulture, Hort. 107.....	3(2-3)
105.....	2(1-3)	Small Fruits, Hort. 110.....	2(2-0)
General Zoology, Zool. 105.....	5(3-6)	General Microbiology, Bact. 101...	3(1-6)
Parasitology, Zool. 208.....	3(2-3)	Staple Crop Ent., Ent. 206.....	3(2-3)
Landscape Gardening I, Hort. 125...	3(3-0)	General Apiculture, Ent. 208.....	3(2-3)
Hygienic Bacteriology, Bact. 206....	4(2-6)	Ap. Nutrition, Food and Nutr. 121..	2(2-0)
Gen. Entomology, Ent. 101.....	3(3-0)	General Geology, Geol. 103.....	3(3-0)
Gen. Economic Ent., Ent. 203.....	3(2-3)	Historical Geology, Geol. 203.....	4(3-3)
Hort. Entomology, Ent. 201.....	2(2-0)	Meteorology, Physics 133.....	3(3-0)
Elem. Org. Chemistry, Chem. 123...	3(2-3)	Household Physics, Physics 101....	4(3-3)
Dairy Chemistry, Chem. 254.....	3(1-6)	Photography, Physics 120.....	2(1-3)
Economic Geology, Geol. 207.....	4(3-3)	Descriptive Physics, Physics 110....	3(3-0)
Human Nutrition, Food and Nutr.			
112.....	3(3-0)		
Physiographic Geology, Geol. 110....	3(3-0)	Principles of Geography, Geol. 240...	3(3-0)
Crystal. and Mineralogy, Geol. 209..	4(2-6)	Vertebrate Paleontology, Geol. 255..	3(3-0)

32. Home Economics

This group is suggested for women in the curriculum in industrial journalism. It states the fundamental subjects in the three lines, food, clothing and applied art. The required option related to an industry may be satisfied by fifteen hours in one or more of these lines. Additional subjects in each line are described in the department sections of the catalogue. Prerequisites count on the group requirement.

Household Physics, Phys. 101.....	4(3-3)	Household Microbiology, Bact. 121..	3(1-6)
Gen. Org. Chemistry, Chem. 122....	5(3-6)	Clothing for the Individual, Clo. and	
Foods I, Food and Nutr. 102.....	5(3-6)	Text. 103.....	4(1-9)
Foods II, Food and Nutr. 107.....	3(1-6)	Elem. Design I, Art 101A.....	2(0-6)
Human Nutrition, Food and Nutr.		Elem. Design II, Art 101B.....	2(0-6)
112.....	3(3-0)	Intermediate Design, Art 103.....	2(0-6)
Dietetics, Food and Nutr. 202.....	4(3-3)	Interior Decoration I, Art 113.....	2(0-6)
Ap. Nutrition, Food and Nutr. 121..	2(2-0)	Principles of Art I, Art 124.....	3(3-0)
Child Guidance I, Child Welf. 201...	3(1-6)	Advanced Design A, Art 105.....	2(0-6)
Child Guidance II, Child Welf. 206..	3(3-0)	Costume Design I, Art 130.....	2(0-6)
The Family, Child Welf. 216.....	2(2-0)		

35. Agriculture

This group, compiled for the use of young men who elect the agriculture option in connection with their work in industrial journalism, gives the basic subjects in some agricultural lines. Subjects for which these are prerequisite are also acceptable. See the expositions of the work of the several departments in the Division of Agriculture.

General Botany I, Bot. 101.....	3(1-4, 2)	General Botany II, Bot. 105.....	3(1-4, 2)
El. of An. Husb., An. Husb. 125.....	3(2-4)	El. of Horticulture, Hort. 107.....	3(2-3)
El. of Dairying, Dairy Husb. 101....	3(2-3)	Dairy Cattle Judging, Dairy Husb. 104.....	1(0-3)
Elem. Org. Chemistry, Chem. 123....	3(2-3)	Prin. of Feeding, An. Husb. 152.....	3(3-0)
Plant Pathology I, Bot. 205.....	3(1-4, 2)	Field Crop Diseases, Bot. 241.....	3(1-6)
Soils, Agron. 130.....	4(3-3)	Farm Crops, Agron. 101.....	4(2-6)
Farm Poultry Prod., Poult. Husb. 101.....	2(1-2, 1)	Genetics, An. Husb. 221.....	3(3-0)

36. Drawing and Art

Students in industrial journalism, with due regard for prerequisites, may elect fifteen hours from this group in order to fulfill the requirement in respect to subjects related to an industry.

Object Drawing I, Arch. 111.....	2(0-6)	Object Drawing II, Arch. 114.....	2(0-6)
Design I, Arch. 142.....	3(0-9)	Design II, Arch. 144.....	3(0-9)
Coml. Illustration I, Arch. 165.....	2(0-6)	Coml. Illustration II, Arch. 170.....	2(0-6)
General Hist. of Arch., Arch. 244.....	3(3-0)	Domestic Arch., Arch. 124.....	2(2-0)
Pencil Rend. and Sketch., Arch. 116,	2(0-6)	Pen and Ink Drawing I, Arch. 134...	2(0-6)
Water Color I, Arch. 118.....	2(0-6)	Water Color II, Arch. 119.....	2(0-6)
Still-life Drawing, Arch. 117.....	2(0-6)	Life Drawing I, Arch. 121.....	2(0-6)
Clay Modeling, Arch. 133.....	2(0-6)	Life Drawing II, Arch. 123.....	2(0-6)
Adv. Free-hand Draw. I, Arch. 201..	2(0-6)	Adv. Free-hand Draw. II, Arch. 206..	2(0-6)
Etching I, Arch. 217.....	2(0-6)	Etching II, Arch. 218.....	2(0-6)
Oil Painting I, Arch. 230.....	2(0-6)	Oil Painting II, Arch. 235.....	2(0-6)
Hist. of Paint. and Sculp., Arch. 179,	3(3-0)	Block Prints, Arch. 137.....	2(0-6)

37. Manual and Industrial Arts

Fifteen hours may be chosen from this group by students in industrial journalism in satisfaction of the option related to an industry. Students preparing to teach manual training will require credits in at least forty hours in that line. Prerequisites must be observed.

Engr. Drawing, Mach. Des. 101.....	2(0-6)	Engr. Woodwork, Shop 101.....	1(0-3)
Descr. Geom., Mach. Des. 106.....	2(0-6)	Manual Training for Primary Grades, Shop 117.....	2(0-6)
Woodworking for Grammar Grades, Shop 120.....	2(0-6)	Woodworking I for High Schools, Shop 125.....	2(0-6)
Woodworking II for High School, Shop 130.....	2(0-6)	Wood Turning, Shop 135.....	2(0-6)
Forging, Shop 150.....	1(0-3)	Farm Carpentry I, Shop 147.....	3(1-6)
Machine Tool Work I, Shop 170....	2(0-6)	Machine Tool Work II, Shop 192....	2(0-6)
Machine Tool Work III, Shop 193....	1(0-3)	Metallurgy, Shop 165.....	2(2-0)
Gas Engines and Tractors, Agric. Engr. 130.....	3(2-3)	Farm Buildings, Agric. Engr. 101..	3(2-3)
Machine Drawing I, Mach. Des. 111,	2(0-6)	Surveying I, Civ. Engr. 102.....	2(0-6)
Reed Furn. Construction, Shop 119..	2(0-6)	Farm Shop Methods, Shop 175.....	3(1-6)
Foundry Production, Shop 161.....	1(0-3)	Metallography I, Shop 167.....	1(0-3)
Adv. Shop Practice, Shop 261.....	1 to 5 hrs.	Advanced Woodwork, Shop 140....	2(0-6)
Farm Blacksmithing I, Shop 157....	1(0-3)	Sheet Metal Work, Shop 173.....	2(0-6)
Farm Blacksmithing II, Shop 158....	1(0-3)	Farm Machinery, Agric. Engr. 108..	3(2-3)

38. Printing

Students in industrial journalism may elect fifteen hours from this group in order to fulfill the requirement in respect to subjects related to an industry, or they may elect courses in this group to satisfy elective requirements, choosing not fewer than eight hours.

Ad. Composition I, Ind. Jour. 108..	2(0-6)	Ad. Composition II, Ind. Jour. 111..	2(0-6)
Ad. Composition III, Ind. Jour. 112,	2(0-6)	Job Composition I, Ind. Jour. 114..	2(0-6)
Job Composition II, Ind. Jour. 118..	2(0-6)	Job Composition III, Ind. Jour. 120,	2(0-6)
Press Work I, Ind. Jour. 122.....	2(0-6)	Press Work II, Ind. Jour. 126.....	2(0-6)

40. Milling Industry

Students in general science or industrial chemistry may elect work in milling industry for which they have taken the prerequisites.

Milling Practice I, Mill. Ind. 109....	3(1-6)	El. of Milling, Mill. Ind. 101.....	2(1-3)
Wheat and Flour Testing, Mill. Ind. 205.....	3(0-9)	Flow Sheets, Mill. Ind. 103.....	2(0-6)
Advanced Wheat and Flour Testing, Mill. Ind. 210.....	1 to 5 (-)	Milling Practice II, Mill. Ind. 111...	3(1-6)
Farm Crops, Agron. 101.....	4(2-6)	Mill. Qual. of Wheat, Mill. Ind. 212,	3(3-0)
Grain Marketing, Ag. Ec. 203.....	3(3-0)	Exper. Baking, Mill. Ind. 206.....	3(1-6)
Quantitative Analysis A, Chem. 250,	3(1-6)	Grain Grad. and Judging, Agron. 108,	2(0-6)
Elem. Org. Chemistry, Chem. 123. .	3(2-3)	Quant. Analysis B, Chem. 251.....	3(1-6)
Milling Technology I, Mill. Ind. 201,	2(0-6)	The Chem. of Proteins, Chem. 236A,	3(2-3)
Probs. in Milling, Mill. Ind. 214.....	Cr. Ar.	Milling Technology II, Mill. Ind. 202,	2(0-6)
		Colloidal Chemistry, Chem. 213.....	2(2-0)

42. Personnel Management

Students who desire specific training for personnel and executive work should elect Educ. 273, Econ. 126, 233, and 267 along with such other courses from the following group as may seem desirable.

Economics II, Econ. 104.....	3(3-0)	Vocational Guidance, Educ. 230A...	3(3-0)
Business Management, Econ. 126....	2(2-0)	Stat. Meth. App. to Educ., Educ. 233.....	3(3-0)
Principles of Accounting, Econ. 136,	3(3-0)	Vocational Education, Educ. 241....	3(3-0)
Corporation Organization and Finance, Econ. 219.....	2(2-0)	Mental Tests, Educ. 260.....	3(3-0)
Labor Problems, Econ. 233.....	2(2-0)	Technic of Mental Testing, Educ. 261,	3(1-6)
Advanced Economics, Econ. 251....	3(3-0)	Psych. of Adv. and Selling, Educ. 265,	3(3-0)
Social Problems, Econ. 257.....	2(2-0)	Social Psychology, Educ. 270.....	3(3-0)
Com. Org. and Lead., Econ. 267.....	3(3-0)	Psych. of Personnel Mgmt., Educ. 273.....	3(3-0)
Advanced Sociology, Econ. 273.....	3(3-0)		

44. Social Welfare Work

Economics I, Econ. 101.....	3(3-0)	Psych. of Pers. Mgmt., Educ. 273...	3(3-0)
Economics II, Econ. 104.....	3(3-0)	Personal Health, Child Welf. 101...	2(2-0)
Sociology, Econ. 151.....	3(3-0)	Child Guidance I, Child Welf. 201...	3(1-6)
Rural Sociology, Econ. 156.....	3(3-0)	Child Guidance II, Child Welf. 206..	3(3-0)
Labor Problems, Econ. 233.....	2(2-0)	Family Health, Child Welf. 211....	3(3-0)
Social Problems, Econ. 257.....	2(2-0)	The Family, Child Welf. 216.....	2(2-0)
Com. Org. and Lead., Econ. 267.....	3(3-0)	Clo. for the Ind., Clo. and Text. 103,	4(1-9)
Advanced Sociology, Econ. 273.....	3(3-0)	Clo. Selection, Clo. and Text. 110...	2(2-0)
General Psychology, Educ. 184.....	3(3-0)	Foods I, Food and Nutr. 102.....	5(3-6)
The Psychology of Childhood and Adolescence, Educ. 250.....	3(3-0)	The House, Household Econ. 107...	3(2-3)
Abnormal Psychology, Educ. 254....	3(3-0)	Home Mgmt., Household Econ. 116,	3(1-6)
Social Psychology, Educ. 270.....	3(3-0)	Heredity and Eugenics, Zoöl. 216...	2(2-0)

45. Art and Design

Elementary Design I, Art 101A....	2(0-6)	Drawing II, Art 122.....	2(0-6)
Elementary Design II, Art 101B....	2(0-6)	Principles of Art I, Art 124.....	3(3-0)
Design in the Crafts, Art 102.....	2(0-6)	Principles of Art II, Art 126.....	3(3-0)
Intermediate Design, Art 103.....	2(0-6)	Lettering, Art 127.....	2(0-6)
Advanced Design A, Art 105.....	2(0-6)	Costume Design I, Art 130.....	2(0-6)
Art of Southwest Indians, Art 111...	1(1-0)	Costume Design II, Art 134.....	2(0-6)
Interior Decoration I, Art 113.....	2(0-6)	Costume Design III, Art 138.....	2(0-6)
Interior Decoration II, Art 115.....	2(0-6)	Advanced Design B, Art 203.....	2(0-6)
Interior Decoration III, Art 117....	2(0-6)	Costume Design IV, Art 207.....	2(0-6)
Drawing I, Art 120.....	2(0-6)		

Bacteriology

Professor BUSHNELL
Professor GAINES
Professor FAY

Assistant Professor BRANDLY
Assistant Professor FOLTZ

The Department of Bacteriology occupies part of the first and second floors of Veterinary Hall. The space is divided into offices and private laboratories, an experiment station and research laboratory, two large general laboratories, incubator or temperature room, preparation room, and stock room. The laboratories are well lighted and equipped with gas, lockers, electric refrigerators, sterilizers, wall cases, microscopes, and other modern facilities necessary for bacteriological work.

The instruction consists of lectures, recitations, demonstrations, and laboratory practice. Printed synopses of lectures and printed laboratory directions are furnished the students in some of the courses; in others textbooks are required. The department library contains textbooks on bacteriology and allied subjects, also the current files of the important technical periodicals relating to bacteriology. These are at the constant disposal of the students for reference. To those who desire graduate work the department offers excellent facilities.

Bacteriology is presented to the students as a biological science and as a practical factor in everyday life. In this subject only the simplest forms of life, consisting almost invariably of one-celled organisms, are studied. It is now possible to study these microscopical forms with ease and accuracy, thus paving the way for a more complete study and better understanding of cells in the aggregate. The second point of view from which this subject is approached is that of its practical application in agriculture, medicine, domestic science, and sanitation.

COURSES IN BACTERIOLOGY

FOR UNDERGRADUATE CREDIT

101. GENERAL MICROBIOLOGY. 3(1-6)*; I, II, and SS. Not open to students who have credit in Bact. 106 or 121. Prerequisite: Chem. 102 or 110. Dr. Gaines and Mr. Foltz.

Morphological and biological characters, classification and distribution of bacteria, factors necessary for the development of bacteria, culture media, cultural features, staining values, and fundamental principles of applied bacteriology.

Laboratory.—The student prepares culture media and becomes familiar with principles of sterilization and incubation, and with general laboratory technic. Deposit, \$8.

106. AGRICULTURAL MICROBIOLOGY. 3(1-6); I and II. Not open to students who have credit in Bact. 101 and 121. Prerequisite: Chem. 122. Dr. Gaines and Dr. Fay.

A general course emphasizing particularly the relation of microorganisms to agriculture.

Laboratory.—Methods of cultivating and studying bacteria, yeasts, and molds; methods for quantitative and qualitative analysis of water, milk, etc.; methods of sterilization and use of germicidal agents. Deposit, \$8.

111, 116. PATHOGENIC BACTERIOLOGY I and II. 4(2-6) each; II and I, respectively. Courses designed especially for students in veterinary medicine. Prerequisite: Chem. 122. Dr. Bushnell and Dr. Brandly.

* The number before the parenthesis indicates the number of hours of credit; the first number within the parentheses indicates the number of hours of recitation each week; the second shows the number of hours to be spent in laboratory work each week; and the third, where there is one, indicates the number of hours of outside work in connection with the laboratory required each week. I, II, and SS indicate that the course is given the first semester, second semester, and summer school, respectively.

I: Distribution; morphological and biochemical features of microorganisms; factors necessary for the development and cultivation of bacteria; fundamental principles of bacteriology as applied to veterinary medicine. II: Morphology, powers of resistance, pathogenesis, channels of infection, and means of dissemination of pathogenic bacteria; epizootic and epidemic diseases of unknown etiology; manufacture, standardization, preparation for the market, and use of vaccines, antitoxins, and other biological products related to diagnosis, prevention, and treatment of specific infectious diseases; and various other topics.

Laboratory.—I: General laboratory technic; pathogenic microorganisms studied morphologically, culturally, and biochemically; quantitative and qualitative examinations of milk and of water. II: Microscopical and cultural characteristics of pathogenic microorganisms continued; laboratory animal inoculation, autopsy, and diagnosis; prevention and treatment of specific infectious diseases; experimental production of antitoxins, agglutinins, precipitins, and cytolyticins, etc. Deposit, \$8 for each course.

121. HOUSEHOLD MICROBIOLOGY. 3(1-6); I, II, and SS. Not open to students who have credit in Bact. 101 or 106. Prerequisite: Chem. 122. Mr. Foltz.

Classification, distribution, and relative importance of bacteria; morphological and biochemical studies of microorganisms; factors necessary for the proper development of bacteria; fundamental principles of the science as applied to household economics.

Laboratory.—Practical applications of theories discussed in the classroom, such as bacteriological study of water, milk, and foods; determination of the potability of water; microscopical study of yeasts and molds; methods of food preservation; the germicidal action of various disinfectants, etc. Deposit, \$8.

125. WATER AND SEWAGE BACTERIOLOGY. 2(0-6); I. Prerequisite: Chem. 108. Dr. Gainey.

A course designed to acquaint the student of engineering with the fundamentals of water purification and sewage disposal, as affected by the action of microorganisms; quantitative and qualitative analyses of water supplies; laboratory study of some of the important microbial changes involved in the disposal of sewage. Deposit, \$5.

FOR GRADUATE AND UNDERGRADUATE CREDIT

202. SOIL MICROBIOLOGY. 3(3-0); II. Prerequisite: Bact. 101 or 106. Offered in 1936-'37 and in alternate years thereafter. Dr. Gainey.

The influences of depth and character of soil, temperature, moisture, chemical action, aëration, and other factors upon the activities of soil microorganisms; the influence of such phenomena as ammonification, nitrification, denitrification, symbiotic and nonsymbiotic nitrogen fixation upon crop production. Various texts are recommended as reference books.

204. SOIL MICROBIOLOGY LABORATORY. 2(0-6); II. Prerequisite: Bact. 101 or 106. Offered in 1936-'37 and in alternate years thereafter. To accompany or follow Bact. 202. Dr. Gainey.

The preparation of various special culture media and reagents necessary to conduct bacteriological analyses of the soil; qualitative and quantitative analyses and the laboratory study of nitrification, denitrification, and nitrogen fixation; plot experiments and field work illustrating the influence of various factors upon the bacterial flora and the inoculation of soil with nitrogen-fixing bacteria. Deposit, \$8.

206. HYGIENIC BACTERIOLOGY. 4(2-6); I. Prerequisite: Bact. 101, 106, or 121. Offered in 1937-'38 and in alternate years thereafter. Dr. Bushnell.

Pathogenic bacteria, especially those related to disease in man; channels of infection, and means of dissemination of pathogenic bacteria; epidemics, their cause and control; and other topics dealing with bacteria in connection with health. Various books recommended as textbooks.

Laboratory.—Microscopical and cultural study of pathogenic bacteria, technic involved in the diagnosis of various infectious diseases; culture of pathogenic anaërobic bacteria; the isolation and identification of pathogenic bacteria; and other practical studies of theories discussed in the classroom. Deposit, \$8.

211. DAIRY BACTERIOLOGY. 3(1-6); II. Prerequisite: Bact. 101, 106, 111, or 121. Dr. Fay.

Bacterial flora of milk, butter, and cheese; infectious diseases conveyed through dairy products; bacterial contaminations of milk by air, water, utensils, etc.; normal and abnormal fermentations in milk, their significance and control.

Laboratory.—Preparation of culture media necessary for dairy bacteriological work; bacteriological analysis of milk; microscopical and cultural characters of the types of microorganisms representing the flora of milk, butter, and cheese; and kindred practical bacteriological studies relating to dairy products. Deposit, \$8.

216. POULTRY BACTERIOLOGY. 3(1-6); II. Prerequisite: Bact. 101, 106, or 111. Dr. Brandly.

Etiology, sources, and modes of infection of diseases of poultry; microbial content of freshly laid eggs, cold-storage eggs, and egg products; conditions tending toward increase or decrease of this microbial content.

Laboratory.—Study of microorganisms pathogenic for poultry; microbial content of eggs and egg preparations handled and produced under various conditions. Deposit, \$8.

217. POULTRY DISEASES. 2(2-0); II. Prerequisite: Bact. 111 and 116 and Surg. and Med. 163. Dr. Brandly.

Anatomy of the fowl; poultry sanitation and hygiene; a complete systematic study of the infectious diseases of all classes of domestic fowl; general diseases of noninfectious nature; external and internal parasites of domestic fowl; minor surgical operations.

222. PHYSIOLOGY OF MICROÖRGANISMS. 3(3-0); I. Prerequisite: Bact. 101, 106, 111, 116, or 121. Offered in 1937-'38 and alternate years thereafter. Dr. Fay.

A general survey of the chemistry and physics of microbial processes. Textbook and other assigned readings.

225. BACTERIOLOGICAL TECHNIC. 3(0-9); II. Prerequisite: Bact. 101, 106, 111, 116, or 121. Offered in 1937-'38 and alternate years thereafter. Dr. Gainey.

Advanced training in the technic of laboratory manipulation; fundamental experiments and special experiments selected according to the interest of the student. Printed outlines furnished. Deposit, \$5.

229. ADVANCED SEROLOGY. 5(3-6); I. Prerequisite: Bact. 206. Offered in 1936-'37 and alternate years thereafter. Dr. Bushnell.

Theories of immunity and immunization; preparation, purification, and standardization of the various biological products used in human and veterinary medicine. Laboratory arranged according to the material available. Textbook and other assigned readings. Deposit, \$8.

235. BACTERIOLOGY OF BUTTER CULTURES. 1(0-3); I. Prerequisite: Bact. 211. Dr. Fay.

The bacteriological and chemical aspects of butter cultures.

270. PROBLEMS IN BACTERIOLOGY. Credit to be arranged; I, II, and SS. Prerequisite: Bact. 101, 106, 111, 116, or 121. Dr. Bushnell, Dr. Gainey, Dr. Fay, Dr. Brandly, and Mr. Foltz.

Special problems assigned, credit depending upon the amount and quality of work done. Deposit, \$3 per credit hour.

275. BACTERIOLOGY SEMINAR. 1(1-0); I and II. For prerequisite, consult professor in charge. Dr. Bushnell.

Papers and discussions by members of the department and the more advanced students on various phases of current research work in bacteriology, serology, and related subjects. Graduate students in this department may be assigned to this subject for credit; others interested may visit the meetings at any time by making proper arrangements.

FOR GRADUATE CREDIT

301. RESEARCH IN BACTERIOLOGY. Credit to be arranged; I, II, and SS. Prerequisite: At least two courses in this department. Dr. Bushnell, Dr. Gainey, Dr. Fay, Dr. Brandly, and Mr. Foltz.

Properly qualified advanced students admitted to this course upon approval of the department head; supervision by a faculty member of the department, and subjects for investigation chosen and outlined in consultation with him; opportunity to do experiment station and advanced research work during vacation periods under faculty supervision; individual research problems for students working toward an advanced degree; upon completion, results presented in form of a thesis which, when accepted, fulfills part of the requirements for the master's or doctor's degree. Deposit, \$3 per credit hour.

Botany and Plant Pathology

Professor MELCHERS
Professor MILLER
Professor DAVIS
Professor HAYMAKER
Professor GATES
Assistant Professor ELMER

Assistant Professor LEFEBVRE
Assistant Professor NEWCOMB
Instructor KINGSLEY
Instructor BATES
Graduate Assistant HANSING
Graduate Research Assistant GAUCH

The instruction given in the Department of Botany and Plant Pathology has a three-fold purpose: To give a training in botany for the general broadening of the student's knowledge; to give a training in the knowledge of plants that will serve as a foundation for the student's further college courses in agricultural subjects; and to instruct and direct those students who desire to investigate such problems in plant life as affect agriculture. Investigations may be undertaken in any of the major fields of botany.

In the general courses each student is supplied with a compound microscope and with all the other accessories of a modern, well-equipped botanical laboratory. The laboratory for advanced study is provided with the general equipment for investigational work, and additional facilities are readily available for those who desire to pursue special lines of research. The department has an excellent herbarium, especially complete for Kansas, and a botanical library containing the usual standard texts and the principal botanical journals.

COURSES IN BOTANY

FOR UNDERGRADUATE CREDIT

101, 105. GENERAL BOTANY I AND II. 3(1-4, 2), each; I and SS, and II and SS, respectively. Mr. Melchers, Dr. Miller, Mr. Davis, Dr. Haymaker, Dr. Gates, Dr. Lefebvre, Miss Newcomb, Miss Kingsley, and Dr. Bates.

I: The principal life processes of plants, such as photosynthesis, digestion, respiration, transpiration, and growth; the responses of plants to environmental conditions and physical stimuli; and the anatomy of the plant.

II: The significance of plant morphology to the allied branches of botany, plant physiology, taxonomy and ecology; the economic importance of the fungi and other pathogenic plants; the evolution of plants, as developed by morphological criteria.

Laboratory.—I: A series of typical experiments followed out in the laboratory and in the greenhouse. Charge, \$3.50.

II: Study of the morphology of the typical representatives of the great groups of the plant kingdom, ecological factors which affect plants, and plant identification under both winter and summer conditions by use of an identification key. Charge, \$3.50.

110. NATURE AND DEVELOPMENT OF PLANTS. 3(3-0); II and SS. Dr. Haymaker.

A general survey of the plant kingdom emphasizing structure, life processes, identification, classification, evolutionary development, geographical distribution, economic importance, etc.

126. MEDICAL BOTANY. 2(1-3); I. Prerequisite: High-school botany or its equivalent. Dr. Gates.

The principal stock-poisoning plants of the range; habitat, poisonous properties, and methods of control and elimination of native poisonous plants.

Laboratory.—A study of the native poisonous plants of the United States, but chiefly of the Western states. Charge, \$2.

FOR GRADUATE AND UNDERGRADUATE CREDIT

202. FRUIT CROP DISEASES. 2(1-2, 1); I. Prerequisite: Bot. 205. Offered in 1937-'38 and in alternate years thereafter. Dr. Haymaker.

Diseases of major and minor fruit crops; cause, effect on host, control.

Laboratory.—A detailed study of each disease affecting the major fruit crops; a detailed microscopic study of the organism causing the disease. Charge, \$2.

205. PLANT PATHOLOGY I (OR ECONOMIC PLANT DISEASES). 3(1-4, 2) or 3(2-3); I and SS. Prerequisite: Bot. 101 and 105. Mr. Melchers and Dr. Haymaker.

Cause and symptoms of plant diseases, infection phenomena, control of plant diseases, breeding for resistance, and plant quarantine.

Laboratory.—Work in the recognition of the more common plant diseases of the farm, orchard, and garden, detailed microscopic studies of diseased tissues and identification of the fungous pathogens which cause them. Charge, \$2.

206. MORPHOLOGY OF THE FUNGI. 3(1-6); I. Prerequisite: Bot. 205. Offered in 1936-'37 and in alternate years thereafter. Dr. Lefebvre.

Structure of slime molds, moldlike bacteria, and fungi studied to determine taxonomic relationships; especial attention to organisms capable of causing disease in plants.

208. PLANT PHYSIOLOGY I. 3(3-0); I. Prerequisite: Bot. 101 and 105 and Chem. 101 and 102 or 110. Dr. Miller.

A detailed study of the plant cell, solutions and membranes in relation to the cell, root systems, intake of water, intake of solutes, elements used, and loss of water.

210. PLANT PHYSIOLOGY II. 3(1-6); II. Prerequisite: Bot. 208. Dr. Miller.

Methods used in obtaining experimental data in regard to the more common functions of plants. Charge, \$5.

211. PLANT PHYSIOLOGY III. 3(3-0); II. Prerequisite: Bot. 208. Dr. Miller.

A continuation of Bact. 208, including a detailed study of photosynthesis, nitrogen metabolism, fat metabolism, digestion, translocation, respiration, and growth.

212. PROBLEMS IN BOTANICAL INSTRUCTION. 3(2-3); SS. Prerequisite: Ten credit hours in botany or in courses of botanical nature. Dr. Haymaker.

Advanced work in the morphology, anatomy, physiology, taxonomy, and diseases of plants; technic in presenting botany to high school and college students. Charge, \$2.

217. BOTANICAL MICROTECHNIC. 3(1-6); II. Prerequisite: Bot. 101 or 105. Offered in 1937-'38 and in alternate years thereafter. Dr. Lefebvre.

Training in the principles and methods of preparing plant materials for histological or cytological study; interpretation of structures shown in the preparations made in this course. Charge, \$3.

218. FIELD BOTANY. 3(2-3); SS. Prerequisite: Bot. 101 and 105. Dr. Haymaker.

A study of the technical terms used in different keys and texts for the identification of various plants; the different systems of classification and nomenclature considered from historical and utilitarian standpoints; history of the higher plants from an evolutionary viewpoint.

Laboratory.—Study and identification of the vegetation of near-by prairies, woodland, and swamps; morphological characteristics, distribution, habits of plants, and their relation to different environmental conditions. Charge, \$2.

220. BOTANICAL SEMINAR. 1(1-0); I and II. Prerequisite: Consult professor in charge.

Presentation of investigational work in botany, including plant pathology, plant physiology, plant ecology, taxonomy, morphology, and genetics; fundamental papers along botanical lines reviewed and a digest presented. Graduate students taking major or minor work in the Department of Botany are expected to attend these sessions and take part in the programs.

225. TAXONOMIC BOTANY OF THE FLOWERING PLANTS. 3(1-4, 2); I. Prerequisite: Bot. 101 and 105. Dr. Gates.

Terms employed; development of the more important systems of classification; and consideration of families of plants.

Laboratory.—Study of selected flower types representing the principal orders and families of plants; identification of plants in field and in the laboratory. Charge, \$2.

228. PLANT ECOLOGY. 2(2-0); II. Prerequisite: Bot. 101 and 105. Dr. Gates.

The structure and dynamics of vegetation.

Laboratory.—With the opening of vegetation in the spring, field trips are taken to selected places. Additional credit in ecology may be secured by arranging for additional work and by registering for Bot. 232.

232. PROBLEMS IN BOTANY. Credit to be arranged; I, II, and SS. Prerequisite: Bot. 101 and 105, and approval of the head of the department. Mr. Melchers, Dr. Miller, Mr. Davis, Dr. Haymaker, Dr. Gates, Dr. Lefebvre, Dr. Elmer, and Miss Newcomb.

A student wishing to pursue a special field of work not definitely represented by one of the undergraduate elective courses may do so upon consultation with the instructor. Charge, \$2.

241. FIELD CROP DISEASES. 3(1-6); II. Prerequisite: Bot. 205. Offered in 1937-'38 and in alternate years thereafter. Mr. Melchers.

The historical development of phytopathology; the various factors entering into the problem of disease resistance in plants; breeding for resistance; the most important literature on the subject.

Laboratory.—A detailed microscopic and symptom study of the fungous, bacterial, and nonparasitic plant diseases attacking cereal and forage crops other than those considered in Plant Pathology I. Charge, \$2.

251. ANATOMY OF THE HIGHER PLANTS. 3(1-6); II. Prerequisite: Bot. 101 and 105. Offered in 1936-'37 and in alternate years thereafter. Miss Newcomb.

A study of the structure and development of the various tissues and organs of the seed plants. Charge, \$3.

266. LITERATURE OF BOTANY. 2(2-0); I. Prerequisite: Bot. 101, 105, and 205. Mr. Davis.

Aims of the course: (1) A general survey of the field of botanical literature, with special reference to the foundational works and authors that students of botany should know. (2) To study current botanical publications and review works of modern botanists appearing in the current serials. (3) To learn the use of keys to botanical literature and standard methods for preparation of special bibliographies and papers. (4) To gain some knowledge of the more important botanical classics and biographies.

268. PLANT CYTOLOGY. 3(1-6); II. Prerequisite: Bot. 101 or Zoöl. 105. Offered in 1937-'38 and in alternate years thereafter. Miss Newcomb.

The structure, development, and functions of the plant cell with special reference to chromosome behavior and its bearing upon genetic results. Charge, \$3.

FOR GRADUATE CREDIT

301. PLANT PATHOLOGY III. 3(1-4, 2); I. Prerequisite: Bot. 205. Offered in 1936-'37 and in alternate years thereafter. Dr. Elmer.

A course in phytopathological technic; a close and extended study of the pathogenic organisms which cause plant disease; preparation of various kinds of culture media, isolation and culture of pathogenic organisms, nutrition of fungi, studies in enzyme secretion and action, micrometry, incubation and infection phenomena, etc. Charge, \$5.

310. RESEARCH IN BOTANY. Credit to be arranged; I, II, and SS.

Research in the various fields of botany may be outlined. A member of the department staff is chosen by the student as his major instructor in the line of work which he wishes to pursue. Upon the completion of the work it may be submitted in part or as a whole towards the master's thesis. Work is offered in the following lines:

Plant Pathology. Mr. Melchers, Dr. Haymaker, Dr. Elmer, and Dr. Lefebvre.

Plant Physiology. Mr. Davis and Dr. Miller.

Taxonomy and Ecology. Dr. Gates.

Cytology and Anatomy. Miss Newcomb.

Mycology. Dr. Lefebvre.

Chemistry

Professor KING
Professor HUGHES
Professor BRUBAKER
Professor COLVER
Associate Professor KEITH
Associate Professor VAN WINKLE
Associate Professor BARHAM
Associate Professor PERKINS
Assistant Professor HALL
Assistant Professor HARRISS
Assistant Professor WHITNAH
Assistant Professor LASH
Assistant Professor MARLOW
Assistant Professor SMITS
Assistant Professor FAITH
Instructor ANDREWS

Instructor McDOWELL
Instructor REED
Instructor BENNE
Instructor SHENK*
Instructor CALDWELL
Instructor HOSTETTER
Instructor DORF
Instructor BEERS
Instructor PETERSON
Instructor OLSEN
Instructor FISHER
Graduate Assistant SCHAIBLE
Graduate Assistant FLOURNOY
Graduate Assistant DEVOR
Graduate Assistant SENTI
Graduate Assistant DODGE

All of the industries are becoming more and more dependent for their highest success upon intelligent application of the physical and biological sciences, and the social sciences are making their greatest progress by tracing their phenomena back to the physical and chemical changes that accompany them. A study of chemistry and physics is therefore essential to any understanding of the processes of nature or of human industry. In the instruction in chemistry the aim is to insist upon a mastery of the chief concepts of the pure science through the agency of textbook drill, accompanied by demonstrations in the lecture room, and experimental observation by the student himself in the laboratory. As the course proceeds, illustrations of chemical principles are drawn from the industrial processes of the chemical, agricultural, domestic, and other arts, thus impressing upon the mind the practical nature of the study. The ultimate object of instruction in this science is to develop in the student the power to form independent judgment upon the manifold problems of daily life in which chemistry plays a part.

Due to the loss of Denison Hall by fire on August 3, 1934, the work of the department is scattered about the campus. The advanced laboratory courses are given in Chemistry Annex 2; the main lecture room is established on the second floor of West Waters Hall; and the experiment station work is carried on in two small laboratories, one located with the Department of Dairy Husbandry and the other with the Department of Agronomy. In all the laboratory work the student is required to give the designated amount of time, and at least a certain amount of work must be satisfactorily performed in order to obtain credit.

COURSES IN CHEMISTRY

FOR UNDERGRADUATE CREDIT

101, 102. CHEMISTRY I AND II. 5(3-6) each; I, II, and SS each. Not open to students who have credit in Chem. 107, 108, or 110. Prerequisite: For II, Chem. 101. Dr. King, Dr. Keith, Dr. Van Winkle, Miss Harriss, Dr. McDowell, Mr. Benne, Mr. Hostetter, Mr. Dorf, Mr. Schaible, Mr. Flournoy, Mr. Senti, Mr. Dodge, and Mr. Devor.

I: The principal theoretical conceptions of chemistry, principles of nomenclature, significance of formulas, chemical equations, etc.; practical uses of the substances and processes used in metallurgy, engineering, agriculture, and other arts.

II: Completion of the study of general chemistry; general principles of qualitative analysis.

Laboratory.—I: Experiments touching preparation and properties of the more important substances performed independently by the student, the objects being here as in other courses to illustrate chemical phenomena, to teach care in manipulation, attentive observation, logical deduction, and discrimination and accuracy in recording results and conclusions. Deposit, \$10.

* On leave 1935-'36.

II: Ordinary methods of separation and detection of the more common metals, nonmetals, acids, bases, and salts. Deposit, \$10.

107, 108. CHEMISTRY E-I and E-II. 4(3-3) each; I, II, and SS, respectively. Not open to students who have credit in Chem. 101 and 102, respectively. Dr. Van Winkle, Mr. Andrews, Mr. Hostetter, and Dr. Olsen.

I: General chemistry; fundamental principles of chemistry which have a special bearing upon engineering and engineering material.

II: General chemistry and qualitative analysis.

Laboratory.—I: Experimental work on the topics considered in the classroom. Deposit, \$7.50.

II: Qualitative analysis; a systematic study of the chemistry of the more common metals and acids; analysis of alloys, minerals, and ores. Deposit, \$7.50.

110. GENERAL CHEMISTRY. 5(3-6); I. Not open to students having credit in any college course in inorganic chemistry. Dr. King, Dr. Brubaker, Dr. Lash, Dr. Marlow, Dr. McDowell, Mr. Benne, Mr. Caldwell, Mr. Dorf, Dr. Peterson, Dr. Fisher, Mr. Beers, Mr. Schaible, Mr. Senti, and Mr. Devor.

A general treatment of some of the principal laws and theories of chemistry; preparation, properties, and uses of some of the important metallic and non-metallic substances.

Laboratory.—Actual preparation and study of the properties of many of the elements and compounds mentioned in the lectures; applications of some of the laws. Deposit, \$10.

122. GENERAL ORGANIC CHEMISTRY. 5(3-6); I, II, and SS. Not open to students who have college credit in organic chemistry, except that it may be taken for two hours credit by students who have completed Chem. 123. Prerequisite: Chem. 110. Dr. Colver, Dr. Barham, Dr. Lash, Dr. Marlow, Mr. Reed, Dr. McDowell, Mr. Caldwell, Mr. Dorf, Dr. Peterson, Mr. Beers, and Mr. Flournoy.

General study of some of the more important classes of organic compounds; a more detailed study of those hydrocarbons, alcohols, ethers, aldehydes, ketones, organic acids, waxes, fats, carbohydrates, and proteins which are of general interest.

Laboratory.—Preparation of a few organic compounds and the study of their physical and chemical properties. Deposit, \$10.

123. ELEMENTARY ORGANIC CHEMISTRY. 3(2-3); II. Not open to students who have college credit in organic chemistry. Prerequisite: Chem. 110. Miss Harriss.

An elementary outline dealing with some of the more important hydrocarbons, alcohols, aldehydes, ketones, organic acids, and various esters, waxes, fats, carbohydrates, and proteins, with special emphasis on their toxological and physiological properties.

Laboratory.—Preparation of a few organic compounds and the study of their physical and chemical properties. Deposit, \$7.50.

130. INSPECTION TRIP. No credit hours. Dr. Faith.

A large number of manufacturing plants of chemical and chemical engineering nature are visited. Different types of plants are selected, only one of each type being visited. An effort is made to vary the trip from year to year and to include such manufacturing centers as Kansas City, St. Louis, and Chicago. The cost of the trip varies from about \$30 to not more than \$50, depending on the places visited.

FOR GRADUATE AND UNDERGRADUATE CREDIT

202. INORGANIC PREPARATIONS. 1 credit for each 3 hours of laboratory; I, II, and SS. Prerequisite: Chem. 102. Dr. Brubaker.

Preparation and purification of some typical inorganic compounds, of those of more complex composition, and compounds of the rarer elements. Deposit, \$10.

203. INORGANIC CHEMICAL TECHNOLOGY. 5(3-6); I. Prerequisite or concurrent: Chem. 206. Dr. Faith.

The fundamental course in industrial chemistry. Problems of the chemical industries; the economic questions involved in chemical manufacture; materials of plant construction; engineering operations involved in chemical engineering; and the principles which underlie the application of chemistry and engineering to the inorganic chemical industries.

Laboratory.—A brief survey of gas, oil, water, and fuel analysis with assigned manufacturing problems which emphasize process costs and reaction conditions. Deposit, \$10.

205. INDUSTRIAL ELECTROCHEMISTRY. 2(2-0); II. Offered in case of sufficient demand. Prerequisite: Chem. 102 or 110 and Phys. 140 or 150. Dr. Faith.

The principles of coulometers, electrochemical methods and analysis, electroplating, electrotyping, and the production of metallic objects by electroplating methods, electrolytic refining of metals, manufacture of various industrial products by electrolytic and electrothermic methods, etc.

206. PHYSICAL CHEMISTRY I. 5(3-6); I. Prerequisite: Chem. 220, 241, and Math. 251. Students in other divisions may enroll without Math. 251. Dr. King and Dr. Hall.

Relations with matter in the gaseous, liquid, and solid states; elementary principles of thermodynamics, solution phenomena, colloids, surface chemistry, and thermochemistry.

Laboratory.—The laboratory closely follows the subject matter of the lectures. Deposit, \$10.

207. ADVANCED INORGANIC CHEMISTRY. 3(3-0); I. Prerequisite: Chem. 102. Dr. Keith.

A thorough study of the facts of chemistry and their theoretical interpretations according to the views of the present; special stress upon the properties of the elements as a basis for methods of classification, and upon the rarer elements and compounds. Students electing this course are advised to take Chem. 202.

208. HISTORY OF CHEMISTRY. 1(1-0); II. Prerequisite: Chem. 206. Dr. Van Winkle.

History of the development of the principal laws and theories of chemistry, with special emphasis upon the failures and triumphs of the founders of chemical science.

209. SURFACE TENSION AND RELATED PHENOMENA. 2(2-0); I or II, when requested by a sufficient number. Prerequisite: Chem. 206. Dr. King.

Methods of measuring surface tension; surface energetics; relation of surface tension to adsorption; and colloidal formation.

211. PAINT OILS AND PIGMENTS. 2(2-0); I. Prerequisite: Chem. 122 and 102. Dr. King.

Extraction, purification, and properties of the oils commonly used in paints; manufacture and properties of paint pigments; the products employed as protective coverings for both wood and metal.

212. ORGANIC CHEMICAL TECHNOLOGY. 3(3-0); II. Prerequisite: Chem. 219 and 206. Dr. Faith.

A comprehensive study of the organic process industries, including oil refining, synthetic organic chemicals, cellulose, fats, and oils.

213. COLLOIDAL CHEMISTRY. 2(2-0); II, when requested by a sufficient number. Prerequisite: Chem. 206. Dr. King.

Suspensoids and emulsoids, optical and electrical properties of colloids, Brownian movement, action of electrolytes on colloids, adsorption and surface phenomena, and short review of the method for the preparation of colloids.

215. CHEMICAL THERMODYNAMICS. 3(3-0); II. Prerequisite: Chem. 206 and Math. 251. Dr. Keith.

Those fundamental principles of thermodynamics which are particularly applicable to chemistry, such as the first and second laws of thermodynamics and their application to fusion, evaporation, phase rule, chemical equilibrium, chemical affinity, electromotive force, surface tension and activity.

216. THEORETICAL ELECTROCHEMISTRY. 3(3-0); I, when requested by a sufficient number. Prerequisite: Chem. 206 and 272. Dr. Keith.

The theory of electrolytic cells, the electrochemical series of metals, electrodes, potentials, polarization, overvoltage, and deposition of metals by electrolysis.

217. ELECTROCHEMISTRY LABORATORY. 2(0-6); II. Prerequisite: Chem. 206 or equivalent. Dr. Hall.

A laboratory course designed and recommended to accompany or follow Theoretical Electrochemistry. Selected experiments in electrometric titrations, storage battery efficiency, polarization, overvoltage, electrode potentials, and related subjects. Deposit, \$10.

218, 219. ORGANIC CHEMISTRY I and II. 4(2-6); each; I and II, respectively. Prerequisite: Chem. 102. Dr. Colver, Dr. Marlow, and Mr. Reed.

I: The aliphatic hydrocarbons, alcohols, ethers, aldehydes, ketones, acids, esters, amides, and related compounds considered particularly from the standpoint of structure, methods of laboratory and commercial preparation, reactions and uses; special attention to such topics as structural, geometrical, and optical isomerism, and the use of acetoacetic ester in organic synthesis.

II: Structure, methods of laboratory and commercial preparation, reactions and uses of the aromatic compounds, orientating influence of various groups; structure and reactions of the diazonium compounds; the different classes of dyes, the alkaloids, the terpenes, and a few heterocyclic compounds.

Laboratory.—I: Preparation, purification, and reactions of one or more typical examples of most of the groups of compounds studied in the classroom. Deposit, \$10.

II: Various preparations that illustrate the reactions characteristic of aromatic compounds. Deposit, \$10.

220. ORGANIC CHEMISTRY. 5(3-6); I, II, and SS. Prerequisite: Chem. 102. Dr. Colver.

The more important classes of organic compounds, particularly the aliphatic hydrocarbons, alcohols, aldehydes, ketones, acids and esters, the fats, proteins and carbohydrates, and such carbocyclic compounds as the hydrocarbons, phenols, acids and esters that have a general interest.

Laboratory.—Preparation and study of the chemical and physical properties of one or more representative examples of the classes of compounds studied in the classroom. Deposit, \$10.

223. ORGANIC PREPARATIONS. 1(0-3) to 5(0-15); I. Prerequisite: Chem. 219. Dr. Colver.

Such compounds prepared as give a thorough knowledge of the fundamental principles of synthetic organic chemistry. Deposit, \$10.

224. QUALITATIVE ORGANIC ANALYSIS. 2(0-6); II, when requested by a sufficient number. Prerequisite: Chem. 219. Dr. Colver.

Characteristic reactions of the various classes of organic compounds; class

reactions using known compounds; classification and identification of pure, unknown substances and mixtures. Deposit, \$10.

225. STEREOISOMERIC AND TAUTOMERIC COMPOUNDS. 2(2-0); II, when requested by a sufficient number. Prerequisite: Chem. 219. Dr. Colver.

Optical isomerism and methods of determining the configuration of the asymmetric carbon atoms of sugars; geometrical isomerism; and keto-enol tautomerism.

226. CARBOCYCLIC AND HETEROCYCLIC COMPOUNDS. 2(2-0); II, when requested by a sufficient number. Prerequisite: Chem. 219. Dr. Colver.

Structure, orientation, methods of synthesis, and reactions of benzene, naphthalene, anthracene and derivatives; furane, pyrrol, thiophene, pyridine, quino-line, isoquinoline, purine, pyrimidine, hydantoin, and some structurally related substances.

228. SPECIAL REACTIONS OF ORGANIC COMPOUNDS. 2(2-0); I, when requested by a sufficient number. Prerequisite: Chem. 219. Dr. Colver.

Some of the less common reactions which take place with certain aliphatic and aromatic compounds.

230. PRINCIPLES OF ANIMAL NUTRITION. 3(3-0); II. Prerequisite: Chem. 122 or equivalent. Dr. Hughes.

The relation of animals to matter and energy, and the physiological principles involved.

231. PHYSIOLOGICAL CHEMISTRY. 5(3-6); I. Prerequisite: Chem. 122 or equivalent. Dr. Hughes and Dr. Marlow.

The synthetic and analytical chemical changes that accompany the physiological processes of animals and plants.

Laboratory.—Practical work with the compounds and processes discussed in the classroom. Deposit, \$10.

234. BIOCHEMICAL PREPARATIONS. 5(0-15); II. Prerequisite: Chem. 219 and 231. Dr. Marlow.

The isolation, purification, and analysis of a number of compounds which are of importance in biochemistry and nutrition. Deposit, \$10.

235. PATHOLOGICAL CHEMISTRY. 2(2-0); when requested by a sufficient number. Prerequisite: Chem. 231. Dr. Hughes.

The chemical facts involved in the causation, progress, and results of disease discussed under the following heads: Inflammation, degeneration, infection, anaemia, tuberculosis, dyspepsia, typhoid fever, jaundice, nephritis, diabetes, gout, rheumatism, and intoxication.

236A. THE CHEMISTRY OF THE PROTEINS. 3(2-3); I. Prerequisite: Chem. 122 or equivalent.

The chemistry of the proteins, particularly as regards their sources, isolation, purification and uses, their derivatives and degradation products. Deposit, \$7.50.

237. BIOCHEMICAL ANALYSIS. 2(0-6); I and II. By appointment. Prerequisite: Chem. 231 and 241. Dr. Marlow.

Quantitative determinations of the organic and inorganic constituents of blood, urine, and other biological material. Deposit, \$10.

238A. CATALYSIS IN ORGANIC CHEMISTRY. 3(3-0); I. Prerequisite: Chem. 219 and 206. Dr. Barham.

The theories of catalysis and its applications along with some of the most recent developments in that field.

239. LABORATORY TECHNIQUE IN ANIMAL NUTRITION. 2(0-6); I and II. Prerequisite: An acceptable course in nutrition or Chem. 231. Dr. Hughes.

Preparation of diet and the care of experimental animals used in the study of various nutritional problems. Deposit, \$10.

240. ADVANCED QUALITATIVE ANALYSIS. 3(1-6); I and II, when requested by a sufficient number. Prerequisite: Chem. 102. Dr. Van Winkle.

A systematic study of the properties of the acid and basic elements and their compounds as shown in a detailed study of systematic analysis; the application of chemistry theory to analytical reactions. Deposit, \$10.

241. QUANTITATIVE ANALYSIS. 5(1-12); II and SS. Prerequisite: Chem. 102 or equivalent. Dr. Brubaker.

Practically the same as Chem. 250 and 251. Deposit, \$10.

242. FIRE ASSAYING. 2(0-6); I. Prerequisite: Chem. 241. Dr. Faith and Mr. Caldwell.

The ordinary methods of fire assaying, with some attention to wet assaying. Fire assays of ores containing such metals as copper, zinc, lead, bismuth, tin, silver, and gold. Deposit, \$10.

243. GAS ANALYSIS. 1(0-3); I. Prerequisite: Chem. 241. Dr. Faith.

Use of standard apparatus in analysis of gases; analysis of air, flue and furnace gases, and illuminating gas. Deposit, \$7.50.

245. CHEMICAL MICROSCOPY. 1(0-3); I, II, and SS, when requested by a sufficient number. Prerequisite: Chem. 122 and 250. Dr. Brubaker.

The various methods of using the microscope in chemical analysis, both qualitative and quantitative, applied to both inorganic substances and to vegetable and animal products. Deposit, \$7.50.

250, 251. QUANTITATIVE ANALYSIS A AND B. 3(1-6) each; I and II, respectively, and SS. Prerequisite: For A, Chem. 102; for B, Chem. 250. Dr. Brubaker.

Course A: General procedure of gravimetric analysis; chemical theory as applied to quantitative reactions. Deposit, \$10.

Course B: General procedures in volumetric analysis; preparation of standard solutions and their uses. Deposit, \$10.

252A. CHEMISTRY OF SOILS AND FERTILIZERS. 2(0-6); I. Prerequisite: Chem. 250 or equivalent. Dr. Perkins.

The most important chemical methods used in the analysis and investigation of soils and fertilizers. Deposit, \$10.

253A. CHEMISTRY OF CROPS. 2(0-6); II. Prerequisite: Chem. 122 and 250 or equivalent. Dr. Perkins.

The most important chemical methods used in the analysis and investigation of substances present in plants and plant products. Deposit, \$10.

254. DAIRY CHEMISTRY. 3(1-6); I. Prerequisite: Chem. 122 and 250. Dr. Whitnah.

Chemical compounds present in milk, butter, cheese, and other dairy products; chemical changes effected by conditions of handling dairy products; a review of literature relating to recent investigational work in dairy chemistry.

Laboratory.—The most important chemical methods used in the analysis and investigation of dairy products. Deposit, \$10.

256. INSECTICIDES AND FUNGICIDES. 2(2-0); given when requested by a sufficient number. Prerequisite: Chem. 122 and 250. Dr. King.

The manufacture of spray materials; the chemistry involved in mixing, and the theory of their toxic actions.

257. FOOD ANALYSIS. 3(0-9); II and SS. Prerequisite: Chem. 122 and 250. Dr. Brubaker.

The quantitative methods employed in the analysis of foodstuffs, practice in

testing for the presence of adulterants, preservatives, and coloring materials. Deposit, \$10.

260. ADVANCED QUANTITATIVE ANALYSIS. 1 to 5 hours. Prerequisite: Chem. 250 and 251. Dr. Brubaker.

Included here, any kind of quantitative chemical work not otherwise designated; a large opportunity for advanced work afforded by the various research and state laboratories. Deposit, \$10.

265. THE CHEMISTRY OF THE CARBOHYDRATES. 2(2-0); I or II, when requested by a sufficient number. Prerequisite: Chem. 122 or equivalent. Dr. Whitnah.

The occurrence, structure, reactions, synthesis, and uses of the more important carbohydrates.

268. PROBLEMS IN CHEMICAL ENGINEERING. Credit to be arranged; I and II. Dr. Faith.

An introduction to chemical engineering research. Deposit, \$10.

270. PROBLEMS IN CHEMISTRY. Credit to be arranged; I, II, and SS.

Individual problems to fulfill the thesis requirements of students in agricultural chemistry, chemistry, and industrial curricula. Deposit, \$10.

271. SELECTED TOPICS IN INORGANIC CHEMISTRY. 2(2-0); II. Prerequisite: Chem. 206. Dr. Lash.

Material from such topics as thermal analysis, temperature measurements, atomic hydrogen, the hydrides, the halogens, solutions, and the ammonia system.

272. PHYSICAL CHEMISTRY II. 3(3-0); II. Prerequisite: Chem. 206 and Math. 250. Dr. King.

Kinetics of reactions, homogeneous and heterogeneous equilibria, electrochemistry, photochemistry, and the electrical theory of matter.

275. CHEMISTRY SEMINAR. Twice a month, throughout the year, the officers of the department, with the more advanced students and such others as wish to, meet for papers and discussions upon topics representing the progress of chemical science, chiefly as found in the current journals. The preparation of subjects for presentation at these meetings may be made a part of the credit work of advanced students.

277. CHEMICAL LITERATURE. 1(1-0); I or II, when requested by a sufficient number. Prerequisite: Chem. 219. Mr. Reed.

A course designed to train the student to make efficient use of chemical literature, and to give him the necessary procedure to follow in collecting available information in our library.

278. ELEMENTS OF CHEMICAL ENGINEERING I. 4(3-3); I. Prerequisite: Math. 251 and Chem. 206; the latter may be taken concurrently. Dr. Faith.

Fundamentals of chemical engineering operations, with emphasis on flow of fluids and flow of heat; application of these principles to equipment design.

Laboratory.—Development of fundamental chemical engineering generalizations by experimental methods. Deposit, \$10.

279. ELEMENTS OF CHEMICAL ENGINEERING II. 4(3-3); II. Prerequisite: Chem. 278. Dr. Faith.

A study of unit operations, including filtration, evaporation, humidification and drying, absorption, distillation, and crystallization.

Laboratory.—Testing and operation of plant equipment. Deposit, \$10.

282. CHEMICAL ENGINEERING PRINCIPLES. 4(3-3); II. Prerequisite: Chem. 278 and 279. Dr. Faith.

The principles of plant location, plant layout and design; the principles

of organization and control of chemical plants, utilization of fuels and energy, and chemical engineering operation costs; laboratory research and technical development.

Laboratory.—Study of economic process layout and operation costs. Deposit, \$7.50.

283. ADVANCED UNIT OPERATIONS. 2(2-0); II, when requested by a sufficient number. Prerequisite: Chem. 279. Dr. Faith.

An advanced study of chemical engineering operations, with emphasis on drying, distillation, absorption, and extraction.

284. ORGANIC UNIT PROCESSES. 2(2-0); I, when requested by a sufficient number. Prerequisite: Chem. 212 and 272. Dr. Faith.

An advanced study of unit processes in organic synthesis, especially nitration, sulfonation, oxidation, hydrogenation, esterification and hydrolysis.

287. CORROSION. 3(3-0); I and II. Prerequisite: Chem. 122 and 206, or concurrent registration. Dr. Van Winkle.

The theories and various factors involved in the corrosion of iron, steel and nonferrous metals; methods of testing for and preventing corrosion.

290. BIOCHEMISTRY OF INTERNAL SECRETIONS. 2(2-0); I or II, when requested by a sufficient number. Prerequisite: Chem. 231. Dr. Marlow.

The chemistry of the glands of internal secretions.

299. CHEMICAL TOXICOLOGY. 3(2-3); I, II, and SS, when requested by a sufficient number. Prerequisite: Chem. 122, 219, or 220. Dr. Smits.

A study of the occurrence, chemical properties and detection of the more common poisons. Deposit, \$7.50.

FOR GRADUATE CREDIT

301. RESEARCH IN CHEMISTRY. Credit to be arranged. Excellent opportunities are offered students to undertake the research work in chemistry. Such work is being constantly conducted in the laboratories of the department in connection with the Agricultural and Engineering Experiment Stations. The State Food Laboratory and the laboratories for analysis of feeds and fertilizers are also accessible to students desiring research along such lines. Much emphasis is placed upon research in the department, and all graduate students whose training is adequate are encouraged to participate. Students working out theses in the Department of Chemistry are assigned to this course. Work is offered in the following lines:

Agricultural Chemistry. Dr. King and Dr. Perkins.

Industrial Chemistry and Chemical Engineering. Dr. Faith and Dr. Van Winkle.

Analytical Chemistry. Dr. Brubaker and Dr. Perkins.

Organic Chemistry. Dr. Colver, Dr. Barham, and Dr. Whitnah.

Biochemistry. Dr. Hughes, Dr. Whitnah, and Dr. Marlow.

General and Physical Chemistry. Dr. King, Dr. Hall, Dr. Keith, and Dr. Lash.

305. ANIMAL NUTRITION SEMINAR. 1(1-0); I and II. For prerequisite, consult instructor. Dr. Hughes, Dr. McCampbell, Dr. Lienhardt, Dr. Burt, Dr. Kramer, and Mr. Payne.

Experiments in nutrition, the methods employed, and validity of conclusions drawn.

Economics and Sociology

Professor KAMMEYER†
 Professor HILL
 Associate Professor STEWART
 Associate Professor HOLTZ
 Assistant Professor THOMPSON

Assistant Professor NELSON
 Assistant Professor MURPHY*
 Instructor WARD
 Instructor EDGEL

Some of the courses offered by this department are either required or elective in most of the curricula of the several divisions of the College. In the curriculum in commerce more than thirty-three percent of the required courses are given by this department; and of the sixteen special electives recommended for students in this curriculum, eleven are courses offered by this department. This shows a wide distribution of courses among the curricula and a concentration of courses in the curriculum in commerce. While special emphasis is placed on the relation of these courses to commerce and industry, their cultural advantage is not neglected. Vocational training is essential and important to students in their preparation for occupational activity, but the state also needs men and women trained for citizenship. It is the purpose of this department to plan and direct its work with these ends in view.

CERTIFICATE OF CERTIFIED PUBLIC ACCOUNTANT

By act of the Kansas legislature passed March 24, 1915, provision is made for the examination for the certificate of Certified Public Accountant. Applicants must be citizens of the United States or must have declared their intention to become citizens. They must be at least twenty-one years of age; must have good moral character; must have a high-school education or the equivalent thereof; must have four years of experience and study in accountancy, at least three of which must have been in the office of a public accountant or on their own account; and must pass an examination in auditing, accounting, and business law given by the State Board of Examiners.

Examination questions are prepared and graded by the American Institute of Accountants and examinations are held in May and November of each year.

COURSES IN ECONOMICS

FOR UNDERGRADUATE CREDIT

101. **ECONOMICS I.** 3(3-0); I, II, and SS. Not open to students who have credit in Ag. Econ. 101. Mr. Stewart, Mr. Thompson, Mr. Murphy, Mr. Ward, and Mr. Edgel.

An introductory study of the fundamental facts, concepts, and principles pertaining to modern economic phenomena; a foundation course for all specialized studies in economics.

104. **ECONOMICS II.** 3(3-0); I, II, and SS. Prerequisite: Econ. 101 or Ag. Econ. 101. Mr. Thompson.

The most urgent contemporary economic problems in the light of generally accepted economic principles; critical examination of the problems and the various proposed remedies; the solutions which seem to offer the greatest promise of successful operation.

116. **MONEY AND BANKING.** 3(3-0); I, II, and SS. Prerequisite: Econ. 101. Mr. Thompson and Mr. Nelson.

The nature, history, and functions of money; its place as a factor in man's economic progress, and its importance as such in his business activities as organized today; banking in its historic forms; the federal reserve system, the federal farm-loan system, and state banks; savings banks, trust companies, building and loan associations, and other institutional forms of credit.

* On leave 1935-'36.

† Deceased Jan. 11, 1936.

126. BUSINESS MANAGEMENT. 2(2-0); I, II, and SS. Prerequisite: Econ. 101, or may be taken concurrently. Mr. Edgel.

The business structure and executive functions—an analysis of management factors such as personnel, finance, accounting, production, and marketing. An elementary course covering the entire range of business endeavor.

FOR GRADUATE AND UNDERGRADUATE CREDIT

214. PUBLIC FINANCE. 3(3-0); I. Prerequisite: Econ. 101. Mr. Thompson.

The major facts and principles relative to public expenditures; public revenues, especially taxation; the administration of public funds; fiscal emergencies and public indebtedness; the budget and other means of control over expenditures and revenues. Not open to students who have credit in Ag. Ec. 219.

217. BUSINESS FINANCE. 3(3-0); II. Prerequisite: Econ. 116 and 134 or 136. Mr. Thompson.

Those problems of business finance which actually arise from day to day in the average industrial concern, including both manufacturing and trading enterprises; the relationship of these financial problems to the problems of original construction, purchase, production, distribution, and consumption of goods; analysis of the most recent financial developments.

219. CORPORATION ORGANIZATION AND FINANCE. 2(2-0); I. Prerequisite: Econ. 101. Open only to engineering students. Mr. Thompson.

The organization and classification of business enterprises, their financial structure, and internal management; the principal forms of corporate stocks and bonds, underwriting procedure, marketing securities, and other processes of financial management.

222. INVESTMENTS. 3(3-0); II and SS. Prerequisite: Econ. 116 and 134 or 136. Mr. Stewart and Mr. Edgel.

Financial types of investment securities; investment risks; effect of economic trends upon investment values; functions of investment banks; investment policies suitable for various investment classes.

223. CREDITS AND COLLECTIONS. 2(2-0); II. Prerequisite: Econ. 101. Mr. Thompson.

The fundamental principles of credits and collections with special attention given to mercantile credits, credit instruments, the sources of credit information, credit department organization and management, technical and legal aspect of collections, and credit and collection control.

229. TRANSPORTATION PROBLEMS. 2(2-0); II. Prerequisite: Econ. 101. Mr. Murphy and Mr. Ward.

A brief review of the development of transportation, followed by a study of the economic characteristics of the railroad industry, results of unrestrained competition in the industry, adoption of public regulation, and the legal and economic phases of regulation.

233. LABOR PROBLEMS. 2(2-0); I and II. Prerequisite: Econ. 101 or 151. Dr. Holtz.

Present status and trends in industrial relations; the background in history and activities of labor organizations and employers' associations; legislation bearing upon industrial relations; new problems of personnel administration, coöperation, profit-sharing, industrial partnership, etc.

242. PROPERTY INSURANCE. 2(2-0); I and SS. Prerequisite: Econ. 101. Mr. Stewart.

Fire, marine, automobile, title, and credit insurance, and corporate bonding; also other forms of property insurance, such as burglary and theft, plate glass, steam boiler, windstorm and tornado, aviation, etc.

244. LIFE INSURANCE. 2(2-0); II and SS. Prerequisite: Econ. 101. Mr. Stewart.

Nature and uses of life insurance, kinds of policies, determination of premiums, reserves, surrender values, dividends, etc.; the organization and management of legal reserve companies, and important legal phases of life insurance.

246. **MARKETING.** 3(3-0); I and SS. Prerequisite: Econ. 101. Mr. Murphy and Mr. Ward.

Marketing functions, such as assembling and grading of products, storing, transportation, financing and risk taking, stimulation of demand, and merchandising; marketing agencies and methods by means of which products are moved from producer to consumer; basic marketing systems; retailing as carried on by department, specialty, and chain stores, and mail-order houses; marketing problems of the individual business; prices and price policies, sales planning and management, salesmanship, and advertising campaigns.

248. **PROBLEMS IN ECONOMICS.** Credit to be arranged. Prerequisite: Econ. 101 and a two-hour course in advanced economics. Economics staff.

251. **ADVANCED ECONOMICS.** 3(3-0); I and SS. Open only to seniors and graduates. Mr. Thompson.

A critical study of fundamental economic principles and the writings of leading economists of the past and present. The course is designed for mature students in the field of economics.

FOR GRADUATE CREDIT

301. **RESEARCH IN ECONOMICS.** Credit to be arranged; I, II, and SS. Prerequisite: Such courses as the problem undertaken may require. Economics staff.

Graduate students who enroll in this course may elect for original investigation any acceptable problem in the general field of economics.

COURSES IN SOCIOLOGY

FOR UNDERGRADUATE CREDIT

151. **SOCIOLOGY.** 3(3-0); I, II, and SS. Dr. Hill.

The fundamental principles of social life as related to other scientific principles; their practical application to social action and organization; normal constructive social evolution emphasized; the processes of socialization, social forces, and social control, particularly in their relation to commercial, industrial, and professional leadership.

156. **RURAL SOCIOLOGY.** 3(3-0); I. Preferably a course in sociology should precede this. Dr. Hill.

The fundamental principles of the science of sociology applied to rural society; social phases of agricultural and economic movements; the relation of nation, state, and county to socializing projects in rural society.

FOR GRADUATE AND UNDERGRADUATE CREDIT

257. **SOCIAL PROBLEMS.** 2(2-0); I, II, and SS. Prerequisite: Econ. 151. Dr. Hill.

The social phases of population movement, dealing with the problems of quantity and quality; charity and reform organization and technique; professional social work.

267. **COMMUNITY ORGANIZATION AND LEADERSHIP.** 3(3-0); II and SS. Prerequisite: Econ. 151. Dr. Hill.

A study, on a functional basis, of organizations working in the urban and rural fields; the principles involved and the technique of organization. The student has opportunity to choose for special study an organization or institution in which he hopes to have a position of leadership for his life work. Special assistance will be given in these special studies, which may afford the capable student valuable means of approach to future employment.

270. ADVANCED RURAL SOCIOLOGY. 3(3-0); II. Prerequisite: Econ. 156. Dr. Hill.

A continuation of Econ. 156; a wide field of reading in the literature of rural life; original research work and a thesis required.

273. ADVANCED SOCIOLOGY. 3(3-0); I. Prerequisite: Econ. 151. Dr. Hill.

A continuation of Econ. 151, with the view of examining critically the sociological theories of recent writers, and of laying a foundation for a constructive theory of social life.

277. HISTORY OF SOCIAL THOUGHT. 3(3-0); I. Prerequisite: Econ. 151. Dr. Holtz.

The development of social thought from ancient civilization to the present—the social philosophies of Plato, Aristotle, St. Augustine, Thomas Aquinas, Machiavelli, Hobbes, Locke, Hume, Montesquieu, and Condorcet; and the sociological systems of Comte, Spencer, Gumplowicz, Ratzenhofer, Tarde, Ward, and others.

279. SOCIOLOGY SEMINAR. Credit to be arranged; I, II, and SS. Prerequisite: Econ. 151. Dr. Hill.

Selected literature and investigation of social problems.

FOR GRADUATE CREDIT

351. RESEARCH IN SOCIOLOGY. Credit to be arranged; I, II, and SS. Prerequisite: Such courses as the problem undertaken may require. Dr. Hill.

Graduate students who enroll in this course may elect for original investigation any acceptable problem in the field of sociology.

COURSES IN ACCOUNTING

FOR UNDERGRADUATE CREDIT

133, 134. ACCOUNTING I AND II. 3(2-3) each; I, II, and SS. Prerequisite: For Econ. 134, Econ. 133. Mr. Nelson, Mr. Murphy, and Mr. Ward.

I: A study of the principles and structure of accounts designed to give power to analyze commercial accounts and statements; problems and practice sets used as an application of principles to practice.

II: Partnership and corporation accounting and problems peculiar to them; valuation of balance-sheet items, with special references to depreciation, inventories, and intangibles; and several other topics.

136. PRINCIPLES OF ACCOUNTING. 3(3-0); II. Not open to students in commerce curricula. Mr. Nelson.

The principles of accounting, with the major emphasis on the use of accounting records and statements, rather than on the procedure of record keeping. Designed for those who will elect only one course in accounting.

FOR GRADUATE AND UNDERGRADUATE CREDIT

280. ADVANCED ACCOUNTING I. 3(3-0); I and SS. Prerequisite: Econ. 134. Mr. Nelson.

Advanced course in accounting theory, with special emphasis on the content and analysis of accounting statements.

281. ADVANCED ACCOUNTING II. 3(3-0); II and SS. Prerequisite: Econ. 134 and permission of instructor. Mr. Nelson.

Application of accounting principles to such types of business enterprise as partnerships, corporations with subsidiaries and branches, companies in financial difficulties, and estates and trusts.

282. INCOME-TAX ACCOUNTING. 2(2-0); II. Prerequisite: Econ. 280 or permission of instructor. Offered in 1937-'38 and alternate years thereafter. Mr. Stewart.

Preparation of federal income-tax returns, and a study of accounting problems arising in connection with them.

283. ACCOUNTING SYSTEMS. 2(2-0); II. Prerequisite: Econ. 280 or Econ. 287. Offered in 1936-'37 and alternate years thereafter. Mr. Nelson.

The analysis of problems arising in the construction and installation of accounting systems for various types of business enterprises.

284. INSTITUTIONAL ACCOUNTING. 2(2-0); II. Mr. Stewart.

A study of accounting principles and their application to cafeteria, lunch and tea rooms, restaurants, dormitories, clubs, and other institutions.

285. AUDITING. 3(3-0); I. Prerequisite: Econ. 280 and permission of instructor. Mr. Nelson.

Auditing accounts of commercial enterprises; attention to balance sheet and detail audits, with study of both principles and practice.

287. COST ACCOUNTING. 3(3-0), II and SS. Prerequisite: Econ. 134. Mr. Nelson.

Principles of allocating production and distribution costs for the purpose of determining financial results and guiding the management of the business enterprise.

289. GOVERNMENTAL ACCOUNTING. 2(2-0); I. Prerequisite: Econ. 280 or 287. Mr. Stewart.

Federal, state, and municipal accounts, and accounts for certain public institutions.

Education

Professor HOLTON
Professor PETERSON
Professor WILLIAMS
Professor STRICKLAND
Professor RUST
Professor DAVIDSON
Professor ALM

Assistant Professor HALL
Assistant Professor LANGFORD
Assistant Professor BAXTER
Instructor MCGGIE
Instructor WYCKOFF
Instructor WILLIAMS
Assistant QUIST

The courses in this department have been organized with the following objectives in view: (1) to meet the requirements of the Kansas State Board of Education in education and psychology for state certificates for teachers; (2) to give general information in the fields of psychology and public education; (3) to meet the requirements of a major for the degree of Master of Science. In the graduate work the main emphasis is on rural and vocational education. The department has a well-equipped shop and laboratories for carrying on research in psychology and education.

The State Board of Education has set up the following standards or their equivalents for certification of teachers:

1. Three-year Certificates Renewable for Life.

a. Complete four years of college work with degree.

b. At least eighteen hours of the four years' work must be taken in the Department of Education, as follows:

(1) Three hours in General Psychology, three in Educational Administration, three in Educational Psychology, and three in Teaching Participation in High School.

(2) Six hours elected from the following courses in the Department of Education: Rural Life and Education, Extracurricular Activities, Educational Measurements, The Curriculum, Statistical Methods Applied to Education, Vocational Guidance, Educational Sociology, Vocational Education, History of Education, Psychology of Childhood and Adolescence, Abnormal Psychology, Mental Tests, The Technic of Mental Testing, Social Psychology, Psychology of Art, and Psychology of Exceptional Children.

c. Valid in any elementary or high school in Kansas.

2. Three-year Certificates Renewable for Three-year Periods.

- a. Complete at least sixty hours of college work, including three hours in General Psychology, three in School Management, three in Methods of Teaching, and three in Teaching Participation in Grade Schools.

Not more than fifteen hours in any one department will be accepted on transcripts showing only sixty hours of credit, and not more than twenty hours credit presented from correspondence courses will be accepted.

- b. Valid in any elementary school.

3. Certificates for Teachers of Vocational Agriculture.

- a. Complete four years of college work with degree, including the following:

(1) Not less than fifty hours in technical or practical agriculture.

(2) Not less than twenty-one hours of science related to agriculture.

(3) Eighteen hours in the Department of Education: viz., three in General Psychology, three in Educational Administration or in Principles of Secondary Education, three in Educational Psychology, three in Vocational Education, three in Methods in Agriculture, and three in Teaching Participation in Agriculture.

(4) Eighteen hours in mechanical lines related to farm-shop problems.

- b. Valid for three years and may be renewed for life.

4. Certificate for Teachers of Vocational Home-making.

- a. Complete four years of college work with degree, including the following:

(1) Thirty-four hours in technical home economics, as required in the curriculum in Home Economics, three in Child Welfare, and three in Practice Work in Household Management.

(2) Eighteen hours in the Department of Education: viz., three in General Psychology, three in Educational Administration or three in Principles of Secondary Education, three in Educational Psychology, three in Vocational Education, three in Methods in Home Economics, and three in Teaching Participation in Home Economics.

- b. Valid for three years and may be renewed for life.

5. To comply with the regulations of the State Board of Education regarding teachers' certificates based on four years of college work, the student must complete at least twenty-four of the last thirty semester hours or fifty of the last sixty semester hours, in residence at the college granting the degree.

COURSES IN EDUCATION**FOR UNDERGRADUATE CREDIT**

107. SCHOOL MANAGEMENT. 3(3-0); I, II, and SS. Limited to freshmen and sophomores. Mr. Davidson.

A survey of classroom and school administration and management of pupils in groups; problems of discipline, school sanitation and hygiene and school health, and general classroom efficiency. The student is shown how to develop an efficient classroom routine and class program.

109. EDUCATIONAL PSYCHOLOGY. 3(3-0); I, II, and SS. Prerequisite: Educ. 184 and junior or senior standing. Mr. Moggie.

The native equipment of human beings, individual differences, the psychology of learning, motivation, and the psychology of the school subjects.

111. METHODS OF TEACHING. 3(3-0); I, II, and SS. Prerequisite: Educ. 184. Open to freshmen and sophomores only. Mr. Moggie.

Problems of general method in classroom procedure in grades and junior high school. Required of candidates for three-year certificate renewable for three-year periods.

129. TEACHING PARTICIPATION IN GRADE SCHOOL. 1 to 4 hours. I, II, and SS. Prerequisite: Educ. 184, 111, and 107.

Not open to students below sophomore standing. Dr. Strickland and Miss Hartman.

The work in this course is done in an elementary school of Manhattan. Appointment must be made at the time of registration for the semester during which it is done.

132. METHODS OF TEACHING HOME ECONOMICS. 3(3-0); I, II, and SS. Prerequisite: Food and Nutr. 102 and 107, Clo. and Text. 103, and Educ. 184. Mrs. Rust and Mrs. Baxter.

The principles of teaching applied to the selection and development of home-economics subject matter in lessons for all types of pupils, and to the conduct of laboratory and classroom exercises.

136. METHODS OF TEACHING AGRICULTURE. 3(3-0); I, II, and SS. Prerequisite: Educ. 184. Mr. Davidson.

Training in planning lessons, organizing materials, and conducting class, laboratory, and field instructional work in vocational agriculture is the purpose of this course. The individual and class project are studied, as well as the problem of coördinating farm mechanics work.

160. TEACHING PARTICIPATION IN HOME ECONOMICS. 3 hours. I, II, and SS. Prerequisite: Food and Nutr. 102 and 107, Clo. and Text. 103. Prerequisite or parallel: Educ. 132. Mrs. Rust and Mrs. Baxter.

Supervised teaching carried on in the home economics classes of the Manhattan high school.

161. TEACHING PARTICIPATION IN AGRICULTURE. 3 hours. I and II. Prerequisite: Educ. 109 and 136. Mr. Davidson.

Three weeks of observation and practice teaching in vocational agriculture classes in Manhattan high school and other high schools by arrangement; group study of classroom problems; lesson plans and presentation criticized by the College instructor and the vocational teacher in the practice department.

163. TEACHING PARTICIPATION IN HIGH SCHOOL. 1 to 4 hours. I, II, and SS. Prerequisite: Educ. 109 and senior standing. Dr. Strickland, Mr. Washburn, and Miss Saum.

Work is done in classes in the Manhattan high school, and special appointment must be made at the time of registration for the semester in which it is done. The work may be elected in biology, English, mathematics, modern languages, physical science, social science, art, and physical education.

FOR GRADUATE AND UNDERGRADUATE CREDIT

201. RURAL LIFE AND EDUCATION. 3(3-0); I, II, and SS. Prerequisite: Educ. 210. Mr. Davidson.

Historical and social study of rural life; institutions and organizations that have contributed to rural life development; evolution from the one-room rural school to the rural high school and consolidated schools; farmers' organizations and all forms of organized community life in the open country, in relation to the problems of public education.

202. EXTRACURRICULAR ACTIVITIES. 3(3-0); I, II, and SS. Prerequisite: Educ. 210. Mr. Moggie.

A careful survey of the extracurricular activities of the junior and senior

high schools; determination of the educational objectives of these activities and the most effective methods and means employed in the accomplishment of the objectives.

206. PHILOSOPHY OF EDUCATION. 3(3-0); II and SS. Prerequisite: Educ. 109. Dr. Holton.

A critical study of the controlling and unifying philosophy of the American public school system and its European background.

210. EDUCATIONAL ADMINISTRATION. 3(3-0); I, II, and SS. Prerequisite: For undergraduate credit, senior standing; for graduate credit, Educ. 109 and 184. Dr. Strickland.

The organization of state, city, and county school systems; organization of school systems in Kansas, both rural and city; the school laws of Kansas.

212. EDUCATIONAL MEASUREMENTS. 3(3-0); I, II, and SS. Prerequisite: Educ. 109 and 184. Dr. Strickland.

The scientific measurement of achievement as distinguished from intelligence testing.

219. THE CURRICULUM. 3(3-0); SS. Prerequisite: Six hours in education and junior standing. Dr. Holton.

The fundamental requirements of our modern life upon the schools; educational objectives in the light of these requirements; each subject in the curriculum examined for its minimum essentials both in the elementary school and in the high school.

220. INTRODUCTION TO PHILOSOPHY. 3(3-0). Prerequisite: Junior standing or better. Not offered in 1935-'36.

A study of the more important interpretations of experience and an examination of the bases of values in modern life.

223. STATISTICAL METHODS APPLIED TO EDUCATION. 3(3-0); I, II, and SS. Prerequisite: Junior standing. Not open to students who have credit in Math. 203. Mr. Moggie.

Organization of the data of educational and biological experience and research for statistical interpretation; graphical representation and interpretation; facility in the calculation of statistical constants; a general consideration of experimental and research methods.

230A. VOCATIONAL GUIDANCE. 3(3-0); I, II, and SS. Prerequisite: Educ. 236 or 210. Dr. Williams.

The best methods and practices now used in the field of pupil guidance in study of vocations and career planning; analysis of a number of the more desirable trades, professions, and business callings; guidance problems of the elementary, junior high school, senior high school and continuation schools.

232. TEACHING SUBJECTS RELATED TO HOME ECONOMICS. 1 to 3 hours; I, II, and SS. Prerequisite: Educ. 132 and 184. Mrs. Rust.

Objectives and principles involved in teaching subjects related to home economics; planning of courses of study which are based upon the problem methods of teaching. (Designed for teachers of vocational homemaking in the Smith-Hughes high-school courses.)

234. METHODS IN ADULT HOMEMAKING CLASSES. 1 to 3 hours; SS. Prerequisite: Educ. 132 and 184, or equivalent. Mrs. Rust.

The principles of teaching applied to adult classes and a demonstration class in one or more phases of homemaking.

236. PRINCIPLES OF SECONDARY EDUCATION. 3(3-0); I, II, and SS. Prerequisite: Educ. 184 and junior or senior standing. Dr. Williams.

A brief historical study of secondary education following the origin and development of present-day principles in the field of secondary education;

objectives of junior and senior high-school organization, administration, and supervision; curriculum and methods of organizing and conducting secondary education; field problems in junior and senior high school. A limited amount of field work is required.

239. EDUCATIONAL SOCIOLOGY. 3(3-0); I, II, and SS. Prerequisite: Educ. 184 and junior or senior standing. Dr. Holton.

The group activities of the school in relation to personality traits; psychology of personality; the school's responsibility in the development of socialized personality traits.

241. VOCATIONAL EDUCATION. 3(3-0); I, II, and SS. Prerequisite: Educ. 210 and 236, and junior or senior standing. Dr. Williams.

A comparative study of the provisions for the different phases of vocational education in Kansas and other states and countries, and of the principles underlying such education, with emphasis upon the relation of vocational education to the community, county, state, and nation, and the part to be played by each in its development. The aim is to fit the student to plan, teach, and administer or supervise vocational work, especially in high schools.

244. HISTORY OF EDUCATION. 3(3-0); I, II, and SS. Dr. Williams.

The history of education in the United States, with a consideration of the more important present-day problems in the organization, administration, and adjustment of public education in the light of historical development.

249. PROBLEMS IN EXTENSION EDUCATION. Credit to be arranged. Prerequisite: Econ. 151 or CS 3; Educ. 184 or CP 8, or EXT. 5. Dr. Gemmell and Dr. Fleenor.*

Problems in extension met by director, supervisor, county agricultural agent, county home demonstration agent, 4-H club leader, or specialist.

FOR GRADUATE CREDIT

306. ADVANCED EDUCATIONAL ADMINISTRATION. 3(3-0); SS. Prerequisite: Educ. 210 or equivalent. Dr. Strickland.

The constitutional and legal basis of public-school administration, study of judicial decisions in order to discover the legal principles involved. Major topics: Creation of school districts; rules and authority of boards of education; control of school property; management of funds; liability of districts and district officers; taxation; employment and dismissal of teachers; rights and duties of parents and pupils; discipline and punishment; curriculum and textbooks. Intended primarily for school executives.

309. PROBLEMS IN EDUCATIONAL PSYCHOLOGY. Credit to be arranged; I, II, and SS. Prerequisite: Educ. 109 and 184. Mr. Moggie.

A study of problems, recent experimentations, and applications of the principles of educational psychology.

311. PROBLEMS IN EDUCATIONAL MEASUREMENT. Credit to be arranged; I, II, and SS. Prerequisite: Educ. 109 and 212. Dr. Strickland.

Problems in refining educational measurement and using its results.

312. PROBLEMS IN TEACHING METHODS. Credit to be arranged; I, II, and SS. Prerequisite: Educ. 109 and senior or graduate standing. Dr. Strickland.

Individual problems in development and definition of effective teaching procedure.

313. RESEARCH IN ORGANIZATION AND PRESENTATION OF HOME ECONOMICS. Credit to be arranged; I, II, and SS. Prerequisite: Graduate standing. Dr. Justin, dean of the Division of Home Economics, and Mrs. Rust.

Individual research problems in phases of organization and administration for home economics. May be chosen as the basis for thesis for the master's

* From the staff of the Department of Home Study.

degree. The nature of the problem will depend upon the student's major interest.

314. PROBLEMS IN ORGANIZATION AND PRESENTATION OF HOME ECONOMICS. Credit to be arranged; I, II, and SS. Prerequisite: Senior or graduate standing. Dr. Justin, dean of the Division of Home Economics, and Mrs. Rust.

This course permits opportunity for study of problems of organization and administration in this field.

315. SUPERVISION IN HOME ECONOMICS. 2(2-0); II and SS, by appointment. Prerequisite: Educ. 132 and 184, and experience in teaching home economics. Mrs. Rust.

Problems met by a supervisor or director of home economics in the public schools; standardization of work; relation of supervisor to teacher; modernization of plant and equipment; course of study, etc.

317. PROBLEMS IN EDUCATIONAL ADMINISTRATION. Credit to be arranged; I, II, and SS. Prerequisite: Educ. 210 and one year of teaching experience. Dr. Strickland.

Two types of problems are considered: (1) The income of the public schools; taxation inequalities and equalization devices; the state and federal unit; possible solutions of revenue problems; (2) The administration of the teaching staff, including training, certification, recruiting, placement, promotion, training in service, tenure, rating, teaching load, salary schedules, professional ethics, legal and social status, professional organizations, health and leisure, retirement and the organization of the teaching staff. The course is primarily for school executives.

322. PROBLEMS IN STATISTICAL METHODS APPLIED TO EDUCATION. Credit to be arranged; I, II, and SS. Prerequisite: Educ. 223 or equivalent, 8 hours of college mathematics, and full graduate standing. Mr. Moggie.

The solution of some statistical problem in research or thesis preparation; the theory of statistics from a more advanced point of view; regression curves and various methods of correlation; the literature of statistics.

325. RESEARCH IN EDUCATION. Credit to be arranged; I and II. Members of Graduate Faculty.

Individual research problems in the general field of education and in the fields of psychology—mental testing, administration, and vocational education.

330. AGRICULTURAL EDUCATION B. 3(3-0); I or II. Dr. Williams.

A research survey course in the field of agricultural education required of all candidates for the degree of Master of Science whose major work in the Department of Education is in the field of agricultural education.

333. PROBLEMS IN EDUCATIONAL SOCIOLOGY. Credit to be arranged; I, II, and SS. Prerequisite: Educ. 109 and 184, and graduate standing. Dr. Holton.

Research problems in the social organization of the school and the social inheritance of school populations, with special reference to the development of desirable personality traits.

337. PROBLEMS IN VOCATIONAL EDUCATION. Credit to be arranged; I, II, and SS. Prerequisite: Educ. 241 and 210 or 236. Dr. Williams.

The solution of some vocational education problem in research or in thesis preparation. Problems in administration, supervision, or curriculum building in the varied vocational fields to meet community needs.

338. PROBLEMS IN VOCATIONAL GUIDANCE. Credit to be arranged; I, II, and SS. Prerequisite: Educ. 230A. Dr. Williams.

Research problems in phases of guidance which affect better coördination and supervision of the work of junior and senior high schools, and development of part-time and adult education progress.

COURSES IN PSYCHOLOGY**FOR UNDERGRADUATE CREDIT**

184. **GENERAL PSYCHOLOGY.** 3(3-0); I, II, and SS. Dr. Peterson, Dr. Alm, and Dr. Langford.

An introduction to the fundamental facts and principles of general psychology. The physiological and neural basis of behavior; innate and acquired tendencies to reaction; the nature of the learning process, and the methods and conditions which favor rapid and effective learning; individual differences as related to vocational and personal efficiency.

FOR GRADUATE AND UNDERGRADUATE CREDIT

250. **THE PSYCHOLOGY OF CHILDHOOD AND ADOLESCENCE.** 3(3-0); I, II, and SS. Prerequisite: Educ. 184. Dr. Alm.

A genetic study of the trends in the development of structures, capacities, interests, and personality traits, that facilitate understanding and control of the behavior of childhood and adolescence.

254. **ABNORMAL PSYCHOLOGY.** 3(3-0); II. Prerequisite: Educ. 184. Dr. Alm.

Development of an understanding attitude toward maladjustment of personality, behavioral disorders, psychoneuroses, and dementias through study of their causes, development, symptoms, prevalence, prevention, and correction. Dreams, hypnotism, and multiple personality will be considered.

257. **ADVANCED GENERAL PSYCHOLOGY.** 3(3-0); II. Prerequisite: Educ. 184. Dr. Langford.

Fundamental problems, methods, and interpretations of general psychology.

259. **EXPERIMENTAL PSYCHOLOGY.** 3(3-0); I or II. Prerequisite: Educ. 184. Dr. Peterson.

A few representative experiments in animal and sensorimotor learning, as an introduction to the types of problems encountered and to the basic methods of procedure essential to the analysis of the thought processes; a survey of the experimental literature on the higher mental processes, with special attention to the more objective studies in the experimental analyses of the thought processes.

260. **MENTAL TESTS.** 3(3-0); I. Prerequisite: Educ. 184. Dr. Peterson.

Current mental tests involving the selection of the best tests for particular purposes at various age and school levels; approved methods of conducting and scoring tests and of utilizing test results.

261. **THE TECHNIC OF MENTAL TESTING.** 3(1-6); I or II. Prerequisite or parallel: Educ. 223 and 260. Dr. Peterson.

Methods of giving and scoring the Stanford Revision of the Binet Scale, with practice under the observation of the instructor until sufficient reliability is secured; the principal standard group tests of intelligence and special abilities analyzed and finally given and scored under observation; choice of tests for specific purposes; tabulation and interpretation of scores.

265. **PSYCHOLOGY OF ADVERTISING AND SELLING.** 3(3-0); II. Prerequisite: Educ. 184. Dr. Peterson.

Psychological factors underlying effective selling and advertising, including a survey of experimental results and of present advertising and selling practices in the light of the principles of psychology.

266. **PSYCHOLOGY OF EXCEPTIONAL CHILDREN.** 3(3-0); I and SS. Prerequisite: Educ. 184. Dr. Alm.

Mental giftedness, mental subnormality, speech disorder, handedness, psychoneurotic and psychopathic personality trends and delinquency in children, with emphasis on causes, diagnostic tests, and behavioral adjustments.

269. ANIMAL PSYCHOLOGY. 3(3-0); I. Prerequisite: Educ. 184 and Zoöl 105. Dr. Alm.

Animal behavior from the standpoint of sensory capacities, perception, adaptive behavior, learning, insight, and other functions. A survey of psychological apparatus and contributions to animal psychology.

270. SOCIAL PSYCHOLOGY. 3(3-0); II. Prerequisite: Educ. 184. Dr. Langford.

The individual as a member of the group, including results of experiments upon and observations of the individual in the group situation.

273. PSYCHOLOGY AND PERSONNEL MANAGEMENT. 3(3-0); I. Prerequisite: Educ. 184. Dr. Peterson.

Scientific principles and procedures involved in employment; promotion, motivation of work, measurement and reward of achievements, etc.

276. PSYCHOLOGY OF ART. 3(3-0); I, II, and SS. Prerequisite: Educ. 184. Dr. Langford.

Brief introduction to the philosophy of art; interpretation of psychological principles used in production and appreciation of art; review of experimental aesthetics in pictorial art and music, with special emphasis on the former.

FOR GRADUATE CREDIT

370. PROBLEMS IN PSYCHOLOGY. Credit to be arranged; I, II, and SS, by appointment. Prerequisite: Consult instructor. Dr. Peterson, Dr. Alm, and Dr. Langford.

Each student studies an individual problem appropriate to his degree of advancement in the field of psychology. A written report is required. The amount of credit depends upon the work done. Enrollment by recommendation of the instructor not later than mid-semester.

373. PSYCHOLOGY OF TEACHING AND LEARNING. 3(3-0); I or II. Prerequisite: Educ. 184. Dr. Peterson.

An analysis of the various forms of learning and of the conditions favorable to the rapid development and effective functioning of knowledge, skills, attitudes, and purposes.

376. RESEARCH IN PSYCHOLOGY. Credit to be arranged; I, II, and SS. Members of graduate faculty.

Individual research problems in the field of psychology.

COURSES FOR FOUR-WEEK SUMMER SCHOOL

FOR GRADUATE AND UNDERGRADUATE CREDIT

283. ADMINISTRATION AND SUPERVISION OF SECONDARY SCHOOLS. 2(10-0); four-week SS. Prerequisite: Educ. 109, 184, and 210. Dr. Williams.

Problems of organization, administration, and supervision covering the complete program of an administrative head of a school system in a small city. (Designed for principals of rural high schools and superintendents of small city systems.)

285. THE PROJECT METHOD IN AGRICULTURAL EDUCATION. 2(10-0); four-week SS. Prerequisite: Educ. 136 and 161. Mr. Davidson or Mr. Hall.

The project as a teaching device, with intensive treatment of project values, project analysis, project accounting, project supervision, project types, project results, project records, project reports, etc. The course is conducted on the problem basis.

287. ORGANIZATION AND CONDUCT OF CLASS PROJECTS. 2(10-0); four-week SS. Prerequisite: Educ. 236 and 241. Mr. Davidson or Mr. Hall.

Fundamentals and principles on which productive class projects should be organized. Research and field work in class project study will be undertaken.

289. ADMINISTRATION AND SUPERVISION OF VOCATIONAL EDUCATION. 2(10-0); four-week SS. Prerequisite: Educ. 109, 184, and 210. Dr. Williams.

Objectives, curriculum organization and content, administrative and supervisory problems from the viewpoint of the city superintendent—leadership needs which must be met in a school system offering vocational education. The problem basis of treatment is used.

291. COMMUNITY PROBLEMS IN VOCATIONAL AGRICULTURE. 2(10-0); four-week SS. Dr. Williams or Mr. Davidson.

Methods, organization, and conduct of club work, junior project work, class projects, and community projects in general—a course conducted on the problem basis and designed specifically for teachers, supervisors, and directors of agricultural work.

293. PROBLEMS IN EVENING SCHOOL CLASSES. 2(10-0); four-week SS. Open to college graduates who have taught one year of vocational agriculture. Mr. Davidson or Mr. Hall.

Problems of organization, curriculum, and methods of teaching evening schools and classes sponsored by the national vocational education act. Designed for teachers in service.

295. ORGANIZATION PROBLEMS IN TEACHING FARM MECHANICS. 2(10-0); four-week SS. Prerequisite: Educ. 136 and 161. Mr. Davidson or Mr. Hall.

An analysis of the farm mechanics' course of study; needs and interests of boys, learning difficulties, skills and technical knowledge required. Correlation with agriculture. Application of laws of learning to the teaching process. Determining objectives.

English

Professor DAVIS
Professor CONOVER
Professor ROCKEY
Professor MATTHEWS
Professor RICE
Professor FAULKNER
Associate Professor STURMER
Associate Professor ELCOCK

Associate Professor BREEDEN
Associate Professor CALLAHAN
Assistant Professor GARVEY
Assistant Professor PARKER
Assistant Professor ABERLE
Instructor SCOTT
Instructor LAMAN
Instructor PEERY

Ability to think accurately and speak well, and capacity to appreciate the world's best literature are recognized essentials of a liberal education. The work of the Department of English is to acquaint the student with the best standards of English practice and appreciation and to encourage him to maintain these standards in all his work. To this end the department offers studies in cultural and technical English and special drills in expressing thought freely and effectively in matters touching the vital interests of the student. The study of the English language and literature is thus made the means of increasing his power and efficiency.

COURSES IN ENGLISH LANGUAGE

FOR UNDERGRADUATE CREDIT

101. COLLEGE RHETORIC I. 3(3-0); I, II, and SS. Prerequisite: Three units of high-school English. Mr. Davis. Mr. Conover, Mr. Rockey, Mr. Matthews, Miss Rice, Mr. Faulkner, Miss Sturmer, Miss Elcock, Mr. Breedon, Mr. Callahan, Miss Garvey, Mrs. Parker, Miss Aberle, Miss Scott, Mr. Laman, and Mr. Peery.

The improvement of students' written and spoken English by reviewing the principles of correct and effective diction, grammar, and sentence structure; by discussing models of good contemporary writing; by studying and practicing various types of paragraph; and by writing expository themes with guidance in selecting material, planning, writing, and revision.

104. COLLEGE RHETORIC II. 3(3-0); I, II, and SS. Prerequisite: Engl. 101. Mr. Davis, Mr. Conover, Mr. Rockey, Mr. Matthews, Miss Rice, Mr. Faulkner, Miss Sturmer, Miss Elcock, Mr. Breeden, Mr. Callahan, Miss Garvey, Mrs. Parker, Miss Aberle, Miss Scott, Mr. Laman, and Mr. Peery.

The principles of argument, description, and narration, illustrated by standard and contemporary literature, and applied in frequent themes; correct form, structure, and diction of some common business letters; organization and writing of one extended composition.

110. ENGINEERING ENGLISH. 2(2-0); I and II. Prerequisite: Engl. 104 and junior standing. Mr. Rockey, Mr. Matthews, and Mr. Faulkner.

The general problems of engineering writing: technical descriptions, and the exposition of ideas, mechanisms, and processes; the preparation of engineering talks, business letters, technical manuscripts, and reports. A brief review of composition essentials is included.

122. COMMERCIAL CORRESPONDENCE. 3(3-0); I, II, and SS. Prerequisite: Engl. 104. Mr. Davis, Mr. Faulkner, and Mr. Callahan.

A thorough review of the routine types of business correspondence; the writing of adjustment, credit, collection, and sales letters; the principles of effective writing as seen in the best writing in the commercial world.

123. WRITTEN AND ORAL SALESMANSHIP. 3(3-0); I and II. Prerequisite: Engl. 104. Mr. Faulkner.

Special attention to the writing of follow-up systems of sales letters and to the composition and display of circular material and catalogues; the basic principles of advertising and the psychology of selling; special practice in the various forms of sales talks; arrangement made for actual sales practice with commercial concerns.

125. BUSINESS ENGLISH AND SALESMANSHIP. 3(3-0); II. Prerequisite: Engl. 104. Mr. Callahan.

The basic principles of business letter writing and salesmanship as they apply in the field of engineering, with practice in the writing of different kinds of business letters and the preparation of sales material, both oral and written.

137. AGRICULTURAL ENGLISH. 3(3-0); I. Prerequisite: Engl. 104. Mr. Davis, Mr. Conover, Mr. Matthews, and Mr. Faulkner.

A brief review of the composition essentials, business correspondence, bulletin writing, the organization of short business talks, the principles of farm advertising; and writing the problems that confront the county agent, the high-school teacher of agriculture, and the farm manager.

140. LITERATURE FROM THE READERS. 3(3-0); SS. Miss Aberle and Mrs. Parker.

Reading considered both as a fundamental means of acquiring knowledge and as a stepping stone to the appreciation of literature. (Planned to meet the needs of teachers of rural and graded schools.)

FOR GRADUATE AND UNDERGRADUATE CREDIT

207. TECHNICAL WRITING. 2(2-0); II. Prerequisite: Engl. 113 or 122. Mr. Davis, Mr. Conover, Mr. Matthews, and Mr. Faulkner.

Fundamental principles of technical and scientific writing, with such practice as will necessitate clearness, accuracy, and effectiveness.

219. ADVANCED COMPOSITION I. 3(3-0); I. Prerequisite: Engl. 104. Mr. Davis, Mr. Conover, and Mr. Matthews.

Special emphasis given to exposition; subjects selected from the student's particular field of work; exposition of mechanisms, processes, and general expository writing carefully studied. For graduate students especial practice is given in thesis organization and style.

220. **ADVANCED COMPOSITION II.** 3(3-0); II. Prerequisite: Engl. 104. Mr. Davis, Mr. Conover, and Mr. Matthews.

Narrative writing both in its relation to the other forms of composition and as an independent form; practical forms of the narrative; special attention to the short story. Direction and criticism of thesis work is offered to graduate students.

223. **ADVANCED PROBLEMS IN COMMERCIAL CORRESPONDENCE.** 3(3-0); II. Prerequisite: Engl. 122. Mr. Faulkner.

Problems in special types of business letters; writing of adjustment, credit, and collection letters; specialized study and writing of sales and business promotion letters; composition of form paragraphs, circular letters, and business reports; correspondence supervision.

228, 230. **THE SHORT STORY I and II.** 3(3-0) each; I and II, respectively. Prerequisite: For I, Engl. 172; for II, Engl. 228. Miss Rice.

I: The world's best short stories; practice in writing sketches and short stories; special emphasis on the elements of the story—plot, setting, action, and characterization.

II: Special stress on the preparation of the short story for publication; the short story in America, with special attention to types, characteristics, and tendencies; standards set by the leading magazines; market problems.

232. **ORAL ENGLISH.** 3(3-0); I, II, and SS. Prerequisite: Engl. 104. Mr. Rockey and Mr. Matthews.

The principles of oral composition as applied to conversation and informal discussions; the correction of errors in grammar, pronunciation, and idiom in everyday speech; a brief history of English sounds. Subjects selected from the field of science, politics, painting, music, and literature. Special investigations in phonology for graduate students.

243. **ADVANCED GRAMMAR.** 3(3-0); I, II, and SS. Prerequisite: Engl. 104. Miss Elcock and Miss Aberle.

Emphasis on English etymology, inflections, syntax, and modern English and American usage. For graduate credit, reports on problems in modern English grammar.

COURSES IN ENGLISH LITERATURE

FOR UNDERGRADUATE CREDIT

172. **ENGLISH LITERATURE.** 3(3-0); I, II, and SS. Prerequisite: Engl. 104. Mr. Davis, Mr. Conover, Mr. Rockey, Mr. Matthews, Miss Rice, Mr. Faulkner, Miss Sturmer, Miss Elcock, Mr. Breeden, Mr. Callahan, Miss Garvey, Mrs. Parker, Miss Aberle, Miss Scott, Mr. Laman, and Mr. Peery.

The application of principles of literary appreciation to representative texts in narrative, lyric, and dramatic poetry, and to examples of the essay and the novel.

175. **AMERICAN LITERATURE.** 3(3-0); I, II, and SS. Prerequisite: Engl. 172. Mr. Davis, Mr. Conover, Mr. Rockey, Mr. Matthews, Miss Rice, Mr. Faulkner, Miss Sturmer, Miss Elcock, Mr. Breeden, Mr. Callahan, Miss Garvey, Mrs. Parker, Miss Aberle, Miss Scott, Mr. Laman, and Mr. Peery.

A study of American prose and poetry, the purpose being to acquaint the student with representative American writers by intensive study of illustrative selections, and to present the historical background and the tendencies of American literature.

181. **HISTORY OF ENGLISH LITERATURE.** 3(3-0); I, II, and SS. Prerequisite: Engl. 172. Mr. Davis, Mr. Conover, Mr. Rockey, Mr. Matthews, Miss Rice, Mr. Faulkner, Miss Sturmer, Miss Elcock, and Miss Aberle.

A study in the history of English literature, the object being to give the student a perspective of the field of English letters, and to study the works of authors in relation to their own periods.

FOR GRADUATE AND UNDERGRADUATE CREDIT

255. CULTURAL READINGS. 3(3-0); I and II. Not open to students who have credit in Engl. 172, 175, or 181. Prerequisite: Engl. 104. Mr. Conover, Mr. Davis, and Mr. Matthews.

A reading course in English and American literature, designed for students in agriculture, engineering, and other technical curricula. Lectures on literature of general cultural value, and reports on assigned readings of especial interest to the technically trained man.

260. CHAUCER. 3(3-0); I. Prerequisite: Engl. 172. Miss Elcock.

The life, times, works, and characteristic language of Chaucer, with the emphasis upon the study of his principal works.

262. MILTON AND THE PURITAN REVOLT. 3(3-0); II. Prerequisite: Engl. 172. Miss Elcock.

The life and times of Milton and his chief works; the conflict in the seventeenth century between the reverence for authority in government, religion, and literature, and the growing spirit of intellectual inquiry.

265. AMERICAN SURVEY. 2(2-0); II. Prerequisite: Engl. 172 and 175. Mr. Davis and Mr. Breeden.

An advanced study in the history of American literature beginning with colonial literature and continuing through the period of the Civil War down to the present time.

268. THE LITERATURE OF THE MIDDLE WEST. 3(3-0); I. Prerequisite: Engl. 172. Mr. Callahan.

A study of the literature produced in that section of America known as the Middle West, particularly Kansas and the surrounding territory; its backgrounds, authors, and literature since the close of the Civil War.

271. THE ENGLISH BIBLE. 3(3-0); I, II, and SS. Prerequisite: Engl. 172. Mr. Conover.

The Bible as literature, with special stress on the narratives of the Old Testament, poetry, wisdom literature, and the book of Job.

273, 274. SHAKESPEAREAN DRAMA I AND II. 3(3-0) each; I and II, respectively. Prerequisite for each: Engl. 172. Mr. Davis and Miss Sturmer.

I: The life and times of Shakespeare and the background of Shakespearean tragedy; intensive study of five of Shakespeare's tragedies: *Macbeth* or *Othello*, *Hamlet*, *King Lear*, *Coriolanus*, and *Romeo and Juliet*.

II: An intensive study of five of Shakespeare's comedies: *The Winter's Tale*, *As You Like It*, *Twelfth Night*, *Cymbeline*, and *The Tempest*; collateral readings of earlier comedy, of Shakespearean comedy, that of his contemporaries, and present-day criticism of Shakespeare.

276. ENGLISH ESSAYISTS OF THE EIGHTEENTH AND NINETEENTH CENTURIES. 3(3-0); II. Prerequisite: Engl. 172. Mr. Davis and Mr. Conover.

Two periods of especially notable English prose. Among the authors discussed are Swift, Addison, Steele, Johnson, Burke, Lamb, Hazlitt, DeQuincey, Wilson, Newman, Ruskin, Spencer, Huxley, Pater, and Wilde.

278. WORDSWORTH, SHELLEY, AND KEATS. 3(3-0); I. Prerequisite: Engl. 172. Mr. Rockey.

A study of the chief works of Wordsworth, Shelley, Keats, Coleridge, and Byron, with some consideration of the period as a revival of romanticism.

280, 281. WORLD CLASSICS I AND II. 3(3-0) each; I and II, respectively. Prerequisite for each: Engl. 172. Mr. Faulkner.

I: The literary masterpieces (in translation) of early times, particular attention being paid to Greek and Latin classics.

II: The literary masterpieces (in translation) of Western Europe, with

particular attention to the works of Italian, Spanish, French, and German writings that have attained lasting world fame.

283. CONTEMPORARY FICTION. 3(3-0); I and SS. Prerequisite: Engl. 172. Mr. Conover.

The more important British and American fiction since Hardy.

284. CONTEMPORARY DRAMA. 3(3-0); II. Prerequisite: Engl. 172. Mr. Conover.

Development of the drama since Ibsen; types of modern drama; works of important English, Irish, and American dramatists.

286, 287. THE NOVEL I AND II. 3(3-0) each; I and II, respectively. Prerequisite: Engl. 172. Mr. Breeden.

I: The English novel, its historical development, its relation to other forms of fiction, and its place in contemporary literature; especial attention to representative works of modern English and American writers.

II: Continuation of the Novel I. Review of essentials in study of the novel; readings of representative modern novels continued; class reports.

288, 290. ENGLISH SURVEY I AND II. 2(2-0) each; I and II, respectively. Prerequisite: Engl. 172. Mr. Davis, Mr. Conover, and Mr. Matthews.

I: An advanced study in the history of English literature from Anglo-Saxon times down to the close of the Elizabethan period.

II: The rise of Puritanism and its influence on English literature; the classical movement emphasized; romanticism and its development.

293. BROWNING AND TENNYSON. 3(3-0); II. Prerequisite: Engl. 172. Mr. Rockey.

Interpretation of the most important poetic and dramatic works of Alfred Tennyson and of Robert Browning.

297. CONTEMPORARY POETRY. 3(3-0); II and SS. Prerequisite: Engl. 172. Mr. Davis and Mr. Conover.

FOR GRADUATE CREDIT

Classes in courses listed under the graduate group are organized whenever the demand for them is sufficient. When the demand does not justify the organization of a class, the work may be arranged for by appointment. Special arrangements for work should be made with the head of the department.

301, 302. HISTORY OF THE ENGLISH LANGUAGE I AND II. 2(2-0) each; I and II, respectively. Prerequisite: Engl. 181. Mr. Conover and Miss Sturmer.

I: The origin and development of the English language, with special stress on Old English.

II: A continuation of Engl. 301, with special emphasis on Middle English and Modern English.

305. RESEARCH IN ENGLISH. Credit to be arranged; I, II, and SS. Prerequisite: Consult head of department and instructors concerned.

Advanced students with acceptable fundamental training may, with the approval of the head of the department, undertake original investigation in some definitely prescribed field of English literature or applied English. Such work must be pursued under the direct supervision of some member of the faculty of the department, and the final results may be used to fulfill the thesis requirements for the master's degree. Students doing research in English will be required to give evidence of approved training in the subject and to have a broad general knowledge of English literature.

Entomology

Professor DEAN
Professor SMITH
Professor PARKER
Associate Professor PAINTER

Assistant Professor BRYSON
Assistant Professor WILBUR
Assistant LAMERSON

In all courses a special effort is made to make the student realize that he is studying living things which form a part of his daily environment, and upon which his welfare in many cases vitally depends. In courses in which both class and laboratory instruction is given, the closest correlation is striven for, and whenever possible the same form is studied simultaneously in laboratory and class. The student is led to integrate his classroom knowledge with local animal life by means of frequent and carefully planned field excursions and by the free use of vivaria in laboratory and museum. The courses offered are intended to awaken in the student a keen appreciation of the general principles underlying insect life, of the life economy of the more beneficial as well as the more injurious species, and of the general principles governing methods for their control.

Standard anatomical charts, a representative collection (especially of local species), a high-grade lantern for the projection of lantern and microscope slides, a large and excellent series of lantern slides (many of them colored), and a series of microscope slides are available for illustration. Compound and dissecting microscopes sufficient for the needs of laboratory classes have been provided.

Facilities for advanced work are provided for graduate students and others who expect to pursue the subject professionally. An advanced laboratory is equipped with individual desks, binocular microscopes, compound microscopes, rotary microtome, imbedding ovens, drawing apparatus, and a supply of glassware and reagents, sufficient for histological work and for research. Three well-equipped insectaries are available for training in insectary methods. The department has a well-classified library containing the frequently used books and bulletins in the various courses. Two acres of experimental plots and field stations with all the necessary equipment provide means for the study of insects under normal field conditions.

COURSES IN ENTOMOLOGY

FOR UNDERGRADUATE CREDIT

101. GENERAL ENTOMOLOGY. 3(3-0) or 4 (3-3); I and II. Dr. Smith.

A popular, general course dealing with insects and related arthropods in their varied relations to plants and animals, including man. The subject matter is given a biological emphasis and is particularly selected to fill a place in the general cultural education of all classes of students and of prospective teachers and writers in the field of biology who will, in most cases, take only this one course in entomology. Charge, \$1.

Students expecting to use this course as a prerequisite to other courses in entomology should register also for the laboratory, which is the same as for Ent. 203. General Zoölogy is a prerequisite for all other courses in entomology, except Milling Entomology.

116. MILLING ENTOMOLOGY. 1(1-0); I. Offered in 1934-'35 and alternate years thereafter. Mr. Dean.

Insect pests of flour mills, elevators, granaries, warehouses, and bakeries and standard methods of dealing with them; inspection trips to flour mills and warehouses.

FOR GRADUATE AND UNDERGRADUATE CREDIT

201. HORTICULTURAL ENTOMOLOGY. 2(2-0); I. Prerequisite: Ent. 101 (4 hours) or 203 and Zoöl. 105. Dr. Parker.

The most important insect pests of orchard, garden, and shade trees, and standard methods of controlling their ravages.

203. GENERAL ECONOMIC ENTOMOLOGY. 3(2-3); I and II. Prerequisite: Zoöl. 105. Mr. Dean and Mr. Bryson.

The elementary anatomy and physiology of insects, complete enough to give a thorough understanding of the life history and habits of the most important species and the general principles upon which the control of these economic forms is based; the more important general facts about insects as a class; main characters of the different orders and groups; how they survive and multiply; and why measures of control differ for different groups. Charge, \$1.

206. STAPLE CROP ENTOMOLOGY. 3(2-3); II. Prerequisite: Ent. 101 (4 hours) or 203 and Zoöl. 105. Mr. Dean and Mr. Wilbur.

The life history of the more important economic insects of field crops, methods to be used in dealing with them, and the literature of economic entomology.

Laboratory.—Practical problems in insect surveys, control, rearing, collecting, and life histories, in the course of which the student gains a first-hand acquaintance with the more important injurious insects at home in nature. Charge, 50 cents.

208. GENERAL APICULTURE. 3(2-3); I and II. Prerequisite: Ent. 101 (4 hours) or 203. Dr. Parker.

A general study of the structure, life history, general behavior, activities, and products of the honeybee; practice beekeeping and best methods used among beekeepers; bee diseases and the standard methods to be used in their eradication and control; relation of bees to agriculture and horticulture. Charge, \$1.

211. EXTERNAL INSECT MORPHOLOGY. 3(1-6); I. Prerequisite: Ent. 203. Mr. Wilbur.

The external anatomy of representative insects belonging to a number of orders, the types studied being selected to represent the essentials of the structure of the exoskeleton and to afford a basis for the courses in taxonomy and for professional studies in hexapod morphology. Charge, \$1.50.

212. INTERNAL INSECT MORPHOLOGY. 3(0-9); II. Prerequisite: Ent. 211. Dr. Painter.

The internal anatomy of representative insects, the dissections of which present the general plan and structure of the internal systems; one conference each week, with assigned readings in selected texts and papers. Charge, \$1.

216. PRINCIPLES OF TAXONOMY. 1(1-0); II. Prerequisite: Ent. 203 and 211 or equivalent. Dr. Painter.

Fundamental principles of zoölogical taxonomy. In detail: Systems of classification; terminology of taxonomic groups; criteria of species and genera; binomial nomenclature, pre-Linnaean and modern nomenclature; international code of zoölogical nomenclature, and other codes; laws of priority; professional ethics and modern tendencies in taxonomy.

217. TAXONOMY OF INSECTS I. 2(0-6); II. Prerequisite: Ent. 203, 211, and 216 parallel. Dr. Painter.

Practice in the determination of insects, at least of all the major orders to genera, sometimes species; an acquaintance with the most useful taxonomic literature in each group and the use of catalogues. Charge, \$1.50.

218. TAXONOMY OF INSECTS II. 3(0-9); II. Prerequisite: Ent. 217. Dr. Painter or other specialist.

A group is selected, and intensive study of the insects and literature of the group is made so that the student may become proficient in their determination. Charge, \$1.50.

221. ADVANCED GENERAL ENTOMOLOGY. 3(3-0); II. Prerequisite: Ent. 101 (4 hours) or 203, and Zoöl. 105. Mr. Wilbur.

A comprehensive view of the broad biological aspects of the subject and an

understanding of the relation of insects to the complex of environmental factors; the various subdivisions of entomology correlated and used as a basis in the presentation of general principles as well as illustrating the problems of maintenance and the various ways in which insects have solved them.

226. MEDICAL ENTOMOLOGY. 3(2-3); I. Prerequisite: Ent. 101 (4 hours) or 203, and Zoöl. 105. Dr. Smith.

Insects and other arthropods as parasites and disseminators of diseases of man and domestic animals; the life cycles, biology, and control of insect parasites.

Laboratory.—A detailed study in order to recognize the various stages of the insect parasites of man and domestic animals; a study of the organisms of insect-borne diseases; house fumigation and observation of local sanitation problems bearing on the subject. Charge, \$1.50.

229. ADVANCED APICULTURE. 3(2-3); I and II. Prerequisite: Ent. 208. Dr. Parker.

A continuation Ent. 208. The principles of bee behavior in relation to the production of a honey crop and good beekeeping practices; swarm-control methods and increase; queen rearing; preparation for wintering, feeding for winter, and winter protection; merits and demerits of different systems of wintering; extracting honey, preparing it for market, marketing and other advanced subjects. Charge, \$1.

231. ENTOMOLOGICAL AND ZOÖLOGICAL LITERATURE. 2(2-0); I. Prerequisite: Ent. 101 and Zoöl. 105 or equivalent. Dr. Smith.

The literature of entomology which is inseparably associated with that of zoölogy and hence of equal importance to students of both subjects; general and special biographical sources, foreign and American scientific journals and serials; the construction of special bibliographies according to approved methods; a study of the biographies of leading world biologists of all ages and their publications, particularly of those in the College library. All advanced students of entomology and zoölogy are expected to take this course.

233. INSECT ECOLOGY. 2(2-0); II. Prerequisite: Ent. 101 (4 hours) or 203, and Zoöl. 105. Ent. 235 should precede this course. Mr. Bryson.

Environment and adaptations of animals, with special reference to insects. The influence of light, temperature, pressure, moisture, evaporation, air movements, food relations, biotic and other conditions of soil and atmosphere.

235. FIELD ENTOMOLOGY. 2(0-6); I. Prerequisite: Ent. 203. Dr. Painter.

Study of insects in the field, methods of collecting, mounting, preserving, and rearing; identification of some of the commoner insects in the field; ecological phases stressed, especially with regard to communities and apparatus for measuring factors. It is recommended that students taking this course follow it with Ent. 233. Charge, \$2.

236. ZOÖLOGY AND ENTOMOLOGY SEMINAR. 1(2-0); I and II. Prerequisite: Consult seminar committee.

Presentation of original investigations, reviews of papers appearing in current journals, summaries of recent advances in various fields and discussion of various aspects of the fundamental problems of modern biology.

238. PROBLEMS IN ENTOMOLOGY. Credit to be arranged; I, II and SS. Prerequisite: Consult instructors. Mr. Dean, Dr. Smith, Dr. Parker, Dr. Painter, Mr. Bryson, and Mr. Wilbur.

Students having sufficient training may, with approval of the head of the department, pursue under the direct supervision of some members of the departmental staff a special problem in one of the following subjects: Insect life history, insect control, insect classification, apiculture, insects injurious to stored grain and milled products, and household insects.

240. INSECT PHYSIOLOGY. 3(3-0); II. Prerequisite: Ent. 211 and Chem. 122 or 219 or 220. Dr. Parker.

The more important physiological processes in insects, including physiology of the cell, respiration, metabolism, reproduction, muscular activity, nervous responses, sense organs and senses, circulation, glandular system, metamorphosis of insects, and effects of insecticides.

FOR GRADUATE CREDIT

316. RESEARCH IN ENTOMOLOGY. Credit to be arranged; I, II, and SS. Prerequisite: (1) For research in taxonomy and morphology, Ent. 203, 211, 217, and Zoöl. 214; (2) for research in economic entomology, Ent. 203, 206, and 217. Mr. Dean, Dr. Smith, Dr. Parker, Dr. Painter, Mr. Bryson, and Mr. Wilbur.

With the approval of the head of the department, advanced students having sufficient fundamental training may undertake original investigation in one of the following fields of entomology: Taxonomy, morphology, economic entomology. Such work is pursued under the direct supervision of some member of the departmental faculty, and the final results, if of sufficient merit, may be used to fulfill the thesis requirement for the master's or doctor's degree. If willing and capable, special students may be drawn into the research work of the Agricultural Experiment Station during the summer vacation and receive training in the investigation of entomological problems.

Geology

Professor SPERRY
Instructor BYRNE

The courses offered in geology are designed to meet the needs of three kinds of students: The technical student in agriculture, civil engineering, or chemistry, who must know something of the relationship of geology to his particular field; the general student who desires some knowledge of the world about him, and who realizes the cultural and economic value of understanding his physical environment; and, finally, the student who wishes to major in geology.

The equipment consists of collections of rocks, fossils, and minerals and the laboratory instruments necessary to study these materials. The country around Manhattan, in addition to splendid Permian and Late Pennsylvanian invertebrate fossils, offers considerable variety of geologic phenomena, such as limestone outcrops, sand dunes, glacial drift, a small volcanic plug, and the physiographic features characteristic of the prairie-plains. To take advantage of this outdoor laboratory, field trips are given in most courses as a regular part of the laboratory work.

COURSES IN GEOLOGY

FOR UNDERGRADUATE CREDIT

102. ENGINEERING GEOLOGY. 4(3-3); I. Prerequisite: Chem. 110 or equivalent. Mr. Sperry and Mr. Byrne.

The general principles of geology and their application to engineering problems.

Laboratory.—Observation and description of the structural and dynamic features of this locality; the study of topographic and geologic maps. Charge, \$1.50.

103. GENERAL GEOLOGY. 3(3-0); I, II, and SS. Three or four field trips are taken during the semester. Mr. Sperry and Mr. Byrne.

The structural and dynamic features of the earth; the rock-forming minerals; the rocks and their decay; a short history of the earth. Charge, \$1.50.

110. **PHYSIOGRAPHIC GEOLOGY.** 3(3-0); II. Prerequisite: Geol. 102 or 103. Mr. Sperry and Mr. Byrne.

The topography of the earth and forces that have produced it. Stress is laid on the origin of the topographic features of North America. Charge, \$1.50.

FOR GRADUATE AND UNDERGRADUATE CREDIT

203. **HISTORICAL GEOLOGY.** 4(3-3); I, II, and SS. Prerequisite: Geol. 102 or 103. Mr. Sperry and Mr. Byrne.

The procession of physical and biological events through which the earth has gone, with stress on the philosophical side of earth history.

Laboratory.—Collection and study of local fossils, and their application in the identification of the rock measures; study of museum specimens and of paleogeographic maps. Charge, \$1.50.

207. **ECONOMIC GEOLOGY.** 4(3-3); II. Prerequisite: Geol. 102 or 103, and Chem. 110 or equivalent. Mr. Sperry.

The origin and mode of occurrence of nonmetallic minerals, including coal and petroleum, and of metallic mineral deposits.

Laboratory.—Identification and study of the ore-forming minerals; map studies of the economic areas. Charge, \$1.50.

209. **CRYSTALLOGRAPHY AND MINERALOGY.** 4(2-6); I. Prerequisite: Chem. 110 or equivalent. Mr. Sperry.

The fundamentals of crystallography and mineralogy.

Laboratory.—The measurements of crystal angles and the determination of crystal constants; identification of minerals by physical characters and with the blowpipe. Charge, \$1.50.

210. **FIELD GEOLOGY.** SS. Credit to depend upon the amount of work done. Opportunity is offered students to do field work in the Rocky Mountains. Students interested should consult Mr. Sperry.

215. **STRUCTURAL GEOLOGY.** 4(3-3); I. Prerequisite: Geol. 102 or 103, and 203. Mr. Sperry.

The mechanics of the earth's crust. The aim is to give a means of interpreting the structures found in the earth.

Laboratory.—Study of joints, faults, and folds produced artificially; a few field trips for the purpose of observing the structures found near Manhattan. Charge, \$1.50.

220. **INVERTEBRATE PALEONTOLOGY.** 4(4-3); I. Prerequisite: Geol. 102 or 103, and 203. Mr. Byrne.

Evolution and geologic history of the invertebrate animals.

Laboratory.—The classification and identification of invertebrate fossils. Charge, \$1.50.

230. **FIELD METHODS IN GEOLOGY.** 3(1-6); II. Prerequisite: Geol. 103 and 203. Mr. Byrne.

The construction of geologic maps, including a complete map of the Manhattan area; the application of field methods to the problems of geology. Charge, \$1.50.

235. **OPTICAL MINERALOGY.** 4(2-6); II. Prerequisite: Geol. 209.. Mr. Sperry.

The use of the polarizing microscope in identifying crystal fragments, powders, sediments, and thin sections; optical methods of microscopic research. Charge, \$1.50.

240. **PRINCIPLES OF GEOGRAPHY.** 3(3-0); I and SS. Mr. Sperry and Mr. Byrne.

An introductory course in college geography, emphasizing the relationships between human activities and the geologic environment. Charge, \$1.50.

255. VERTEBRATE PALEONTOLOGY. 3(3-0); II. Prerequisite: Geol. 203 or ten hours of zoölogy. Mr. Byrne.

The evolution, geologic history, and classification of the vertebrates. Charge, \$1.50.

275. PROBLEMS IN GEOLOGY. Credit to be arranged; I, II, and SS. Mr. Sperry and Mr. Byrne.

An individual problem in a particular phase of geology investigated under the guidance of an instructor.

FOR GRADUATE CREDIT

301. RESEARCH IN GEOLOGY. Credit to be arranged; I, II, and SS.

Students with adequate preparation may undertake original investigations in geology.

History and Government

Professor PRICE
Professor ILES
Professor JAMES
Professor CORRELL

Professor SHANNON
Professor PARRISH
Associate Professor WILLIAMS
Assistant Professor ALSOP

Training for citizenship, breadth of view, historic-mindedness, fairness of judgment, and general culture are constant and specific aims of each course offered by the Department of History and Government. A mastery of these subjects forms a common ground of meeting and conversing with fellow citizens, and helps to create an impression that contributes directly to larger success in life, including the business and professional world. As a result of the training received in these courses the student is better prepared to understand and appreciate the institutions in the midst of which he lives and of which he is a part. He is also prepared to act more wisely his part as a leader in good citizenship wherever his lot may be cast. In our modern age and self-governing nation, and in an institution supported by the state and nation, it would seem to be the imperative duty of every student to secure specific training for wise and effective leadership in the governmental affairs of the state and nation that are thus preparing him for life and its duties.

COURSES IN HISTORY

FOR UNDERGRADUATE STUDY

101. ANCIENT CIVILIZATIONS. 3(3-0); I and SS. Mr. Parrish.

The beginnings and growth of western culture; early civilizations of the Near East and Mediterranean regions, from the rise of Egypt and Babylonia to the decline of the Roman Empire (395 A.D.). Special attention is given to the achievements of the Greeks and Romans.

102. MEDIEVAL EUROPE. 3(3-0); II and SS. Mr. Parrish.

The development of civilization in Europe, from the decline of the Roman Empire (395 A.D.) to the discovery of the new world (1500 A.D.). Changes which laid the foundation for modern Europe: Interaction of forces of Roman Empire, organized Christianity, barbarians, Islam, Arabic and Byzantine culture; monasticism, feudalism; beginnings of modern states; universities and cathedrals; towns and trade; the intellectual awakening and a new world.

104. AMERICAN HISTORY SURVEY. 3(3-0); I and SS. Not open to students who have credit in Hist. 105, 201, or 202. Mr. Price.

A survey of American history and institutions from the newer viewpoint. Based on lectures, with special library studies of assigned topics. Combines constitutional, political, diplomatic, economic, and social phases of the growth of our republic, with background and interpretation. Charge, \$1.

105. AMERICAN INDUSTRIAL HISTORY. 3(3-0); I, II, and SS. Not open to

students who have credit in Hist. 104. Dr. Shannon, Mr. Correll, and Miss Alsop.

History of American agriculture, manufactures, and commerce with related activities from their colonial beginnings to the present; survey of the physical basis of American history, the growth of population and its expansion across the continent, and the reflection of these things on our industrial, social, and political life; European developments, as a side light on American history; growth of our national industrial organization and its present-day aspects.

110. HISTORY OF COMMERCE AND INDUSTRY. 3(3-0); I. Dr. Shannon.

The evolution of industry and commerce from primitive beginnings to present-day organization, traced in broad outline, and economic survey of world history, with special stress on the modern period.

115. MODERN EUROPE I. 3(3-0); I. Miss Alsop.

The evolution of modern institutions from the renaissance to the opening of the nineteenth century, the principal movements being the commercial revolution through which European trade turned from Mediterranean to Atlantic ports; the Reformation; the earlier phases of the development of political democracy through the Puritan revolt in England and the French Revolution; and the Napoleonic era.

121. ENGLISH HISTORY. 3(3-0); I, II, and SS. Mr. James.

A general survey of the whole field of English history, including the outlines of political history and the essentials of English constitutional development and stressing the development of the empire, the English background of American history, and the industrial and social development of the English people.

126. CURRENT HISTORY. 1(1-0); I, II, and SS. May not be taken more than four semesters for credit. Mr. Price, Mr. Iles, Mr. James, Mr. Correll, Dr. Shannon, Mr. Williams, Mr. Parrish, and Miss Alsop.

The essentials of American and foreign governments, of international relations, of international law, of biography, of industrial developments, and of the larger world issues as they appear in current news reports giving a wide outlook on the world of today and a better understanding of conditions and institutions in the midst of which we live.

FOR GRADUATE AND UNDERGRADUATE CREDIT

201. AMERICAN HISTORY I. 3(3-0); I, II, and SS. Not open to students who have credit in Hist. 104. Prerequisite, when taken for graduate credit: Six hours of college history. Mr. Price.

Beginning of the American nation: The origin and development of American nationality and democracy to the War of 1812, with special stress on the industrial phases, but including our constitutional and political development, with the European background in each case. Charge, \$1.

202. AMERICAN HISTORY II. 3(3-0); I, II and SS. Prerequisite, when taken for graduate credit: Six hours of college history. Mr. Price.

Western expansion and sectionalism: The industrial conditions, the political issues, and the leaders of the middle period of our history, from the War of 1812 to the Civil War. Charge, \$1.

203. AMERICAN HISTORY III. 3(3-0); I, II, and SS. Prerequisite, when taken for graduate credit: Six hours of college history. Mr. Price, Mr. Iles, or Dr. Shannon.

The new industrial age: Review of the industrial conditions in America just before the Civil War; the effects of that war; the political and governmental activities of the period since 1860 in the light of the industrial conditions and developments of that period.

204. AMERICAN AGRICULTURAL HISTORY. 3(3-0); I. Prerequisite, when taken for graduate credit: Six hours of college history. Dr. Shannon.

European background and Indian beginnings; agricultural development during the colonial period; the westward movement into the prairie regions of the Mississippi valley, with the distinctive American developments in methods, livestock, and especially farm machinery; the last quarter century with its varied industries, more intensive farming, and higher cost of living.

206. AMERICAN POLITICAL PARTIES. 2(2-0); I. Prerequisite, when taken for graduate credit: Six hours of college history. Mr. Iles.

Origin, development, leaders, and function of political parties in America; issues and results of the more important presidential elections; growth of nationality and development of self-government through American history, with special reference to present tendencies. This course is intended to supplement course 105 or 204.

208. LATIN AMERICA. 3(3-0); I, II, and SS. Prerequisite, when taken for graduate credit: Six hours of college history. Mr. James.

European background, discovery, exploration, and settlement of Spanish and Portuguese colonies in America; development of the Spanish administrative system; Spanish-American wars for independence; liberation of Brazil; rise of the Hispanic-American republics; their relations with each other and with the United States; social and economic conditions; present-day problems of the republican period.

223. MODERN EUROPE II. 3(3-0); I, II, and SS. Prerequisite, when taken for graduate credit: Hist. 115 or equivalent. Mr. Parrish.

European adjustments following the period of the industrial revolution, the French revolution, and the fall of the Napoleonic Empire; the rising tide of nationalism and democracy; political and social reforms; progress of science; social and economic movements; expansion of the European influence in Asia and Africa; the World War, and briefly, the new Europe.

225. HISTORY OF THE HOME. 3(3-0); II. Prerequisite, when taken for graduate credit: Six hours of college history. Miss Alsop.

The primitive family; the Hebrew family; family life of the Greeks and of the Romans; the home and family life during the Middle Ages, including the influence of the Christian church; the English family since 1485; the American colonial home; the industrial revolution and its effects upon family life; the family during the nineteenth century; the present situation and tendencies.

226. THE BRITISH EMPIRE. 2(2-0); II and SS. Prerequisite, when taken for graduate credit: Six hours of college history. Mr. James.

The English phases of the European expansion movement, with consideration to the forces and influences promoting the "swarming of the English" overseas; growth and development of the English provinces into self-governing colonies and the union of these into practically independent dominions; the drawing together of the widely scattered English people into a British commonwealth of nations, and the significance of this fact in the struggle for democracy.

228. IMMIGRATION AND INTERNATIONAL RELATIONS. 2(2-0); I and SS. Prerequisite, when taken for graduate credit: Six hours of college history. Mr. Price and Mr. James.

Causes and effects—economic, social, and political—of the coming of the foreigner to our shores, from the colonial period to the present, with special reference to recent changes as to the character of the immigrants and as to the conditions in Europe and in America that affect the number and quality of immigrants; a clear survey of the important epochs in our diplomatic history.

231. HISTORY OF RELIGIONS. 2(2-0); I or II, and SS. Prerequisite, when taken for graduate credit: Six hours of college history. Mr. Parrish.

Rise and growth of historic religions which influence most of the peoples of the world today; relation of each religion to race, physical environment, and advance in culture; the leading personalities, religious conceptions, and

historic events and movements which modify life and thought in Hinduism, Buddhism, Confucianism, Taoism, Zoroastrianism, Mohammedanism, Judaism, and Christianity.

234. TWENTIETH CENTURY EUROPE. 3(3-0); I, II, and SS. Prerequisite, when taken for graduate credit: Hist. 223 or equivalent. Mr. Correll.

A study of the peace treaties of 1919, the political and social reconstruction of Europe since the World War, and the new instruments of international organization, such as the League of Nations, the World Court, and international conferences.

236. THE FAR EAST. 3(3-0); II and SS. Prerequisite, when taken for graduate credit: Six hours of college history. Mr. Parrish.

Rise, development, and spread of Chinese civilization in the Far East; achievements in politics, economics, philosophy, science, art, literature; impact of the modern West, including the United States; especial attention is given to China's economic, social, and diplomatic problems since 1840; rise of Japan; partial dismemberment of China under the Manchus, and rise of the republic; new rôle of China and Japan in world commerce, trade, and politics.

250. SEMINAR IN HISTORY AND GOVERNMENT. 2 to 5 hours; I, II, and SS. Prerequisite: Six hours of college history of a type that will serve as a proper background for the subject to be studied. Mr. Price, Mr. Iles, Mr. James, Mr. Correll, Dr. Shannon, and Mr. Parrish.

Preference given to special fields connected with the history of agriculture, of industry, or of commerce, though other fields may be studied at the discretion of the department.

290. HISTORICAL METHOD AND BIBLIOGRAPHY. 2(2-0); I and SS. Prerequisite, when taken for graduate credit: Six hours of college history. Dr. Shannon, assisted by other teachers of the department.

A study of historians and of historical works, together with instruction as to methods employed in the writing of history or of historical articles or theses. Required of all graduates majoring in history, and recommended to undergraduates majoring in history.

FOR GRADUATE CREDIT

301. RESEARCH IN HISTORY. Credit to be arranged; I, II, and SS. Prerequisite or contemporary: Hist. 290 and consult instructors. Mr. Price, Mr. Iles, Mr. James, Mr. Correll, Dr. Shannon, and Mr. Parrish.

Individual research problems in European or American history, including international relations. Conclusions will generally take the form of a thesis.

COURSES IN GOVERNMENT

FOR UNDERGRADUATE CREDIT

151. AMERICAN GOVERNMENT. 3(3-0); I, II, and SS. Mr. Iles.

A definite review of the fundamental principles and operations of our state and national governments, including the principles of constitutional law, but giving special emphasis to present-day conditions and movements in our governmental and political life.

152. AMERICAN NATIONAL GOVERNMENT. 3(3-0); I. Not open to students who have credit in Hist. 151. Mr. Iles.

The mechanism, functions, and control of the government of the United States, with considerable attention to principles and problems. With Hist. 153, this course affords a comprehensive study of American national, state, and local government.

153. AMERICAN STATE GOVERNMENT. 3(3-0); II. Not open to students who have credit in Hist. 151. Mr. Iles.

State and local government, with special attention to functions and problems.

160. **COMMERCIAL LAW.** 1(1-0); I. Mr. Williams.

The elementary principles of contracts, agency, sales, and negotiable instruments. Business Law I may be substituted for Commercial Law, where the requirements of the curricula permit, and the extra credit used as an elective.

163, 164. **BUSINESS LAW I AND II.** 3(3-0) each; I and II. Prerequisite for II: Hist. 163 or 167. Mr. Williams.

I: Contracts, agency, and sales.

II: Negotiable instruments, partnership, and corporations.

167. **LAW FOR ENGINEERS.** 2(2-0); I and II. Mr. Williams.

A study, chiefly through cases, of such rules of law as will prove most useful to engineers and architects, with special emphasis on the law of contracts.

175. **FARM LAW.** 2(2-0); I. Offered in 1937-'38 and in alternate years thereafter. Not open to students who have credit in Hist. 276. Mr. Williams.

A study, chiefly through Kansas cases, of the rules in various branches of the law a knowledge of which is most useful to a farmer, with special emphasis on the law of real property, including deeds, mortgages, and the relation of landlord and tenant.

FOR GRADUATE AND UNDERGRADUATE CREDIT

252. **COMPARATIVE GOVERNMENT.** 2(2-0); I or II, and SS. Prerequisite: Hist. 151 or equivalent. Mr. Iles or Mr. Williams.

The leading features, especially with regard to administration, of certain European governments, such as England, France, and Germany, and a comparison of essential features with government in the United States. (A supplement to Hist. 151.)

256. **INTERNATIONAL LAW.** 2(2-0); I. Mr. James.

Fundamental principles of international law and international relations; public and private rights and obligations in time of peace and in time of war, especially in the light of recent developments, such as the Hague conference.

260. **GOVERNMENT REGULATION OF BUSINESS.** 2(2-0); II. Prerequisite, when taken for graduate credit: Hist. 151, 160, 163, 167, 175, or 276. Mr. Williams.

Government powers; vested rights; business affected with a public interest; trade regulations and prohibitions; labor unions; protection of debtors; conservation and natural resources; emergency legislation; and certain positive governmental activities.

276. **LAND LAW.** 2(2-0); I. Planned to supplement Ag. Ec. 218. Offered in 1936-'37 and in alternate years thereafter. Not open to students who have credit in Hist. 175. Mr. Williams.

A study, chiefly through Kansas cases, of the estates, interests, and rights in land, including relation of landlord and tenant, future interests, joint estates, easements, equitable interests, and mortgages; acquisition of land, including conveyances, descent, devise, and adverse possession; notice of rights of the owner and the incumbrancer, including notice by recording.

FOR GRADUATE CREDIT

351. **RESEARCH IN GOVERNMENT.** Credit to be arranged; I, II, and SS. For prerequisite in each case, consult instructor. Mr. Price, Mr. Iles, Mr. James, Dr. Shannon, and Mr. Williams.

Individual research problems in national or local government, American or European, including studies in comparative government or international law. The conclusions generally take the form of a thesis.

Industrial Journalism and Printing

Professor ROGERS
Professor KEITH
Associate Professor BIRD

Assistant Professor AMOS
Assistant Professor HOSTETTER
Instructor LASHBROOK

The work in industrial journalism and printing is designed to accomplish two purposes—the preparation of students in other fields to do occasional writing for newspapers and other periodicals on subjects of special interest; and the training of students fundamentally interested in journalism for positions on farm journals, newspapers, and other publications, particularly where writing on agriculture and other industrial subjects is in demand. The instruction considers the requirements of newspapers, agricultural papers, trade publications, and general magazines, and the ethical problems of the profession of journalism. *The Kansas Industrialist*, the official paper of the College, is under the editorial and mechanical direction of the department. The office of *The Kansas State Collegian*, the student semiweekly newspaper, is in the department practice room. Students write, also, for general newspapers, farm journals, and magazines.

Attention is given to the mechanical side of the profession in the instruction in printing, which is required of all students taking the curriculum in industrial journalism. Printing has been taught in the institution continuously since 1873—the longest period during which instruction in the subject has been given in any American college.

The equipment for instruction in journalism and printing is that of a practical publishing and printing plant.

A large amount of timely agricultural and other information is furnished regularly to Kansas newspapers, farm journals, and other publications. Special assignments are covered for these periodicals, and special inquiries are answered.

All students enrolled in the curriculum in industrial journalism, and all other students who take Journalism Lectures or courses designated "Journalism fee charged," pay a charge of \$1.50 a semester. Only one journalism fee is charged a student in a given semester.

COURSES IN PRINTING

FOR UNDERGRADUATE CREDIT

101. PRINCIPLES OF TYPOGRAPHY. 3(2-3); I and II. Prerequisite: Ind. Jour. 140 or sophomore classification. Mr. Amos.

The case, the point system, and the measurement of type and stock; the history of printing; development of the various typographical styles; practice in setting straight matter, with emphasis on accuracy. The type faces and the typography of advertisements and head display; principles of effective make-up. Journalism fee charged.

102. PRINTING PRACTICE. 2(0-6); SS. Mr. Amos.

A study of general printing-shop practice—a course intended particularly for high-school teachers of printing and for those who expect to have editorial supervision of publications, including high-school papers.

108, 111, 112. AD COMPOSITION I, II, and III. 2(0-6) each; I and II each. Prerequisite: For I, Ind. Jour. 101; for II, Ind. Jour. 108; for III, Ind. Jour. 111. Mr. Amos.

I: Principles of display and design as applied to newspaper and magazine advertisements; practical work in setting ads for magazines. Journalism fee charged.

II and III: Ind. Jour. 108 continued; more complicated work studied. Journalism fee charged.

114, 118, 120. JOB COMPOSITION I, II, and III. 2(0-6) each; I and II each. Prerequisite: For I, Ind. Jour. 101; for II, Ind. Jour. 114; for III, Ind. Jour. 118. Mr. Amos.

I: Emphasis on differences in requirements for job composition and ad composition; proper selection of type faces, borders, and ornaments; setting jobs and locking them up for the pressroom. Journalism fee charged.

II and III: Color work, tabular forms, and other complicated kinds of job work. Journalism fee charged.

122, 126. PRESS WORK I AND II. 2(0-6) each; I and II each. Prerequisite: For I, Ind. Jour. 108 or 114; for II, Ind. Jour. 122. Mr. Amos.

I: Practical platen presswork under ordinary printing-office conditions; feeding of the press and preparation of the jobs by the student; selection of inks and care of printing rollers. Journalism fee charged.

II: I continued, with more advanced work in mixing inks and in color work. Journalism fee charged.

COURSES IN INDUSTRIAL JOURNALISM

FOR UNDERGRADUATE CREDIT

140. JOURNALISTIC VOCATIONS. 2(2-0); II. Mr. Rogers.

The publishing field, daily and weekly newspapers, news agencies and syndicates, trade and business press, agricultural press, women in journalism, the field of advertising, circulation, magazines, free-lance writing, publicity, photography and art, the labor press, and religious journalism. Journalism fee charged.

151. ELEMENTARY JOURNALISM. 2(2-0); I, II, and SS. Prerequisite: Ind. Jour. 140 or sophomore classification. Miss Hostetter and Mr. Lashbrook.

Methods of obtaining news of various types, the writing of the lead, and the general styles of the news story. Journalism fee charged.

153. KANSAS STATE COLLEGIAN JOURNALISM. 1(0-3); I, II, and SS. Prerequisite: Permission of instructor. Mr. Lashbrook.

The gathering and writing of news, or advertising practice, on *The Kansas State Collegian* under the supervision of the instructor.

160. AGRICULTURAL JOURNALISM. 3(2-3); I and II. Mr. Bird.

The course is intended to supply sufficient knowledge of the principles of news writing as applied to agriculture to enable students in agriculture to become occasional contributors to newspapers and farm journals, and to give them an understanding of the needs and problems of editors. Much practice given in agricultural writing. Journalism fee charged.

161. INDUSTRIAL WRITING. 2(2-0); I and II. Prerequisite: Ind. Jour. 151. Miss Hostetter and Mr. Lashbrook.

Application of the principles of journalism to the treatment of industrial subjects, such as are found in agriculture, engineering, home economics, and more general scientific research. Journalism fee charged.

162. RADIO WRITING. 2(2-0); II and SS. Prerequisite: Ind. Jour. 151. Mr. Rogers and Mr. Keith.

Preparation of radio news and advertising copy. Facilities of broadcasting station KSAC and Department of Public Speaking afford laboratory tests of material prepared.

163. ADVANCED REPORTING. 3(3-0); I. Prerequisite: Ind. Jour. 161. Mr. Lashbrook.

Recitation and practice covering the work of the reporter in connection with local, state, and national government; the reporting of conventions, exhibitions, and large public gatherings. Special assignments in connection with industrial and scientific news. (For students who are familiar with the fundamentals of news reporting.) Journalism fee charged.

167. INDUSTRIAL FEATURE WRITING. 2(2-0); I and SS. Prerequisite: Ind. Jour. 161. Mr. Rogers.

The feature article; its underlying principles applied to writing on agricultural and other industrial subjects; demands of newspapers, farm journals, and general magazines for writing of this character; agricultural journals, trade journals, and other publications of highly specialized character; actual writing for publications of these types and submission of material to editors. Journalism fee charged.

172. JOURNALISM FOR WOMEN. 2(2-0); II. Prerequisite: Ind. Jour. 167. Miss Hostetter.

A course for women students in news and feature writing for women's pages and women's magazines and consideration of specialized fields for the woman writer. Journalism fee charged.

178. PRINCIPLES OF ADVERTISING. 4(4-0); I and II. Prerequisite: For industrial journalism students, Ind. Jour. 161; for commerce students, Engl. 123. Mr. Keith.

Study of goods to be advertised, analysis of the market, psychology of advertising, preparation of advertising copy, and other important matters; application of the principles involved; building up of circulation of periodical publications; soliciting advertising; premiums and other plans for increasing circulation; the advertising agency, circulation analysis, and fixing of advertising rates. Journalism fee charged.

181. THE RURAL PRESS. 2(2-0); I and II. Prerequisite: Ind. Jour. 151. Mr. Bird.

Nature and needs of the community newspaper, with emphasis on its presentation of the agriculture and rural life in its field; actual writing of news stories and items gathered on the campus for publication in Kansas community newspapers. Journalism fee charged.

183. NEWS BUREAU METHODS. 2(2-0); I. Prerequisite: Ind. Jour. 151. Mr. Bird.

A study of publicity methods, accepted and condemned practices, the psychology of the press agent's copy, its effect on the editor and the reader. Lecture and recitation supplemented with practice writing for the College news bureau. Journalism fee charged.

199. INDUSTRIAL JOURNALISM LECTURE. R; I and II.

Prominent men and women in the field of journalism or in activities of interest to journalism students are brought in for talks to all journalism students. Attendance is required of all enrolled in Industrial Journalism.

FOR GRADUATE AND UNDERGRADUATE CREDIT

254. COPY READING. 2(0-6); II. Prerequisite: Ind. Jour. 163. Miss Hostetter and Mr. Lashbrook.

Practice in the work required of a copy reader, whether on a newspaper, an agricultural journal, or some other publication. Journalism fee charged.

255. CONTEMPORARY THOUGHT. 3(3-0); I. Prerequisite: For industrial journalism students, Ind. Jour. 254; for others, Econ. 101 or equivalent. Mr. Rogers.

Correlation and unification of various subjects previously pursued in college; unbiased presentation of contemporary development and contemporary figures in science, the arts, and philosophy.

257. EDITORIAL PRACTICE. 2(2-0); I. Prerequisite: Ind. Jour. 254. Miss Hostetter.

The writing of editorials suitable for farm papers, trade papers, and newspapers; the shaping of editorial policies. Journalism fee charged.

265. MATERIALS OF JOURNALISM. 2(2-0); I. Prerequisite: Ind. Jour. 254. Mr. Lashbrook.

The principal newspapers and magazines; accuracy and adequacy of news reports and other published matter; materials handled by the publications; methods of treatment; character of editorial comment.

270. MAGAZINE FEATURES. 2(2-0); I, II, and SS. Prerequisite: For industrial journalism students, Ind. Jour. 167; for others, Engl. 104. Mr. Rogers and Mr. Bird.

The matter of the course is varied to suit the needs and desires of the students, emphasis being laid upon such types of magazine writing as members of the class wish to practice. Journalism fee charged.

273. HISTORY AND ETHICS OF JOURNALISM. 3(3-0); II. Prerequisite: Ind. Jour. 255. Mr. Rogers.

The history of journalism from its beginning and the history of printing as far as this is concerned with periodical publications. The ethics of journalism as exemplified in the use of contributed matter, in the work of the reporter or staff writer, in the editorial conduct of the paper, and in the handling of circulation and advertising; federal and state laws relating to periodical publications, to advertising, to libel, and to author's rights.

278. JOURNALISM SURVEYS. 2(0-6); II. Prerequisite: Ind. Jour. 254 or equivalent. Mr. Rogers and Miss Hostetter.

Careful investigation of the periodical reading matter of communities; tabulation of information obtained; relation of the reading matter to the industrial, economic, social, and moral life of the communities.

282. COLUMN CONDUCTING. 2(2-0); II, when requested by a sufficient number. Prerequisite: Engl. 104. Mr. Davis, of the Department of English.

The conducting of the so-called column, humorous or semiserious; writing paragraphs, light verse, and similar material, with stress on practice in writing humor.

287. CURRENT PERIODICALS. 3(3-0); II. Prerequisite: Engl. 104. Miss Hostetter.

The material contained in current periodicals of various types, and the nature of its appeal to the reader.

FOR GRADUATE CREDIT

351. RESEARCH IN INDUSTRIAL JOURNALISM. Credit to be arranged; I and II. Mr. Rogers.

Several courses embodying creative literary work or detailed research in specialized journalism are arranged to meet the specific needs and desires of the individual graduate students.

Library Economics

Librarian SMITH
Associate Librarian DERBY
Reference Librarian DAVIS
Loan Librarian CAMP

Reference Assistant SWENSON
Documents Librarian HOFF
Loan Assistant CULLIPHER

The Library supplements the work of every department of the College. It is a storehouse of knowledge for every student. It supplies information and the latest results of scientific research for every instructor. The Library is thus essential to the College, forming, as it were, a center from which its various activities radiate.

In order that the Library may perform its functions with the highest degree of efficiency it is necessary that instruction be given regarding its use. With this thought in mind a course is offered, the purpose of which is to familiarize the student with scientific, up-to-date methods in the use of books and to acquaint him with the best general reference books, as well as with

standard works on various subjects. Placed at the beginning of his College course, it tends to increase largely his efficiency in study throughout the entire course.

COURSES IN LIBRARY ECONOMICS

FOR UNDERGRADUATE CREDIT

101. LIBRARY METHODS. 1(1-0); I and II. Miss Derby, Miss Hoff, Miss Davis, Miss Camp, Miss Swenson, and Miss Cullipher.

Classification and arrangement of books in the library; card catalogues; the principal works of reference, such as dictionaries, encyclopedias, atlases, and standard works in history, literature, economics, quotations, statistics, etc.; public documents and their indexes; indexes to periodicals, etc.; methods of indexing current reading for purposes of future reference.

Mathematics

Professor REMICK
Professor WHITE
Professor STRATTON
Associate Professor HYDE
Associate Professor LEWIS
Associate Professor LYONS

Assistant Professor JANES
Assistant Professor MOSSMAN
Assistant Professor HOLROYD
Assistant Professor DAUGHERTY
Instructor CRAMER

In an institution that stands as an exponent of the industrial type of education, mathematics should occupy an important place. Training in this exact science is valuable, not only for its own sake, but also on account of its manifold applications. On this basis the courses in mathematics are offered primarily with the following ends in view: (1) The attainment of mental power and accuracy in the interest both of general culture and special application; (2) the acquirement of facts and processes that will provide the student with an indispensable tool for further scientific and technical study.

As several of the curricula of the College are formulated on the assumption that a half year of solid geometry will have been taken in high school, classes in this subject are provided for students who are deficient in this respect. College credit on electives is allowed for this work.

COURSES IN MATHEMATICS

FOR UNDERGRADUATE CREDIT

101. PLANE TRIGONOMETRY. 3(3-0); I, II, and SS. Prerequisite: Plane geometry and one and one half years of high-school algebra. Dr. Stratton, Miss Hyde, Mr. Lewis, Mr. Lyons, Miss Holroyd, Mr. Janes, Miss Mossman, Mr. Daugherty, and Mr. Cramer.

Functions of acute right triangles, goniometry, oblique triangles, practical problems.

102. SOLID GEOMETRY. 2(2-0); I, II, and SS. Prerequisite: Plane geometry and one year of high-school algebra. Mr. Lewis, Mr. Janes, Miss Holroyd, Mr. Daugherty, and Mr. Cramer.

Principal theorems, numerical exercises, and mensurational problems.

104. COLLEGE ALGEBRA. 3(3-0); I, II, and SS. Duplicates latter part of Math. 107. Prerequisite: Plane geometry and one and one half years of high-school algebra. Dr. Stratton, Miss Hyde, Mr. Lewis, Mr. Lyons, Miss Holroyd, Mr. Janes, Miss Mossman, Mr. Daugherty, and Mr. Cramer.

Elementary topics, functions and their graphs, and quadratic equations rapidly reviewed; complex numbers, theory of equations, permutations and combinations, partial fractions, and determinants.

107. COLLEGE ALGEBRA A. 5(5-0); I, II, and SS. Includes Math. 104. Prerequisite: Plane geometry and one year of high-school algebra. Dr. Stratton,

Miss Hyde, Mr. Lewis, Mr. Lyons, Miss Holroyd, Mr. Janes, Miss Mossman, Mr. Daugherty, and Mr. Cramer.

Brief review of elementary subjects; a thorough treatment of quadratics, ratio, proportion, progressions, and the binomial theorem for positive exponents; the chief content of Math. 104.

110. PLANE ANALYTICAL GEOMETRY. 4(4-0); I, II, and SS. Prerequisite: Math. 101 and Math. 104 or 107. Mr. White, Dr. Stratton, Miss Hyde, Mr. Lyons, Mr. Janes, Miss Mossman, Miss Holroyd, and Mr. Daugherty.

Coördinate systems, projections, loci, straight line conics, parametric and empirical equations, with a discussion of the general equation of the second degree.

126. ELEMENTS OF STATISTICS. 3(3-0); I and II. Not open to students who have credit in Educ. 223. Mr. White.

The parts of algebra most needed as a basis for statistical work; development of the secondary principles used in analysis of statistical data.

150. MATHEMATICS OF INVESTMENT. 3(3-0); II. Prerequisite: Econ. 133 Mr. Janes.

Problems relating to interest, annuities, sinking funds, amortization and valuation of bonds, depreciation, building and loan, and life insurance.

FOR GRADUATE AND UNDERGRADUATE CREDIT

The following courses are available on request by a sufficient number of students. Math. 201, 202, 203, 210, 213, 216, 221, 225, 250, and 251 are offered each year.

201. DIFFERENTIAL EQUATIONS. 3(3-0); I. Prerequisite: Math. 251. Mr. Remick.

The various standard types of differential equations, with the usual applications.

202. HIGHER ALGEBRA. 3(3-0); I, II, and SS. Prerequisite: Math. 110. Dr. Stratton, Miss Hyde, Mr. Lewis, Mr. Lyons, Mr. Janes, Miss Mossman, Miss Holroyd, and Mr. Daugherty.

Probability, partial fractions, binomial theorem for any exponent, transcendental and parametric equations, determinants, and introduction to limits and infinite series.

203. THEORY OF STATISTICS. 3(3-0); II. Prerequisite: Math. 126 or equivalent. Mr. White.

The theory of probability applied to statistical problems; statistical curves, correlation theory, curve fitting, and problems of random sampling, actual practice with data from biology, agronomy, physics, etc.

206. CALCULUS II. 3(3-0); I, II, and SS. Prerequisite: Math. 205. Mr. Remick, Mr. White, Dr. Stratton, Miss Hyde, Mr. Lewis, Mr. Lyons, Mr. Janes, and Miss Mossman.

Problems involving areas, lengths, surfaces, and volumes treated by processes of single integration; idea of successive and partial integration applied to areas, moments, centers of gravity, surfaces, volumes; series.

206A. CALCULUS IIA. 4(4-0); I and II. Prerequisite: Math. 205. Mr. Remick, Mr. White, Miss Hyde, Mr. Lewis, Mr. Lyons, and Mr. Janes.

Similar to Math. 206, with the addition of a brief treatment of some of the more common types of differential equations likely to be met in engineering applications.

207. SOLID ANALYTICAL GEOMETRY. 3(3-0); II. Prerequisite: Math. 110 and 251. Mr. White.

Coördinates of points in space and their transformation involving discussion of lines and planes; standard types of quadratic surfaces, their classification and principal properties.

210. ADVANCED CALCULUS I. 3(3-0); I. Prerequisite: Math. 251. Mr. White.

Special topics in integral calculus, including various methods of integrating elementary forms, definite integrals with attention to gamma and beta functions, and applications to lengths and areas.

213. ADVANCED CALCULUS II. 3(3-0); II. Prerequisite: Math. 210. Mr. White.

Continuation of Math. 210, including further application to geometry and mechanics, a treatment of line, surface, and space integrals, and a discussion of elliptic integrals.

216. THEORY OF EQUATIONS. 3(3-0); I. Prerequisite: Math. 251. Mr. Remick.

The elements of the classical theory, including the general cubic and quartic equation and the complete solution of numerical equations; discussion of symmetric functions, resultants, and discriminants.

221. HISTORY OF MATHEMATICS. 3(3-0); I, II, and SS. Prerequisite: Math. 110. Dr. Stratton, Miss Hyde, Mr. Lewis, Mr. Janes, Miss Holroyd, and Mr. Daugherty.

Historical development of elementary mathematics through the calculus.

223. FOURIER'S SERIES AND PARTIAL DIFFERENTIAL EQUATIONS. 3(3-0); II. Prerequisite: Math. 201. Mr. White.

An introduction to Fourier's integrals and series with applications to problems in physics involving partial differential equations.

225. MODERN PLANE GEOMETRY. 3(3-0); II. Prerequisite: Math. 110. Dr. Stratton.

Properties of a triangle and its circles, harmonic ranges and pencils, inversion, poles and polars, etc.

230. VECTOR ANALYSIS. 3(3-0); I or II. Prerequisite: Math. 251. Dr. Babcock.

An introduction to the methods of vector algebra and geometry, with applications, and to the elements of tensors.

231. SURVEY OF APPLIED MATHEMATICS I. 3(3-0); I. Prerequisite: Math. 251. Offered in 1937-'38 and in alternate years thereafter. Dr. Babcock.

An introduction to such subjects as determinants and matrices; infinite series; Fourier series; multiple, line, and improper integrals; and elliptic integrals.

232. SURVEY OF APPLIED MATHEMATICS II. 3(3-0); II. Prerequisite: Math. 251. Offered in 1937-'38 and in alternate years thereafter. Dr. Babcock.

A continuation of Math. 231, including ordinary and partial differential equations; vector analysis; probability; and curve fitting.

250. CALCULUS I. 4(4-0); I, II, and SS. Prerequisite: Math. 110. Mr. Remick, Mr. White, Dr. Stratton, Miss Hyde, Mr. Lewis, Mr. Lyons, Mr. Janes, Miss Mossman, Miss Holroyd, and Mr. Daugherty.

The usual topics of differential calculus are considered in this course.

251. CALCULUS II. 4(4-0); I, II, and SS. Prerequisite: Math. 250. Mr. Remick, Mr. White, Dr. Stratton, Miss Hyde, Mr. Lewis, Mr. Lyons, Mr. Janes, Miss Mossman, Miss Holroyd, and Mr. Daugherty.

Integration of standard forms, formula by parts, rational fractions, definite integrals. Application to problems in areas, lengths, surfaces, and volumes treated by processes of single integration; idea of successive and partial integration applied to areas, moments, centers of gravity, surfaces, and volumes; series.

252. CALCULUS IIA. 5(5-0); I and II. Prerequisite: Math. 250. Mr. Remick, Mr. White, Miss Hyde, Mr. Lewis, Mr. Lyons, Mr. Janes, Miss Mossman, and Mr. Daugherty.

Similar to Math. 250, with the addition of a brief treatment of some of the more common types of differential equations likely to be met in engineering applications.

FOR GRADUATE CREDIT

The following courses are available by appointment:

301. THEORY OF FUNCTIONS OF A COMPLEX VARIABLE. 3(3-0); II. Prerequisite: Math. 201 and 213. Mr. Remick.

An introductory course with the usual line of topics.

306. THEORETICAL MECHANICS. 3(3-0); I. Prerequisite: Math. 251. Dr. Stratton.

Mechanics in its relation to mathematical analysis.

312. HIGHER GEOMETRY. 3(3-0); II. Prerequisite: Math. 225. Dr. Stratton. Linear dependence, homogeneous coördinates, cross ratio, properties of conics, elements of projective geometry.

316. ADVANCED DIFFERENTIAL EQUATIONS. 3(3-0); I. Prerequisite: Math. 201. Mr. Remick.

Treatment of special topics, such as the equations of Legendre, Bessel, and Ricatti, with applications.

326. CALCULUS OF VARIATIONS. 3(3-0); I. Prerequisite: Math. 201. Mr. Remick.

Some of the standard problems of maxima and minima wherein a definite integral affords the fundamental form of expression.

331. RESEARCH IN MATHEMATICS. Credit to be arranged; I and II. Required of all candidates for the master's degree whose major work is in the Department of Mathematics.

Military Science and Tactics

Professor SULLIVAN, Lieut. Colonel, Inf., U. S. A.
Associate Professor LOHMANN, Major, C. A. C., U. S. A.
Associate Professor DEMPEWOLF, Major, Inf., U. S. A.
Assistant Professor CREWS, Major, C. A. C., U. S. A.
Assistant Professor REHM, Major, Inf., U. S. A.
Assistant Professor RYDER, Major, Inf., U. S. A.
Assistant Professor FRANK, Captain, C. A. C., U. S. A.
Military Property Custodian PETERS
Instructor LARSON, Staff Sergeant, D. E. M. L., U. S. A.
Instructor WILLIAMS, Staff Sergeant, D. E. M. L., U. S. A.
Instructor McDonald, Sergeant, D. E. M. L., U. S. A.
Instructor WILSON, Sergeant, D. E. M. L., U. S. A.

This College is one of the beneficiaries of the act of Congress of July 2, 1862, known as the Land-grant College Act. Military tactics is required in the College curricula. All male students who are citizens of the United States, and not physically disqualified, are required to take military training three hours a week for two years. Students entering with 25 hours of advanced credit are excused from the second year of military training; those entering with 59 hours of advanced credit are excused from all military requirements.

Requests for excuse from military science, or for postponement of the work, are acted upon by the president of the College. Such requests are presented through the student's dean, and the president obtains the advice of the professor of military science and tactics, who thoroughly investigates each case on its merits and makes his recommendation to the president. Requests based on physical condition must be accompanied by a recommendation made by the College physician. Students excused from military science for any reason

are assigned to an equivalent amount of some other College work instead. Students permitted to postpone military science are not thereby excused, but must make it up later.

Students enrolling in military courses who were members of junior units, R. O. T. C., at military academies or high schools, or those receiving military training while enrolled in government-aided schools (section 55c, national defense act, and section 1225, Revised Statutes) may apply for advanced-credit examinations on the basis of one semester for each year of training at a high school or government-aided school; provided there is stationed at these schools a regular officer of the United States Army; and provided further, that no credit will be given beyond the basic course, which comprises the first four semesters of the College curricula (freshman and sophomore years).

The act of congress of June 3, 1916, known as the National Defense Act, provides for the establishment in civil institutions of a Reserve Officers' Training Corps (R. O. T. C.).

The object of this provision is stated as follows:

"The primary object of establishing units of the Reserve Officers' Training Corps is to qualify, by systematic and standard methods of training, students at civil institutions for reserve officers. The system of instruction, herein prescribed, presents to these students a standard measure of that military training which is necessary in order to prepare them to perform intelligently the duties of commissioned officers in the military forces of the United States, and it enables them to be thus trained with the least practicable interference with their civil careers.

"Units of the senior division may be organized at civil institutions which require four years of collegiate study for a degree, including state universities and those state institutions that are required to provide instruction in military tactics under the provisions of the act of congress approved July 2, 1862, donating lands for the establishment of colleges where the leading object shall be practical instruction in agriculture and the mechanic arts, including military tactics.

"Units of the junior division may be organized at any other public or private educational institution."

An infantry unit and a coast artillery unit of the Reserve Officers' Training Corps have been established in this College.

Members of the R. O. T. C. will receive the benefits mentioned below:

1. SENIOR DIVISION, BASIC COURSE (freshmen, sophomores). Each student of these classes will be furnished with complete uniform, and equipment for his use during the course. The articles remain the property of the United States and must be accounted for and turned in by each student at the close of each college year or upon withdrawal from the R. O. T. C. Shoes are not furnished. Each student will provide himself with a pair of tan shoes (not laced boots), before entering College, as they will be required immediately upon his admission.

Any article of uniform clothing requiring repairs because of improper use or manifest lack of care will be repaired at the expense of the student concerned. Any such article damaged sufficiently to make reissue undesirable will be paid for by the student concerned. In either instance the extent and cause of the damage will be determined by the commandant or by a member of the regular military faculty designated by him.

As the proper care and prompt return of uniform clothing and other government property is considered an important part of military training, no course in that subject will be regarded as completed by any student who is indebted to the College for loss of, or damage to, government property.

A laboratory fee of 50 cents per semester is charged all students assigned to military training.

Corporals are selected from sophomores and specially qualified freshmen.

2. SENIOR DIVISION, ADVANCED COURSE. (Students who have completed the two years' Basic Course.) The student who continues in the R. O. T. C. after completing the Basic Course will receive the following benefits:

He will receive a special uniform allowance.

He will receive commutation of subsistence at the rate of 25 cents per day, provided he executes an agreement to complete the Advanced Course, or to continue in the course during the remainder of his time in College, and to take the course in camp training during such period as prescribed by the Secretary of War. The camps referred to involve no expense on the part of the student. In addition, a complete summer uniform will be issued and he will be paid at the rate of 70 cents per day for not to exceed six weeks, and five cents per mile to and from camp to cover travel expenses.

After graduation he will be eligible for appointment by the President of the United States as a reserve officer of the army, and if so appointed he may, under certain conditions, be appointed and commissioned a second lieutenant in the regular army with pay at the rate of \$125 per month, with the usual allowances. (Ration allowance is \$18 and allowance for quarters \$40 per month.)

In order to elect the Advanced Course, R. O. T. C., a student must have the recommendation of the president of the College, his dean, and the professor of military science and tactics.

The corps of cadets at present is organized as one regiment. A military band is also provided for. Assignments to the military band are made upon recommendation of the bandmaster, who has charge of the technical instruction.

Officers and higher noncommissioned officers are selected from the students taking the Advanced Course, R. O. T. C., according to class standing. This selection is made from among those cadets who have been most studious and soldierlike in the performance of their duties, and the most exemplary in their general deportment.

Students who are regularly enrolled in the Advanced Course of the Senior Division normally receive three semester credits of elective work toward graduation for each semester of military training taken beyond the Basic Course.

COURSES IN MILITARY SCIENCE AND TACTICS

FOR UNDERGRADUATE CREDIT

Senior Division R. O. T. C.

BASIC COURSE, INFANTRY

(For students not in the Division of Engineering or in the curricula in Industrial Chemistry and Milling Industry.)

101A. INFANTRY I. 1(0-3); I. Maj. Dempewolf, Maj. Rehm, and Maj. Ryder.

(a) *Practical.* Leadership, infantry drill, ceremonies, and rifle marksmanship.

(b) *Theoretical.* Leadership, infantry drill, National Defense Act and reserve officers' training corps, obligations of citizenship, military history and policy, current international situation, military discipline, courtesies and customs of the service, and military organization.

102A. INFANTRY II. 1(0-3); II. Prerequisite: Mil. Sc. 101A. Maj. Dempewolf, Maj. Rehm, and Maj. Ryder.

(a) *Practical.* Leadership, infantry drill, ceremonies, map reading, rifle marksmanship, and first aid.

(b) *Theoretical.* Leadership, military sanitation, first aid, military organization, map reading, and rifle marksmanship.

103A. INFANTRY III. 1(0-3); I. Prerequisite: Mil. Sc. 102A. Maj. Rehm.

(a) *Practical.* Leadership, infantry drill, ceremonies, and combat training.

(b) *Theoretical.* Leadership, infantry drill, military history, and combat training.

- 104A. INFANTRY IV. 1(0-3); II. Prerequisite: Mil. Sc. 103A. Maj. Rehm.
 (a) *Practical*. Leadership, infantry drill, weapons, and combat training.
 (b) *Theoretical*. Leadership, weapons, and combat training.

ADVANCED COURSE, INFANTRY

(For students not in the Division of Engineering or in the curricula in Industrial Chemistry and Milling Industry.)

109. INFANTRY V. 3(2-3); I. Prerequisite: Mil. Sc. 104A. Maj. Ryder.
 (a) *Practical*. Leadership, infantry drill, ceremonies, aërial photograph reading, and combat training.
 (b) *Theoretical*. Leadership, infantry drill, ceremonies, aërial photograph reading, and combat training.
110. INFANTRY VI. 3(2-3); II. Prerequisite: Mil. Sc. 109. Maj. Ryder.
 (a) *Practical*. Leadership, infantry drill, ceremonies, weapons, and combat training.
 (b) *Theoretical*. Leadership, infantry drill, weapons, and combat training.
111. INFANTRY VII. 3(2-3); I. Prerequisite: Mil. Sc. 110. Maj. Dempe-wolf.
 (a) *Practical*. Leadership, infantry drill, ceremonies, and combat training.
 (b) *Theoretical*. Leadership, infantry drill, ceremonies, military law, company administration and supply, combat training, and military history and policy.
112. INFANTRY VIII. 3(2-3); II. Prerequisite: Mil. Sc. 111. Maj. Dempe-wolf.
 (a) *Practical*. Leadership, infantry drill, ceremonies, and combat training.
 (b) *Theoretical*. Leadership, combat training, tanks, mechanization, and officers' reserve corps regulations.

BASIC COURSE, COAST ARTILLERY

(For students in the Division of Engineering or in the curricula in Industrial Chemistry and Milling Industry.)

- 113A. ARTILLERY I. 1(0-3); I and II. Maj. Lohmann, Maj. Crews, and Capt. Frank.
 (a) *Practical*. First aid, rifle marksmanship, mechanical maneuvers, close-order infantry and artillery drill.
 (b) *Theoretical*. Military fundamentals, organization of the army, organization of the coast artillery corps, military discipline, courtesies and customs of the service, military sanitation and first aid, military history and policy, National Defense Act and R. O. T. C., military obligations of citizenship and the current international situation; leadership, the theory of close-order drill, including the platoon; and primary coast artillery instruction, rifle marksmanship, coast artillery ammunition, weapons and materiel.
- 114A. ARTILLERY II. 1(0-3); I and II. Prerequisite: Mil. Sc. 113A or 101A. Maj. Lohmann, Maj. Crews, and Capt. Frank.
 (a) *Practical*. Continuation of Artillery I.
 (b) *Theoretical*. Continuation of Artillery I.
- 115A. ARTILLERY III. 1(0-3); I and II. Prerequisite: Mil. Sci. 114A. Maj. Crews.
 (a) *Practical*. Close-order infantry drill and artillery drill.
 (b) *Theoretical*. Leadership, a review of Artillery I and II and coast

NOTE.—Advanced-course students are required to attend one camp. This comes normally at the end of the junior year, and is held normally at Fort Leavenworth, Kan.

artillery instruction, including fire control and position finding for seacoast and antiaircraft artillery, identification of aircraft and characteristics of naval targets.

116A. ARTILLERY IV. 1(0-3); I and II. Prerequisite: Mil. Sc. 115A. Maj. Crews.

(a) *Practical*. Continuation of Artillery III.

(b) *Theoretical*. Continuation of Artillery III.

ADVANCED COURSE, COAST ARTILLERY

(For students in the Division of Engineering and in the curricula in Industrial Chemistry and Milling Industry.)

117. ARTILLERY V. 3(2-3); I. Prerequisite: Mil. Sc. 116A. Capt. Frank.

(a) *Practical*. Formulation of orders, map problems, orientation, calculation of firing data for antiaircraft and machine guns, map reading, basic gunnery, close-order infantry and artillery drill.

(b) *Theoretical*. Leadership, a review of Artillery I to IV, inclusive, and principles of instructional methods, map and aerial photograph reading, combat orders and the solution of problems, and coast artillery instruction, basic gunnery, fire control and position finding for seacoast and antiaircraft artillery.

118. ARTILLERY VI. 3(2-3); II. Prerequisite: Mil. Sc. 117. Capt. Frank.

(a) *Practical*. Continuation of Artillery V.

(b) *Theoretical*. Continuation of Artillery V.

119. ARTILLERY VII. 3(2-3); I. Prerequisite: Mil. Sc. 118. Maj. Lohmann.

(a) *Practical*. Military law, leadership, infantry drill, ceremonies, artillery drill, orientation, and motor transportation.

(b) *Theoretical*. Military law and administration, military history and policy of the United States, leadership, principles of and instructional methods, military motor transportation, and coast artillery instruction, artillery tactics, orientation, materiel and field engineering.

120. ARTILLERY VIII. 3(2-3); II. Prerequisite: Mil. Sc. 119. Maj. Lohmann.

(a) *Practical*. Continuation of Artillery VII.

(b) *Theoretical*. Continuation of Artillery VII.

NOTE.—Advanced-course students are required to attend one camp. This comes normally at the end of the junior year, and is held normally at Fort Sheridan, Ill.

Modern Languages

Professor MOORE
Professor LIMPER
Associate Professor CRITTENDEN

Assistant Professor PETTIS
Instructor TOWNSEND

The aim of foreign language study is twofold. Its primary objective here is a practical one: to furnish the student with an instrument definitely useful in the fields of commerce and science. Incidentally, it also gives him a better knowledge of the English language. The broader purpose might be called cultural: to acquaint the student with the literature of other countries and thus to stimulate his curiosity about foreign customs and philosophies.

A number of literary and scientific periodicals published in French, Spanish, and German are received by the College Library, and afford the student excellent opportunity to amplify his reading knowledge of these languages.

Students who have had French, Spanish, or German in high school are required, as a rule, to take more advanced courses as their elective or required work in that language. Those who have had one year of a foreign language in

high school should be assigned to the second course here; those who have had two years in high school should consult the head of the department regarding assignment to advanced work here.

COURSES IN GERMAN

FOR UNDERGRADUATE CREDIT

101, 102. GERMAN I AND II. 3(3-0) each; I, II, and SS. Prerequisite: For II, Mod. Lang. 101 or equivalent. Dr. Moore and Dr. Limper.

Fundamentals of German grammar; easy reading and oral drill.

111. GERMAN III. 3(3-0); I, II, and SS. Prerequisite: Mod. Lang. 102 or equivalent. Dr. Moore and Dr. Limper.

Selections from modern writers; grammar review, sight reading, and oral drill.

FOR GRADUATE AND UNDERGRADUATE CREDIT

202. GERMAN IV. 3(3-0); I and II. Prerequisite: Mod. Lang. 111 or equivalent. Dr. Moore and Dr. Limper.

Rapid reading and oral drill.

209. SCHILLER. 3(3-0); I and II. Prerequisite: Mod. Lang. 202 or equivalent. Dr. Moore and Dr. Limper.

An introduction to the dramas of Schiller.

211. NINETEENTH CENTURY GERMAN DRAMA. 3(3-0); II.* Prerequisite: 15 hours of college German or equivalent. Dr. Moore.

Rapid reading of dramas by Grillparzer, Hebbel, Hauptmann, and others.

237. SCIENTIFIC GERMAN. 4(4-0); I. Prerequisite: Mod. Lang. 102 or equivalent. Dr. Moore.

An introduction to the vast field of scientific publications appearing in German.

COURSES IN FRENCH

FOR UNDERGRADUATE CREDIT

151, 152. FRENCH I AND II. 3(3-0) each; I, II, and SS. Prerequisite: For II, Mod. Lang. 151 or one year of high-school French. Dr. Limper, Miss Pettis, and Miss Townsend.

The fundamentals of French grammar; emphasis on reading.

161. FRENCH III. 3(3-0); I, II, and SS. Prerequisite: Mod. Lang. 152 or equivalent. Dr. Limper, Miss Pettis, and Miss Townsend.

Primarily a reading course; grammar reviewed; oral drill.

FOR GRADUATE AND UNDERGRADUATE CREDIT

251. FRENCH IV. 3(3-0); I and II. Prerequisite: Mod. Lang. 161 or two years of high-school French. Dr. Limper and Miss Pettis.

Modern stories by such writers as Daudet, Maupassant, and Zola.

257. FRENCH DRAMA I. 3(3-0); I or II. Prerequisite: 12 hours of college French or equivalent. Dr. Limper and Miss Pettis.

French classic drama—Corneille, Molière, Racine, Marivaux, and others.

258. FRENCH DRAMA II. 3(3-0); I or II. Prerequisite: 12 hours of college French or equivalent. Dr. Limper and Miss Pettis.

Modern French drama—Brieux, Hervieu, Maeterlinck, Rostand, and others.

261. FRENCH COMPOSITION AND CONVERSATION. 3(3-0); II, when requested by a sufficient number. Prerequisite: 12 hours of college French or equivalent. Miss Pettis.

Class period devoted to practice in speaking French; written themes required as preparation for each recitation.

* Effective January, 1936.

263. THE FRENCH NOVEL. 3(3-0); I, II, and SS, by appointment. Prerequisite: Mod. Lang. 257 and 258 or equivalent. Dr. Limper and Miss Pettis.

A panoramic view of the French novel in the various periods of literary production.

COURSES IN SPANISH

FOR UNDERGRADUATE CREDIT

176, 177. SPANISH I AND II. 3(3-0) each; I, II, and SS. Prerequisite: For II, Mod. Lang. 176 or one year of high-school Spanish. Dr. Moore, Miss Crittenden, and Miss Townsend.

The fundamentals of Spanish grammar, stress on training to understand spoken Spanish.

180. SPANISH III. 3(3-0); I, II, and SS. Prerequisite: Mod. Lang. 177 or equivalent. Miss Crittenden and Miss Townsend.

Readings from such representative Spanish authors as Alarcón, Pérez Galdós, and Palacio Valdés.

194. SPANISH COMPOSITION AND CONVERSATION I. 3(3-0); I. Prerequisite: Mod. Lang. 180 or equivalent. Miss Townsend.

Written composition with review of Spanish grammar; practice in taking Spanish dictation and in speaking Spanish.

197. SPANISH COMPOSITION AND CONVERSATION II. 3(3-0); II. Prerequisite: Mod. Lang. 194 or equivalent. Miss Townsend.

A continuation of Mod. Lang. 194 with written themes, giving the student an opportunity to express his own ideas in Spanish.

FOR GRADUATE AND UNDERGRADUATE CREDIT

272. SPANISH IV. 3(3-0); I and II, by appointment. Prerequisite: Mod. Lang. 180. Miss Crittenden.

Stories from the most eminent of modern Spanish authors, such as Béquér, Trueba, Alarcón, Palacio Valdés, and Blasco Ibañez.

275. THE SPANISH NOVEL. 3(3-0); I. Prerequisite: Mod. Lang. 272 or equivalent. Miss Crittenden.

A panoramic view of the Spanish novel in the several periods of Spanish literary production.

280. THE SPANISH DRAMA. 3(3-0); II. Prerequisite: Mod. Lang. 272 or equivalent. Miss Crittenden.

A general view of the drama produced in Spain's best literary periods.

Music

Professor LINDQUIST
Associate Professor SAYRE
Associate Professor DOWNEY
Assistant Professor HARTMAN
Assistant Professor PAINTER
Assistant Professor JEFFERSON

Assistant Professor MARTIN
Assistant Professor STRATTON
Assistant Professor PELTON*
Assistant Professor JESSON
Assistant Professor GROSSMANN
Instructor KRAUSHAAR†

To be a vital factor in the life of every student is the aim of the Department of Music. It strives to create and foster a love for and an appreciation of the best in music, and to give to students that broader culture and more complete education which is gained through academic, professional, and vocational training combined with musical and artistic study. Believing that this can be accomplished to a much greater degree by having a teaching staff of musicians who are not only capable instructors but also artistic performers, courses are offered which will prepare the student not only for the teaching

* On sabbatic leave first semester, 1935-'36.

† First semester, 1935-'36.

profession, but for an artistic career as well. Students enrolled in the department participate in the musical contributions to the public programs of the College, and such participation is a part of their training and study.

METHODS OF INSTRUCTION

Instruction in piano, organ, violin, violoncello, double-bass, and other instruments, also in voice, is given in private lessons. No two students have the same mental, physical, or artistic capacity, and their individual capabilities can be neither properly nor fully developed without painstaking personal attention. The best results are dependent on a close adaptation to the needs of the individual student, and such adaptation is, of course, impracticable unless the instruction be given in private lessons.

All theoretical subjects are taught in classes.

CREDITS

Students taking work in the Department of Music to a sufficient extent are allowed credits on their electives in the Divisions of General Science, Home Economics, and Agriculture, while substitutions in music, with the approval of the dean, may be made in the Division of Engineering, as follows: For Voice or some instrument, two hours each semester; for History and Appreciation of Music, two hours each semester; for Harmony, two hours each semester; for Counterpoint, two hours each semester; for Musical Form and Analysis, one hour each semester; for Orchestra or Band, one half hour each semester; for School Music methods, two hours each semester. Any student having a full assignment may, upon recommendation of the Department of Music, together with the approval of the student's dean, take music without credit.

Students coming from other schools to enter our courses in music may be sufficiently advanced as players or singers to enter the second or third year of the regular music curricula but prohibited therefrom owing to their lack of knowledge of theory. If such students enter the first year of a theoretical course, their progress as players and singers is not retarded, but it would be much to their advantage to make special theoretical preparation in the hope of qualifying for more advanced standing.

PRELIMINARY MUSICAL TRAINING

Preliminary training in music is undertaken by two classes of students. The first class consists of college students not able to meet the college entrance requirements for freshman standing in the four-year music curricula. The second consists of grade-school and high-school students whose parents desire to secure for their children the kind of "conservatory" instruction that the Department of Music is in a position to offer.

Special training is given in rhythm, ear training, sight reading, scale building, melody writing, and appreciation. This work aims to develop in the student a natural means of expression through music and to furnish the right foundation for a music education.

Applicants for freshman standing in the four-year music curricula must pass an examination over certain requirements, which are as follows:

CURRICULUM IN APPLIED MUSIC

Voice majors: A voice of superior quality, ability to sing in time and in tune, and a practical knowledge of music notation.

Piano and Organ majors: A considerable degree of proficiency in the fundamentals of piano technic and in the playing of the easier classics.

Other instrumental majors: A practicable knowledge of the fundamental technique of playing the instrument in the study of which the student desires to major, and a considerable degree of proficiency in the playing of the easier classics written for that instrument.

CURRICULUM IN MUSIC EDUCATION

School Music majors: A practicable degree of proficiency in the fundamentals of piano technic and sight reading, and the ability to sing in time and in tune.

Band and Orchestra majors: A practicable degree of proficiency in the fundamentals of piano technic.

A complete and detailed list of the requirements for freshman standing in the music curricula, including examination material, may be had by writing to the office of the vice-president of the College.

COURSES IN THE THEORY OF MUSIC

The aim of theoretical courses is to give the student an intelligent conception of music through the study of its historical development and scientific construction.

FOR UNDERGRADUATE CREDIT

101, 102. HARMONY I AND II. 2(2-0) each; I, II, and SS. Prerequisite: Mus. 116 or equivalent. Mr. Stratton and Mr. Jesson.

I: A study of the major and minor scales, intervals, construction and progression of the primary triads and their inversions; the dominant seventh and its progressions and inversions; harmonizing melodies and basses.

II: Subordinate triads and their sevenths in progressions and inversions; the beginnings of modulation; writing of original exercises.

103, 104. HARMONY III AND IV. 2(2-0) each; I and II, respectively, and SS. Prerequisite: Mus. 102. Mr. Stratton and Mr. Jesson.

III: Modulation completed; altered and mixed chords; embellishments.

IV: Works of the masters; writing of original exercises and small compositions.

105, 106, 107, 108. EAR TRAINING AND SIGHT SINGING I, II, III, and IV. 2(1-3) each; I, II, I and II, respectively. Prerequisite: Mus. 116 or equivalent. Miss Hartman.

The reading and hearing of intervals, chords, and rhythmical forms.

108A. COUNTERPOINT. 2(2-0); I, II, and SS. Prerequisite: Mus. 104. Miss Jefferson.

A study of melody writing, the association of melodies in simple counterpoint, leading to the writing of original two- and three-part inventions.

111. MUSICAL FORM AND ANALYSIS. 1(1-0); I, II, and SS. Prerequisite: Mus. 104 and 108A. Mr. Jesson.

The various forms used in composition; the music of Bach, Haydn, Mozart, Beethoven, Schumann, Chopin, Brahms, Wagner, and others.

115. RADIO MUSIC APPRECIATION PROGRAMS. 1(1-1); I, II, and SS. Prerequisite or concurrent: Mus. 130. Miss Grossmann.

A study of program building, and practical experience in the planning and presentation of music appreciation programs.

116. MUSIC FUNDAMENTALS. 1(2-0); I, II, and SS. Mr. Sayre.

A study of music notation, rhythm, scales, intervals, and keys; and a brief survey of acoustics, form, design, expression, interpretation, and the melodic, harmonic, and polyphonic elements in music.

A basic course designed to meet the needs of students who desire elementary instruction in the theory of music.

130, 131. HISTORY AND APPRECIATION OF MUSIC I AND II. 2(3-0) each; I and II, respectively, and SS. Mr. Lindquist.

Aim of these courses: To give definite knowledge of each of the three periods in the history of music, the style of music peculiar to each, and musical contact with the great composers.

133. CHORAL CONDUCTING. 1(2-0); I, II, and SS. Prerequisite: Mus. 116 or equivalent. Mr. Lindquist.

Practical training in the essentials of conducting choirs, glee clubs, and choruses.

134. INSTRUMENTAL CONDUCTING. 1(2-0); I, II, and SS. Prerequisite: Mus. 104 and 133. Mr. Downey.

Practical training in the essentials of conducting bands and orchestras.

136. INSTRUMENTATION AND ORCHESTRATION. 3(3-0); I, II, and SS. Prerequisite: Mus. 104 and 108A. Mr. Downey.

All of the instruments of the band and orchestra studied with relation to tone color, range and function; simple and familiar compositions scored for all forms of ensemble, including full orchestra.

138, 139. SCHOOL MUSIC I AND II. 2(2-0) each; I and II, respectively, and SS. Prerequisite: Mus. 105 and 106. Miss Hartman.

I: Methods and materials for teaching music in kindergarten and the primary grades.

II: Methods and materials for teaching music in the elementary grades.

143. SCHOOL MUSIC III. 2(2-0); I, II, and SS. Prerequisite: Mus. 138 and 139. Miss Hartman.

Methods and teaching materials suitable for junior and senior high school.

149. METHODS AND MATERIALS FOR THE STUDIO. 1(2-0); I and II. Mr. Lindquist, Mr. Stratton, Mr. Downey, Mr. Martin, and Mr. Jesson.

Methods of teaching fundamental technic, selection of teaching materials, and the outlining of courses of study; discussion of principles and processes involved in the various phases of vocal and instrumental study as a means of music education. Designed for students majoring in voice or some instrument in the curriculum in Applied Music; taught in separate divisions for voice, piano, organ, violin, etc.

151A to 151H. ORCHESTRAL INSTRUMENTS I TO VIII. $\frac{1}{2}$ (1-0) each; I, II, and SS. Mr. Downey, Mr. Martin, and assistants.

A course designed to acquaint the student with the methods of tone production of the most important instruments of the orchestra. Fee, \$2.

COURSES IN APPLIED MUSIC

153. INSTRUMENT. 0 to 4 hours a semester, maximum of 32 hours allowed; I, II, and SS. Offered to students taking work in the curriculum in Applied Music and to students who desire special training in band or orchestra in the curriculum in Music Education. Elective in other curricula. Mr. Downey, Mr. Martin, and assistants. For fees, see table following Mus. 198.

156. VOICE. 0 to 4 hours a semester, maximum of 32 hours allowed; I, II, and SS. For the curricula in Applied Music and Music Education, and elective in other curricula. Mr. Lindquist, Mr. Sayre, and Miss Grossmann.

Since production of tone in singing is governed by certain fundamental, explainable laws of phonetics and breath control, teaching the intelligent use of these laws is the constant objective of these courses. Coaching is given in the singing of French, Italian, and German songs, but the greater part of the work is in English, and pure enunciation of the mother tongue is constantly stressed. For fees, see table following Mus. 198.

158. VIOLIN. 0 to 4 hours a semester, maximum of 32 hours allowed; I, II, and SS. For the curricula in Applied Music and Music Education, and elective in other curricula. Mr. Martin and assistants. For fees, see table following Mus. 198.

161. PIANO. 0 to 4 hours a semester, maximum of 32 hours allowed; I, II, and SS. For the curricula in Applied Music and Music Education, and elective in other curricula. Mr. Stratton, Miss Painter, Miss Jefferson, Mr. Jesson, and Miss Pelton.

Instruction outlined for each semester is a conservative estimate of what a student of average talent is expected to accomplish. Every two weeks a one-hour auxiliary playing class is held, which all students majoring in piano are required to attend, and which is also open to all piano students recommended for admission by their teachers. Opportunity is given for frequent playing, study of music terminology, discussion of how to study, and acquiring a knowledge of the development of piano literature. For fees, see table following Mus. 198.

163. VIOLONCELLO. 0 to 4 hours a semester, maximum of 32 hours allowed; I, II, and SS. For the curricula in Applied Music and Music Education, and elective in other curricula. Mr. Downey. For fees, see table following Mus. 198.

167. DOUBLE-BASS. 0 to 4 hours a semester, maximum of 32 hours allowed; I, II, and SS. For the curricula in Applied Music and Music Education, and elective in other curricula. Mr. Downey. For fees, see table following Mus. 198.

169A to 169H. VIOLIN ENSEMBLE I TO VIII. 1(0-3) each; I (courses A, C, E, G) and II (courses B, D, F, H). Elective for students of superior talent. Prerequisite: Four semesters of violin, viola, or violoncello, or the equivalent. Mr. Downey.

A practical course in the playing of string duets, trios, and quartets. Fee, \$2.

172. ORGAN. 0 to 4 hours a semester, maximum of 32 hours allowed; I, II, and SS. For the curricula in Applied Music and Music Education, and elective in other curricula. Mr. Jesson. For fees, see table following Mus. 198.

174. VOCAL ENSEMBLE. No credit (0-2); I, II, and SS. Elective for students of superior vocal talent. Mr. Lindquist, Mr. Sayre, Miss Grossmann, and Miss Hartman.

A practical course in the singing of duets, trios, and quartets. Fee, \$2.

176A to 176H. PIANO ENSEMBLE I TO VIII. R(1-0); I (176 A, C, E, G) and II (176 B, D, F, H). Required of all students majoring in piano or organ in the curriculum in Applied Music. Miss Painter.

During the first two years this work is in classes of four, for practice in sight reading and ensemble playing, the chief material used being orchestral music arranged for eight hands. During the last two years the work is done partly in classes of four, but develops into two-piano work and training for accompaniment and ensemble with various groups of orchestral instruments. Fee, \$2.

181A to 181F. RECITAL I TO VI. R(-); I (181 A, C, and E) and II (181 B, D, and F). Required of all students taking work in the curriculum in Applied Music. A joint solo recital appearance in Recital IV, and an individual solo recital in Recital VI.

183. ENSEMBLE. $\frac{1}{2}$ (0-2) each semester. For the curricula in Applied Music and Music Education, and elective in other curricula. Mr. Lindquist, Miss Grossmann, Mr. Sayre, and Mr. Downey.

Required ensemble work may be taken in Choral Ensemble (Mus. 194); Orchestra (Mus. 195); or Band (Mus. 198).

187. PRACTICE TEACHING OF MUSIC. R(1-0); II. Mr. Lindquist, Mr. Downey, Mr. Martin, Mr. Stratton, and Mr. Jesson.

Practice teaching in private classes for students in the curriculum in Applied Music.

194. CHORAL ENSEMBLE. $\frac{1}{2}$ (0-2) each semester. Weekly rehearsals, all special rehearsals, and public performances. Prerequisite: A voice of good quality, a knowledge of musical notation, and the ability to sing in time and in tune. Mr. Lindquist, Mr. Sayre, and Miss Grossmann.

Membership in both the College Chorus and the Men's Glee Club or the College Chorus and the Women's Glee Club.

MUSICAL ORGANIZATIONS

The existence of an organization of individuals is justified by the service such a body renders. The musical organizations at the College are second to none in the colleges of America. Students are here given a rare opportunity to study the great musical compositions that have been written for various ensemble combinations, and to render excellent service to the College and community as well as to themselves in the presentation of public programs.

191. CHORUS. Weekly rehearsals, all special rehearsals, and public performances; I and II. Prerequisite: Ability to read musical notation and to sing in time and in tune. Membership is open to the entire student body, and to others who may qualify. Approval of the head of the Department of Music must be obtained. Mr. Lindquist.

The College Chorus presents two or more standard cantatas or oratorios each year.

THE MEN'S GLEE CLUB. The Men's Glee Club is composed of about forty-five of the best male voices in the College. Membership is open to the entire student body, including graduate students, and vacancies in the club are filled by competitive tryouts. This organization is available for a limited number of concert engagements throughout the state. Mr. Lindquist.

THE WOMEN'S GLEE CLUB. This is an organization of young women of the College. Two separate divisions are maintained: the Study Club, the membership of which is selected by competitive tryouts, and the Concert Club, to which members of the Study Club may be elected after one year's service. Membership is open to the entire student body, including graduate students, and vacancies in the club are filled by competitive trial. This organization is also available for a limited number of concert engagements throughout the state. Mr. Sayre and Miss Grossmann.

195. ORCHESTRA. $\frac{1}{2}$ (0-2) each semester. Weekly rehearsals, all special rehearsals, and public performances. Mr. Downey.

The College Orchestra, composed of about fifty players, maintains a correct and well-balanced instrumentation, including all of the instruments of the modern symphony orchestra; and, in the preparation of programs of symphonic music, opera and oratorio accompaniments, offers the actual routine experience necessary for the development of efficient orchestra playing. Vacancies are filled by competitive tryouts, and membership is open to the entire student body and to others who may qualify.

198. BAND. $\frac{1}{2}$ (0-2) each semester. Weekly rehearsals, all special rehearsals, and public performances. Mr. Downey and Mr. Martin.

The College Band plays for all military functions and major athletic events, and makes several concert appearances on the campus during the year. It is also available for a limited number of concert engagements throughout the state. Membership is open to the entire student body, and vacancies are filled by competitive trial. Fee, 50 cents; deposit, \$2.

FEES IN MUSIC

COURSE	GRADATION OF TEACHERS							
	1	2	3	4	5	6	7	8
Two lessons each week for a semester:								
Voice	\$38	\$36	..	\$32	..	\$30*	\$24*	\$14†
Piano .....	..	36	\$34	32	..	30*	24*	14†
Organ .....	..	36	..	..	..	30*	24*	14†
Violin .....	..	36	..	..	..	30*	24*	14†
Violoncello .....	..	36	..	..	..	30*	24*	14†
Other orchestral instruments.....	..	..	..	..	\$30	30*	24*	14†
One lesson each week for a semester:								
Voice	21	20	..	18	..	17*	14*	9†
Piano .....	..	20	19	18	..	17*	14*	9†
Organ .....	..	20	..	..	..	17*	14*	9†
Violin .....	..	20	..	..	..	17*	14*	9†
Violoncello .....	..	20	..	..	..	17*	14*	9†
Other orchestral instruments.....	..	..	..	..	17	17*	14*	9†
Piano rent, one hour daily—\$4 a semester.								
Piano rent, two hours daily—\$6 a semester.								
Organ rent, one hour weekly—\$3 a semester.								

Physical Education and Athletics

Professor AHEARN
 Professor SAUM
 Professor WASHBURN
 Professor FRY
 Assistant Professor ROOT
 Assistant Professor GEYER
 Instructor HAYLETT

Instructor MOLL†
 Instructor MAYTUM
 Instructor WILLIAMSON
 Assistant MYERS
 Assistant PATTERSON
 Assistant FORCHEMER
 Assistant CREED

The purpose of the Department of Physical Education and Athletics is to assist the students of the College to live to the best advantage, and so to aid them in the formation of hygienic habits that during their college course they may make a profitable physical preparation for life.

All young men and all young women of the College are entitled to the privileges of the gymnasium, which is large and well equipped with all sorts of apparatus for physical training, with locker, plunge baths, shower baths, and other accommodations.

Men taking the physical education courses 103, 104, 105, 106 are required to furnish their own uniforms consisting of white sleeveless shirt, short white gym pants, and rubber-soled shoes.

Men majoring in physical education are required to wear a special uniform for their gymnasium class work, which costs approximately \$9.

Equipment is furnished to acceptable candidates for varsity and freshman athletic teams. It is checked out to individual candidates and they are held responsible for it. It must be returned when called for by the property clerk. Failure to return or replace equipment when called for subjects the offender to a fine or to other disciplinary action.

Physical education is required of all freshmen and sophomores unless excused for disability on recommendation of the College physician. Students entering with 15, 25, 44, or 59 hours of advanced credit are excused from one, two, three, or four semesters, respectively, of physical education, no substitution being required.

The work of the department is based largely upon a physical examination given each student when he enters upon the work of the department. All students, whether taking work in the department or not, are entitled to receive a physical examination and advice as to their physical condition.

A diagnosis is made of the vital organs to ascertain their functional condition, and a complete inspection of the whole body is made to detect any weakness or deformity that may exist. Based upon the information thus obtained,

* Fees for children.

† Student assistant fees.

‡ On sabbatic leave 1935-'36.

advice is given and work assigned to students in accordance with their physical needs, tastes, and capabilities.

The College is a member of the Big Six Athletic Conference. Intercollegiate athletic competition is carried on in all the usual college sports. Supervision and control are vested in the Athletic Council consisting of eight faculty members. Each candidate for an athletic team is given a thorough examination before he competes and careful medical supervision is maintained throughout the year. Opportunity is offered to every student who wishes to try out for the College teams.

An extensive intramural program is provided. Thirteen different sport activities are offered for men and nine for women. These activities are designed to furnish exercise, recreation, and social contacts, and to develop interest and skill in games for later years. There are several tennis courts and two intramural athletic fields, one for men and one for women. The women's athletic association is largely responsible for carrying on the women's intramural program and the whole program is under careful faculty supervision. Any student enrolled in the College is eligible to compete in intramural sports and a very large percentage of students participate. Awards in the form of emblems, sweaters, plaques, and medals are made to students on the basis of participation.

COURSES IN PHYSICAL EDUCATION

FOR UNDERGRADUATE CREDIT—MEN

A deposit of \$3 is required of each student enrolled in any course designated "Deposit." Only one deposit is required from any student in one semester.

103, 104, 105, 106. PHYSICAL EDUCATION M. R(0-2) each semester of freshman and sophomore years. Mr. Washburn, Mr. Root, Mr. Moll, Mr. Patterson, Mr. Williamson, Mr. Myers, and Mr. Creed.

Personal hygiene and social problems; marching, calisthenics, apparatus and games, selected with the object of obtaining the best hygienic, educational and recreative results for the student.

The following activities may be elected by students in place of the gymnasium work: (a) swimming: beginning, advanced, and Red Cross life-saving. (Beginning swimming is a prerequisite for advanced swimming and for Red Cross life-saving. Students must pass a preliminary test before entering the Red Cross life-saving class unless they have passed the test given in the advanced swimming class.) (b) boxing, (c) wrestling, and (d) corrective gymnastics. Deposit.

109. APPARATUS. 1(0-3); I. Prerequisite: Phys. Ed. 115A and 117A. Mr. Moll and Mr. Creed.

Carefully selected and graded exercises on the various pieces of apparatus, fundamental apparatus stunts, mat exercises and tumbling. Deposit.

113A. FIRST AID AND MASSAGE. 3(3-0); I and SS. Prerequisite: Zoöl. 123A. Mr. Moll and Mr. Creed.

Different forms of injuries and their temporary protection, including dressing, bandaging, transportation of the injured, etc., aid in case of accident, preparation of solutions, bandages, splints, etc., and methods of massage.

115A, 117A. GYMNASTICS I AND II. 2(1-3) and 2(0-6), respectively; I and II, respectively, and SS. Mr. Washburn, Mr. Moll, and Mr. Williamson.

I: Theory and practice of marching and calisthenics; principles of the gymnastic lesson; nomenclature and arrangement of exercises; light apparatus; games. Deposit.

II: Continuation of Phys. Ed. 115A, with the addition of gymnastic dancing, the composition and teaching of model lessons, fundamental exercises on the apparatus and mat work. Deposit.

119. PERSONAL HYGIENE. 2(2-0); I and SS. Mr. Washburn.

This course deals with health from the standpoint of the individual; care of the body, its organs, and vital processes.

121, 122. SWIMMING M I AND II. 1(0-3 each); I and II, respectively, and SS. Prerequisite: For II, Phys. Ed. 121. Mr. Patterson, Mr. Moll, and Mr. Creed.

I: Instruction and practice of breast, back, and crawl strokes, of diving, treading water, and floating, land exercises and methods of breathing. Deposit.

II: Continuation of Swimming M I. Advanced swimming and diving, water games and stunts, Red Cross life-saving methods. Methods of teaching and conduct of swimming meets and programs are discussed. Deposit.

123. PHYSIOLOGY OF EXERCISE. 2(2-0); I. Prerequisite: Zoöl. 123A and 130. Mr. Washburn.

The effect of exercise on the tissues, systems, and organs of the body.

124A. PHYSICAL DIAGNOSIS AND PRESCRIPTION. 3(3-0); I. Prerequisite: Phys. Ed. 115A, 117A, and 141B. Mr. Washburn.

Students are taught to diagnose faulty conditions and, in cases that can be remedied by exercise, to give directions and write prescriptions of exercise.

125. FOOTBALL. 3(2-3); II and SS. Mr. Fry.

Study of the rules, theory, and practice for fundamentals and equipment; various positions on a football team, generalship and field tactics; systems of offensive and defensive football. Deposit.

128. WRESTLING. 1(0-3); I. Mr. Patterson.

Rules, and the method of attack and defense in catch-as-catch-can wrestling; theories of wrestling, and wrestling psychology. Deposit.

130A. BASKETBALL. 2(1-3); I and SS. Mr. Root.

The rules, technic of basket shooting, foul throwing, catching, and passing, dribbling, reverse turn, different styles of play, offense, defense, team work, selection of players, training, and equipment. Deposit.

132. BOXING. 1(0-3); II. Mr. Patterson.

Instruction in various modes of attack and defense; discussion of training, wrestling and boxing tournaments, and related topics. Deposit.

133. BASEBALL. 2(1-3); II and SS. Mr. Ahearn.

Theory and technic, each position being studied separately; rules, schedules, equipment, strategy, signals, team organization, plays, and players. Deposit.

135, 136B. PRACTICE TEACHING IN PHYSICAL EDUCATION I AND II. 1(0-3) and 2(0-6), respectively. I and II, respectively. Prerequisite: Junior standing. Mr. Washburn.

Under immediate supervision of the teachers and coaches, students assist in the physical education classes, athletic squads, and intramural teams, and officiate in intramural games. The theory of teaching and officiating is also discussed. Deposit.

136C. PRACTICE TEACHING IN PHYSICAL EDUCATION III. 2(0-6). Mr. Washburn. Continuation of Phys. Ed. 135 and 136B. Deposit.

140A. TRACK AND FIELD SPORTS. 2(1-3); II. Mr. Haylett.

Rules and theory of track and field events; organization, conduct, officiating of meets, construction of all track equipment, training, dieting, equipment, and selection of material. Fundamentals of track and field sports. Deposit.

141B. KINESIOLOGY M. 3(3-0); II. Prerequisite: Zoöl. 123A. Mr. Washburn.

The mechanics of movements; elemental body movements analyzed, and principles involved applied to teaching of physical education.

142. PUBLIC-SCHOOL PROGRAM IN PHYSICAL EDUCATION. 2(2-0); II. Prerequisite: Senior standing. Mr. Washburn.

The objectives of physical education; the educational, health and recreative significance; content of the school program; types of activity to be emphasized in grades, high school, and college.

145A. PLAYGROUND MANAGEMENT AND GAMES M. 2(2-0); II. Mr. Washburn.

Management and activities of the playground; equipment of playgrounds, arrangement of apparatus and places for games, track work, wading pools, etc.; municipal and industrial recreation centers, mass athletics.

146B. ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION M. 2(2-0); I. Prerequisite: Junior standing. Mr. Washburn.

Organization and administration of the physical education department in various types of institutions; intercollegiate, interscholastic and intramural athletics.

148. SCHOOL HYGIENE. 3(3-0); II. Prerequisite: Phys. Ed. 119, Zoöl. 123A and 130. Mr. Washburn.

Hygiene of the building and of the teacher; principles, content, and methods of health education.

FOR GRADUATE CREDIT—MEN

301. PROBLEMS IN PHYSICAL EDUCATION. Credit to be arranged. Prerequisite: Variable, depending upon problem chosen. Mr. Washburn.

FOR UNDERGRADUATE CREDIT—WOMEN

A deposit of \$2.50 is required of each student enrolled in any course designated "Deposit." Only one deposit is required from any student in one semester.

151A, 152A, 153, 154. PHYSICAL EDUCATION W. R(0-3) each; I, II, and SS. Miss Saum, Miss Geyer, Miss Maytum, and Miss Forchemer.

Natural dancing, swimming and corrective gymnastics offered throughout the year; hockey, fieldball, soccer, volleyball, tennis, basketball, archery, baseball, track and field sports given in season. Deposit. A refund of 50 cents, each semester, is made upon return of key.

Recreational swimming hour. There is an open hour in the pool on Tuesdays and Thursdays at 4 o'clock. No instruction is given. This hour is open to those who have registered in the College and paid the necessary fees. Swimming fee, \$1 each semester.

155. FUNDAMENTAL RHYTHMS. 1(0-3); I. Miss Forchemer.

Body rhythm, fundamentals of music, and percussion accompaniment for rhythmic activities. Deposit.

157A. GENERAL TECHNIC I. 2(1-3); I. Miss Saum and Miss Maytum.

Theory and practice of self-testing activities. Deposit.

157B. GENERAL TECHNIC II. 2(1-3); II. Miss Maytum and Miss Geyer.

Theory and practice of recreational sports and golf. Deposit.

157C. GENERAL TECHNIC III. 2(1-3); I. Prerequisite: Phys. Ed. 155. Miss Forchemer.

Theory and practice of child rhythms and folk dancing. Deposit.

157D. GENERAL TECHNIC IV. 2(1-3); II. Prerequisite: Ability to play volleyball, baseball, and tennis. Miss Geyer.

Theory and practice of volleyball, baseball, and tennis. Deposit.

157E. GENERAL TECHNIC V. 2(1-3); I. Prerequisite: Ability to play speedball or hockey. Miss Geyer.

Methods of teaching soccer, hockey, speedball, and fieldball. Deposit.

157F. GENERAL TECHNIC VI. 2(1-3); II. Prerequisite: A knowledge of Danish gymnastics and basketball. Miss Geyer.

Methods of teaching basketball and gymnastics. Deposit.

157G. GENERAL TECHNIC VII. 2(1-3); I. Prerequisite: A semester each of beginning dancing and intermediate dancing. Miss Forchemer.

Methods of teaching modern dance. Deposit.

157H. GENERAL TECHNIC VIII. 2(1-3); II. Prerequisite: A semester each of beginning swimming and intermediate swimming. Miss Saum.

Methods of teaching swimming. Deposit.

158. FIRST-AID. 1(1-0); SS.

The prevention of accidents and the treatment of injuries in an emergency.

160. FOLK DANCING I. 1(0-3); I. Prerequisite: Phys. Ed. 151A to 154. Miss Maytum.

Singing games for gymnasium, classroom, and playground; selected and graded list of simple folk dances. Material adapted for use in elementary schools. Deposit.

161. FOLK DANCING II. 1(0-3); II. Prerequisite: Phys. Ed. 160. Miss Maytum.

A selected list of folk dances and clog dances for use in junior and senior high schools. Deposit.

163. PRINCIPLES OF HEALTH EDUCATION W. 3(3-0); I and SS. Prerequisite: Child Welf. 101. Miss Geyer.

General program of health work; daily health inspection; health examinations; and evaluation of health education material for grades and high schools.

164. CLOG AND CHARACTER DANCING W. 1(0-3); SS.

Principles of teaching clog and character dancing; lectures and practical work; a notebook is required.

165. TUMBLING, PYRAMIDS, AND STUNTS W. 1(0-3); SS.

Instruction in tumbling, pyramids, and stunts in line with the ability of the class. Material presented may be used in grades and high school.

166. INTRAMURAL ATHLETICS FOR WOMEN. 1(1-0); SS.

This course is offered for teachers who direct intramural activities. Types and methods of conducting intramural athletics in high schools will be considered.

167. CAMP CRAFT W. 1(0-3); SS.

Fire building, outdoor cooking, day and overnight trips, and handicraft. Lectures, reports, and practical work.

171. HEALTH EXAMINATIONS W. 2(0-6); I. Prerequisite: Phys. Ed. 184, Zoöl. 123A and 130. Miss Maytum.

Methods of giving health examinations, analysis of normal body mechanics and postural deviations.

172. THERAPEUTICS AND MASSAGE. 2(0-6); II. Prerequisite: Phys. Ed. 171 and 184, and Zoöl. 123A. Miss Maytum.

Postural defects studied and exercises given for correction of each; general and local massage practiced for cases which can be treated by the Department of Physical Education. Deposit.

176. ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION W. 2(2-0); II. Prerequisite: Phys. Ed. 157A to 157G, 182A, and 188. Miss Saum.

Administrative policies of physical education departments: the staff, activities, basic principles. Construction, equipment, and care of plant.

178. FOLK DANCING. 1(0-3); SS. Miss Maytum.

Lectures on origin and values of folk dancing, principles of teaching folk dances, use of folk dances in festivals; practical work consisting of graded folk dances and some practice teaching; a notebook required. Deposit.

182A. PLAYGROUND MANAGEMENT AND GAMES W. 2(1-3); I and SS. Pre-requisite: Phys. Ed. 151A and 152A. Miss Maytum.

Organization and administration of playground activities and equipment; history of the playground movement and the various theories of play. Types of games suitable for different age periods, methods of coaching and managing group contests. Deposit.

184. KINESIOLOGY W. 2(2-0); II. Prerequisite: Zoöl. 123. Miss Geyer.

The mechanics of movement; elemental body movements analyzed and principles involved applied to the teaching of physical education.

187A. TECHNIC OF BASKETBALL, BASEBALL, AND VOLLEYBALL. 1(0-3); SS.

Rules, duties of officials, organization of squads and teams, equipment. Methods of coaching and conducting of tournaments. Deposit.

188. TEACHING AND ADAPTION OF PHYSICAL EDUCATION. 3(3-0); I. Pre-requisite: Phys. Ed. 157A to 157F, 161, and 182A. Miss Maytum.

Problems of physical education and general principles of leadership; adaptation of material to meet needs of various groups and to meet aims and ideals of physical education.

FOR UNDERGRADUATE CREDIT—MEN AND WOMEN

192. HISTORY AND PRINCIPLES OF PHYSICAL EDUCATION. 3(3-0); II. Pre-requisite: Sophomore standing. Miss Forchemer.

A survey of the field of physical education from ancient to modern times; aims and ideals of physical education and its relation to general education.

Physics

Professor HAMILTON
Professor RABURN*
Professor FLOYD
Associate Professor BRACKETT
Associate Professor LYON

Associate Professor CHAPIN
Assistant Professor HARTEL
Assistant Professor MAXWELL
Assistant Professor AVERY
Assistant Professor HUDIBURG

The inventions derived from physics are intimately involved in modern life. The principles of physics underlie the sciences and philosophy, and are widely applied in the curricula in which physics is required. Educated men and women require acquaintance with physics for its cultural value, as well as for its practical uses. The physics courses provide instruction in theory and its laboratory applications. Courses marked SS are available every summer. Many other courses are offered every second or third summer as demand arises.

COURSES IN PHYSICS

FOR UNDERGRADUATE CREDIT

101. HOUSEHOLD PHYSICS. 4(3-3); I, II, and SS. Mr. Hamilton, Mr. Floyd, and Miss Avery.

Lectures and demonstrations in which the laws and principles involved in household appliances are explained and illustrated. Charge, \$3.

110. DESCRIPTIVE PHYSICS. 3(3-0); I, II, and SS. Mr. Brackett, Mr. Hartel, Mr. Lyon, and Mr. Maxwell.

Nonmathematical explanations and experimental demonstrations of selected

* On leave 1935-'36.

principles in physics, with attention directed to the contribution of physics to man's progress; adapted to the needs of students of journalism, commerce, and physical education. Not for credit if following Phys. 135, 140 or 145, 150.

120.¹ PHOTOGRAPHY. 2(1-3); II. Mr. Hamilton and Mr. Hudiburg.

Chemical and physical principles involved in photography; practice in making good negatives and prints. Charge, \$3.

131. GENERAL RADIO. 2(2-0); I. Alternate years. Mr. Lyon.

Elementary, nonmathematical explanation of radio.

133. METEOROLOGY. 3(3-0); I. Mr. Hamilton and Mr. Raburn.

Weather phenomena and principles of forecasting; climatic factors; relation of weather studies to agriculture, general science, and physiography.

134. AGRICULTURAL PHYSICS. 3(3-0); II. Mr. Brackett.

Fundamental principles as related to agriculture. Required of students in agriculture who enter without high-school physics.

135, 140. GENERAL PHYSICS I AND II. 4(3-3) each; I, II, and SS each. Not open for full credit to students who have credit in Phys. 101, or in 145 or 150. Prerequisite: Math. 101. Mr. Floyd, Mr. Brackett, Mr. Lyon, Mr. Chapin, and Mr. Hartel.

I: General principles involved in mechanics, heat, and sound.

II: General principles involved in magnetism, electricity, and light. Charge, \$3 for each course.

145, 150. ENGINEERING PHYSICS I AND II. 5(4-3) each; I, II, and SS each. Prerequisite: For I, Math. 101; for II, Phys. 145. Not open for full credit to students who have credit in Phys. 101, 135, or 140. Mr. Hamilton, Mr. Raburn, Mr. Brackett, Mr. Lyon, Mr. Chapin, Mr. Maxwell, and Mr. Hudiburg.

I: Principles of mechanics, heat, and sound for technical students.

II: Principles of magnetism, electricity, and light for technical students. Charge, \$3 for each course.

155. DESCRIPTIVE ASTRONOMY. 3(3-0); II. Mr. Hartel.

Introductory course. Constellation studies and observations with the five-inch refracting telescope.

158. PHYSICS FOR MUSICIANS I. 5(4-3); I. Prerequisite: Mus. 101 and 102. Mr. Floyd and Mr. Chapin.

Laws and principles necessary to an understanding of the physics of scales, chords, and musical instruments, including the human voice. Charge, \$3.

159. PHYSICS FOR MUSICIANS II. 3(3-0); II. Prerequisite: Phys. 158, 135, or 145. Mr. Floyd and Mr. Chapin.

Lectures and demonstrations dealing with the applications of the material presented in Phys. 158 to scales, chords, and musical instruments, including the human voice.

FOR GRADUATE AND UNDERGRADUATE CREDIT

204. APPARATUS DESIGN, CONSTRUCTION, AND CALIBRATION. 1(0-3) or 2(0-6); I, II, and SS. Prerequisite: Phys. 140 or 150. Mr. Floyd, Mr. Brackett, and Mr. Hudiburg.

A course in the design, construction, and calibration of apparatus, open to students to whom research problems have been assigned in any department of the college, to teachers of science, and to others. Deposit, \$3.

214. ARCHITECTURAL ACOUSTICS. 1(1-0); II. Prerequisite: Phys. 140 or 150. Mr. Floyd and Mr. Chapin.

Prediction of acoustic properties of buildings in advance of construction and the correction of acoustic defects.

1. Because of the loss of equipment by fire, Phys. 120 and 226 will not be offered in 1936-'37.

216. THEORETICAL ASTRONOMY. 3(3-0); I. Prerequisite: Phys. 155 and Math. 101. Mr. Hartel.

Calculations concerning distances and motions of bodies in the solar system and of the stars, and applications of laws of gravitation leading to the study of celestial mechanics.

219. HEAT. 3(3-0); I. Prerequisite: Phys. 140 or 150 and Math. 250. Mr. Floyd, Mr. Raburn, and Mr. Chapin.

A critical study of the general field of heat.

222. HEAT LABORATORY. 1(0-3); I. Phys. 219 is prerequisite or concurrent. Mr. Floyd and Mr. Chapin. Charge, \$3.

226.¹ X-RAYS. 2(2-3); I or II. Prerequisite: Phys. 101, 140, 150, or equivalent. Mr. Hamilton.

Radiology, theory of short waves and of the equipment used in their production in various types of X-ray tubes. Laboratory work involving the use and operation of X-ray equipment, and making exposures and development of X-ray plates and films. Charge, \$3.

229. SPECTROSCOPY. 3(2-3); I. Prerequisite: Phys. 140 or 150 and Chem. 102 or 110. Mr. Hamilton and Mr. Raburn.

Theory and use of the spectrometer for identification of elements and compounds.

Laboratory.—Calibration of prisms and gratings and the measurement of wave lengths. Charge, \$3.

230. LIGHT. 3(3-0); II. Prerequisite: Phys. 140 or 150 and Math. 250. Mr. Hamilton, Mr. Floyd, and Mr. Chapin.

A critical study of the general field of light from the wave point of view.

232. LIGHT LABORATORY. 1(0-3); II. Phys. 230 is prerequisite or concurrent. Mr. Floyd and Mr. Chapin.

234. ELECTRON THEORY. 3(3-0); II. Prerequisite: Phys. 140 or 150. Chem. 102 or 110 and Math. 250. Mr. Raburn, Mr. Brackett, and Mr. Lyon.

An interpretation of matter, radioactivity, and electricity in terms of the electron.

236. SOUND. 3(3-0); I and SS. Prerequisite: Math. 251 and Phys. 135 or 145. Mr. Floyd and Mr. Chapin.

A theoretical course for students doing problem or research work in sound.

245. RADIO MEASUREMENTS. 2(1-3); I or II. Prerequisite: Phys. 140 or 150 and adequate knowledge of radio. Mr. Lyon and Mr. Hudiburg.

Tube characteristics, inductance, capacity, and use of wave meter and decimeter.

247. HISTORY OF PHYSICS. 2(2-0); II. Prerequisite: One course in physics. Mr. Brackett and Mr. Lyon.

Development of physics, and interactions of physical science and philosophy; the influence of modern physics and its effect on contemporary thought.

249. MODERN PHYSICS. 3(3-0); I. Prerequisite: Course in physics and chemistry. It is recommended but not required that Phys. 247 be taken first. Mr. Brackett and Mr. Lyon.

Theories involved in recent advances in physics reviewed critically; each member of the class is assigned to read selections from different texts and articles and to report and discuss his findings.

252. ADVANCED MECHANICS LABORATORY. 1(0-3) or 2(0-6); I. Prerequisite: Phys. 140 or 150. Mr. Hamilton and Mr. Hartel.

1. Because of the loss of equipment by fire, Phys. 120 and 226 will not be offered in 1936-'37.

Surface tension, viscosity, simple harmonic motion, torsion, pendulum, flexure, moment of inertia, and rigidity.

257. **ELECTRICITY AND MAGNETISM.** 2(2-0); I or II. Prerequisite: Phys. 140 or 150 and Math. 251. Mr. Lyon and Mr. Hudiburg.

Electricity and magnetism discussed in terms of calculus.

259. **ELECTRICITY LABORATORY.** 1(0-3) or 2(0-6); I or II. Prerequisite: Phys. 140 or 150. Mr. Hudiburg, Mr. Lyon, and Mr. Maxwell.

Experiments selected to meet the needs of the student.

261. **PROBLEMS IN PHYSICS.** Credit to be arranged; I, II, and SS. Prerequisite: Phys. 140 or 150. Mr. Hamilton, Mr. Floyd, Mr. Brackett, Mr. Lyon, and Mr. Chapin.

COURSES AVAILABLE BY APPOINTMENT

275. **ELECTRIC OSCILLATIONS AND ELECTRIC WAVES.** 3(3-0). Prerequisite: Phys. 140 or 150, Math. 201 and adequate knowledge of radio. Mr. Lyon.

278. **KINETIC THEORY OF GASES.** 3(3-0). Prerequisite: Phys. 219 and Math. 201. Mr. Floyd and Mr. Raburn.

280. **QUANTUM THEORY AND WAVE MECHANICS.** 3(3-0): Prerequisite: Phys. 140 or 150 and Math. 201. Mr. Lyon and Mr. Chapin.

285. **GENERAL THERMODYNAMICS.** 3(3-0). Prerequisite: Phys. 219 and Math. 201. Mr. Floyd and Mr. Chapin.

FOR GRADUATE CREDIT

301. **RESEARCH IN PHYSICS.** Credit to be arranged; I, II, and SS. Prerequisite: Consent of instructor. The staff.

315. **VECTOR MECHANICS.** 3(3-0). Prerequisite: Math. 230. Dr. Babcock.

Public Speaking

Professor HILL
Professor SUMMERS

Associate Professor HEBERER
Associate Professor GIVEN

It is the constant effort of the Department of Public Speaking to relate the training in public speaking to the work of all other departments of the College and to harmonize it with the spirit of the College. With this object in view, students are trained in the presentation and discussion of the valuable ideas acquired in their various fields of study. The method pursued in this training is that of actual practice on the platform before an audience.

The department seeks to place itself at the service of those various organizations of the College which desire or need its assistance, and at the service of the communities of the state. In addition to its regular courses, it aims to make itself available, as far as possible for individual rehearsals. It trains the orators of the College, coaches and directs college plays, and prepares inter-collegiate debating teams. Students are urged to ally themselves with the organizations representing those various activities.

COURSES IN PUBLIC SPEAKING

FOR UNDERGRADUATE CREDIT

101. **ORAL INTERPRETATION.** 2(2-0); I and II. Mr. Given.

Purpose to enable the student to attain some proficiency in the art of oral interpretation; training to develop a natural style; points of theory and routine drill necessary for the development and use of the voice and for proper platform deportment.

102. **DRAMATIC READING.** 2(2-0); II. Prerequisite: Pub. Spk. 101 or by arrangement with head of department. Mr. Given.

A continuation of Pub. Spk. 101, involving more advanced study of the principles of oral interpretation and their application to platform reading.

106, 108. **EXTEMPORE SPEECH I AND II.** 2(2-0) each; I and II each. Prerequisite: For II, Pub. Spk. 106. Dr. Hill, Dr. Summers, Mr. Heberer, and Mr. Given.

I: Preparation and delivery of short addresses based on prepared outlines.

II: Pub. Spk. 106 continued, with special attention to specific application of the principles of that course to particular occasions.

115. **LECTURE RECITAL.** 2(-); I and II. Prerequisite: Pub. Spk. 101 and 102 or by arrangement with head of department. Dr. Hill.

Preparation and delivery by the student of one extended lecture recital, lecture, or preparation and delivery of short recitals; a study of types.

121. **ARGUMENTATION AND DEBATE.** 2(2-0); II. Prerequisite: Pub. Spk. 106 or by arrangement with instructor. Dr. Summers.

Fundamentals of argumentation as applied to debate, with special attention to the making of outlines, collection and organization of material, structure and style of the debate speech, and methods of refutation. Opportunity will be given to participate in a number of classroom debates for criticism.

123, 124. **INTERCOLLEGIATE DEBATE I AND II.** 2(-) each. Prerequisite for I: Pub. Spk. 121; for II, Pub. Spk. 122 and permission of head of department. Dr. Summers.

I: Practical experience in intercollegiate contest debating.

II: Practical experience in intercollegiate debates of the discussion type.

126. **PARLIAMENTARY PROCEDURE.** 1(1-0); II. Dr. Summers.

How to organize and conduct meetings and take part in deliberative assemblies, with stress on three phases: How to conduct a meeting as chairman; how to take part from the floor; and how to organize and work in committee.

130, 135. **DRAMATIC PRODUCTION I AND II.** 2(2-0) each; I, II, and SS each. Prerequisite for II: Pub. Spk. 130 or permission of instructor. Mr. Heberer.

I: The fundamentals of acting, both in theory and practice. Lecture, discussions, and exercises in pantomime, and participation in dramatic productions presented by the Department of Public Speaking, if the ability of the student warrants his appearance in public performances.

II: Lectures and discussion of the fundamentals of stagecraft, including direction, lighting, and scene design. Participation in the production staff of the major performances of the Department of Public Speaking and the preparation of a director's prompt book is required.

138. **PUBLIC SPEAKING FOR TEACHERS.** 1(1-0); II and SS. Dr. Hill and Mr. Heberer.

A course designed to give the teacher training in the art of reading and speaking from the public platform, and a knowledge of the principles of public speaking as they apply to pedagogy.

142. **ORATORICAL CONTEST.** 2(-); II. Prerequisite: Pub. Spk. 101 or permission of head of department.

Practical experience in modern types of intercollegiate and recognized inter-society contest oratory. Limit of credits for contest participation, four hours.

150, 152. **DEVELOPMENT OF THE THEATER I AND II.** 2(2-0) each; I and II, respectively. Mr. Heberer.

I: The theater from its beginning down to the end of the nineteenth century; types of plays, theaters, acting and production, and their relations to the time.

II: The modern theater, its problems, plays, actors, artists, and producers—a study of the American theater principally, and a survey of the contemporary stage.

160. RADIO SPEAKING AND ANNOUNCING. 2(1-3); I and II. Prerequisite: Pub. Spk. 106 and permission of instructor. Dr. Summers.

The essentials of radio speaking voice, preparation of material for broadcast, announcing, and customary studio regulations. Offered by the Department of Public Speaking in conjunction with the staff of the College radio station. The equipment of the College broadcasting station is used for laboratory work. Fee, \$2.

164. THE RADIO PROGRAM. 2(2-0); II. Prerequisite: Pub. Spk. 160 or permission of instructor. Dr. Summers.

Analysis of program types, with particular attention to educational, dramatic, and advertising programs; experience in the planning of programs and in the construction and presentation of original features.

168. RADIO PROGRAM PARTICIPATION. 1(1-1); I and II. Prerequisite: Pub. Spk. 160. May not be taken more than three semesters for credit.

Preparation of programs for presentation over the College radio station, and presentation of the material prepared, for criticism.

FOR GRADUATE AND UNDERGRADUATE CREDIT

201. PHONETICS. 4(3-3); I. Prerequisite: Pub. Spk. 101, 106, and 108. Mr. Given.

The science of speech sounds with special emphasis upon the formation of sounds by the human voice mechanism.

205. PAGEANTRY. 3(3-0); I and II. Prerequisite: Engl. 172 and Pub. Spk. 106. Mr. Heberer.

History of community drama and pageantry; finding and arranging materials; organization of pageant groups; methods of financing; the adaptation of costuming, dancing, music, and setting to pageant production. Students during the course write a complete pageant manuscript, and produce a pageant in reality or in miniature under laboratory conditions.

222. ADVANCED DEBATE. 2(2-0); I. Prerequisite: Pub. Spk. 121 or by arrangement with instructor. Dr. Summers.

Practical application of debate theory in public discussion, with particular attention to the use of various methods of persuasion. Opportunity to participate in classroom discussion debates for criticism.

225. THE PUBLIC PROGRAM. 2(2-0); II and SS. Prerequisite: Pub. Spk. 106 or permission of instructor. Dr. Hill and Mr. Heberer.

The theory and practice of planning, building, and presenting various types of public programs, for the conference, the convention, the public assembly, the educational institute, the after-dinner occasion.

FOR GRADUATE CREDIT

301. RESEARCH IN SPEECH. Credit to be arranged. I, II, and SS. Prerequisite: Consult instructor. Dr. Hill and Mr. Given.

Individual research problems in the general field of speech and in the fields of the drama and pageantry, speech defects, speech psychology, speech types, lecture recital, and lecture.

305. CLINICAL PROBLEMS OF DEFECTIVE SPEAKING. 4(2-6); II. Prerequisite: Pub. Spk. 101, 106, 108, and 201. Dr. Hill and Mr. Given.

A study of corrective methods. Practical problems assigned when defective cases are available.

Zoölogy

Professor NABOURS
 Professor ACKERT
 Professor HARMAN
 Associate Professor HERRICK
 Assistant Professor WIMMER
 Assistant Professor HARBAUGH
 Instructor GOODRICH
 Instructor CAUTHEN

Research Assistant STEBBINS
 Graduate Assistant AYERS
 Graduate Assistant TORSTVEIT
 Graduate Research Assistant ELWELL
 Graduate Research Assistant FREEMAN
 Graduate Research Assistant GREENWOOD
 Graduate Research Assistant REID

The courses have been planned to give a fundamental knowledge of the structures, functions, and relations of animals; information concerning the manner in which animals respond to the conditions of the environment; an appreciation of their human values; and a consideration of the problem of heredity and evolution.

The classrooms and laboratories are equipped with charts, models, microscopes, microtomes, paraffin baths and other apparatus both for elementary and advanced work, and a good natural history museum is available. A specially trained technician is in charge of equipment and available in matters connected with zoölogical technic.

COURSES IN ZOOLOGY

FOR UNDERGRADUATE CREDIT

105. GENERAL ZOÖLOGY. 5(3-6); I, II, and SS. Dr. Nabours, Dr. Ackert, Dr. Herrick, Mr. Harbaugh, and Mr. Goodrich.

Structures, functions, relations, and evolution of types of both invertebrates and vertebrates. Charge, \$3.

123A. HUMAN ANATOMY. 5(3-6); I. Prerequisite: Zoöl. 105 or equivalent. Dr. Wimmer.

Special attention to the human skeleton, musculature, and organs; study of dissectible models, skeletons, and charts. Charge, \$3.

130. PHYSIOLOGY. 4(3-3); I, II, and SS. Prerequisite: Zoöl. 105 or equivalent, and Chem. 110 or equivalent. Dr. Wimmer.

A general study of the functions of the organs and organ systems of the body and their relationship and coördinations. Charge, \$3.

135. EMBRYOLOGY A. 3(2-3); I and SS. Prerequisite: Zoöl. 105 or equivalent. Dr. Harman.

Development of the germ cells, fertilization, origin of the germ layers, initiation and growth of systems of organs, establishment of fetal relations, and nutrition and growth of mammals. The chick and pig are used principally as laboratory materials. Charge, \$3.

FOR GRADUATE AND UNDERGRADUATE CREDIT

203. PROBLEMS IN ZOÖLOGY. Credit to be arranged; I, II, and SS. Dr. Nabours, Dr. Ackert, Dr. Harman, Dr. Herrick, Dr. Wimmer, Mr. Harbaugh, Mr. Goodrich, and Mr. Cauthen.

Individual problems in heredity, parasitology, physiology, cytology, embryology, protozoölogy, ecology, ornithology, endocrinology, and neurology assigned by the instructors.

205. FIELD ZOÖLOGY. 2(1-3) or 3(1-6); I, II, and SS. Prerequisite: Zoöl. 105 or equivalent. Mr. Harbaugh.

A general ecological survey of the animal kingdom with emphasis on local forms; notes on their life histories, distribution, and relationship. Charge, \$3.

206. ZOÖLOGICAL TECHNIC. 1(0-3) or 2(0-6); II. Prerequisite: Zoöl. 105 or equivalent. Mr. Cauthen.

Methods of killing, fixing, imbedding, using microtome, staining, dehy-

drating, and other processes in preparation of microscopical slides, principles of photomicrography. Charge, \$3.

208. PARASITOLOGY. 3(2-3); I. Prerequisite: Zoöl. 105 or equivalent. Dr. Ackert.

A study of the biology, pathology, and prophylaxis of the principal external and internal parasites of the domestic animals. Charge, \$2.

209. PRINCIPLES OF PARASITOLOGY. 2(2-0); I. Prerequisite: Zoöl. 105. Dr. Ackert.

Principles, origin, history, and philosophy of animal parasitism.

212. INVERTEBRATE ZOÖLOGY. 4(2-6); I. Prerequisite: Zoöl. 105 or equivalent. Mr. Goodrich.

An intensive study of the principal invertebrate groups, stressing morphology, physiology, and taxonomy. Charge, \$3.

214. CYTOLOGY. 4(2-6); I. Prerequisite: Zoöl. 105 or equivalent. Dr. Harman.

Methods of preparing material for cytological study, development of the germ cells and theories of structures and functions of the different parts of the cell. Charge, \$3.

216. HEREDITY AND EUGENICS. 2(2-0); I. Prerequisite: Zoöl. 105 or equivalent. Dr. Nabours.

Human inheritance and the interactions of nature and heredity.

217. EVOLUTION AND HEREDITY. 3(2-3) or 4(2-6); II. Prerequisite: Zoöl. 105 or equivalent. Dr. Nabours.

Development of the idea of evolution; evidence and principal theories of the causes of evolution; problems of variation, heredity, and experimental evolution.

218. HUMAN PARASITOLOGY. 3(3-0); II. Prerequisite: Zoöl. 105 or equivalent. Dr. Ackert.

Biological, pathological, and prophylactic phases of the principal parasitic maladies of man.

219A. EMBRYOLOGY B. 4(3-3); I, II, and SS. Prerequisite: Zoöl. 105 or equivalent. Dr. Harman.

The physiology of reproduction, developmental anatomy and physiology of mammals, with special reference to man. Charge, \$3.

220. ADVANCED EMBRYOLOGY. 4(2-6); I or II or SS. Prerequisite: Zoöl. 105 and 219 A or 135, or equivalent. Dr. Harman.

Further study of the main facts of embryology, with special reference to their bearings upon biological theories, and a comparative study of the physiology of reproduction in mammals, including man. Charge, \$3.

225. ZOÖLOGY AND ENTOMOLOGY SEMINAR. 1(1-0); I and II. Prerequisite: Zoöl. 105 or equivalent.

Presentation of original investigations, reviews of papers appearing in current journals, summaries of recent advances in various fields, and discussion of various aspects of the fundamental problems of modern biology.

227. GENETICS SEMINAR. 1(1-0); I and II. Prerequisite: Zoöl. 105 or equivalent. Dr. Nabours, Dr. Warren, Dr. Parker, and Dr. Ibsen.

Study and criticism of genetic experiments in plants and animals, biological and mathematical methods employed, validity of conclusions drawn.

231. ENDOCRINOLOGY. 2(2-0); I and SS. Prerequisite: Zoöl. 105, 130, and 135 or 246; consult instructor. Dr. Herrick.

The biology of the ductless glands, with emphasis on the recent work on the functions and interrelations of the pituitary, adrenal, thyroid, and sex glands in higher vertebrates, including man.

235. **ADVANCED PHYSIOLOGY.** 4(3-3); I and SS. Prerequisite: Chem. 122 and Zoöl. 105. For graduate students, and upperclassmen with the consent of the instructor. Dr. Wimmer.

An intensive study of physiological processes, with special emphasis on those of man. Charge, \$3.

240. **TAXONOMY OF PARASITES.** 2(1-3); II and SS. Prerequisite: Zoöl. 105, and 208 or 218. Dr. Ackert.

Structure of animal parasites; relation of certain animal groups; principles of classification; identification of parasites of man and of domestic animals. Charge, \$2.

244. **ORNITHOLOGY.** 2(1-3) or 3(1-6); II and SS. Prerequisite: Zoöl. 105 or equivalent. Mr. Goodrich.

Recitation, field, and laboratory study of bird adaptations and habits. Charge, \$2.

246. **COMPARATIVE ANATOMY OF VERTEBRATES.** 4(2-6); II. Prerequisite: Zoöl. 105 or equivalent. Dr. Herrick.

A comparative consideration of the skeletal, muscular, nervous, digestive, respiratory, circulatory, and urogenital systems and the sensory organs of vertebrates. Charge, \$3.

250. **COMPARATIVE AND HUMAN NEUROLOGY.** 3(2-3); I. Prerequisite: Zoöl. 105. Dr. Herrick.

Structure, functions, and evolution of the nervous system. Charge, \$2.

FOR GRADUATE CREDIT

301. **RESEARCH IN ZOÖLOGY.** Credit to be arranged; I, II, and SS. Prerequisite: Consult instructor. Dr. Nabours, Dr. Ackert, Dr. Harman, Dr. Herrick, Dr. Wimmer, Mr. Harbaugh, Mr. Goodrich, and Mr. Cauthen.

Individual research problems are assigned in the fields of heredity and experimental evolution, parasitology, cytology, embryology, ecology, physiology, neurology, endocrinology, and protozoölogy.

The Division of Home Economics

MARGARET M. JUSTIN, *Dean*

Modern research in the sciences and present-day development of the industries, arts, and professions have brought a recognition of the value of technical training as a part of the preparation for life's work. An educational plan which combines industrial, technical, and scientific subjects with the older general studies results to the students in the power to express, in everyday activities, the knowledge acquired in the classroom. It increases the capacity for productive work and develops the desire to realize in practical form the theories and principles studied. The aim of a collegiate course in home economics is not merely to increase the student's stock of information, but to stimulate interest in continued study or research, to train in accuracy in detail, to teach discrimination with regard to criteria by which to interpret results, and to cultivate an attitude of economic and social responsibility.

The curricula as outlined below are arranged to meet the needs of the following groups of students: Those who wish to teach, those who wish to enter graduate courses leading to technical or professional work, and those who wish to apply their knowledge to various problems of home life or in fields of industry and social service in which an understanding of home-economics subjects is essential to intelligent action. The training given is as varied as it is broad. It includes a knowledge of the laws of health; an understanding of the sanitary requirements of the home; the study of values, both absolute and relative, of the various articles used in the home; the wise expenditure of money, time, and energy; the scientific principles underlying the selection and preparation of food; the right care of children; and the ability to secure efficient service from others. Instruction is methodical and thorough, and is suited to the circumstances of the students. Life in the residence hall, in which the student participates in the numerous duties pertaining to the routine of living is recognized as a sustaining influence in the mastery of instruction offered in the classroom and laboratory, and is suggested as desirable for all students not participating otherwise in group life. Experience shows that such training teaches contentment, industry, order, and cleanliness, and fosters a woman's independence and feeling of responsibility.

The four four-year curricula in this division lead to the degree of Bachelor of Science in Home Economics, and a five-year curriculum leads to the degree of Bachelor of Science in Home Economics and Nursing.

CURRICULUM IN HOME ECONOMICS

The training in this curriculum is both general and specific. Since scientific training is fundamental in the intelligent and successful administration of the home, strong courses in the sciences are given as a foundation for the special training in home economics. To the end that well-rounded culture may be attained, courses in English, history, economics, and psychology receive due prominence. The time of the student is about equally divided among the purely technical subjects, the fundamental sciences, and studies of general interest. The courses in the related subjects are given in the different departments of the College, while the technical courses are given in the Division of Home Economics. In the junior and senior years opportunity is given for choice of electives, which makes it possible for students to specialize in some chosen line. To this end provision has been made for both options and electives to be chosen in groups combined logically in courses approved by the faculty or by the student's dean. This choice of electives will be made during the first semester of the sophomore year.

This curriculum is recommended for all who desire general training in home economics or who have not yet determined the special fields in which they wish to major. It is the curriculum to be chosen by those who wish to teach home economics or to engage in home demonstration work.

CURRICULUM IN HOME ECONOMICS AND ART

The curriculum offering special training in art is designed to meet the need of students especially interested in this field. The courses give background for professional work in the art field, for teaching of art and for the general culture afforded by art study.

CURRICULUM IN HOME ECONOMICS AND INSTITUTIONAL ECONOMICS AND DIETETICS

This curriculum is designed to meet the needs of the student who wishes to become a dietitian or director of food services in college residence hall, cafeteria, tea room, or hotel. It meets the requirements set by the American Dietetic Association for entrance to accredited hospitals and at the same time provides practical training for the management of the food unit of various types of institutions. As a part of the training received, residence in the college residence hall for one semester will be required. Usually after graduation the student serves an apprenticeship in a recommended establishment to round out her training and experience.

CURRICULUM IN HOME ECONOMICS AND JOURNALISM

This curriculum is planned for those students having special aptitude and interest in writing as a vocation. The broad field of home economics with its intimate bearing on the daily lives of people makes the combination of home economics subject matter with technical training in journalism peculiarly desirable for the woman journalist. The basic courses in home economics supply assurance in their knowledge and approach to the subject and the journalism courses assist in the successful, popular presentation of the facts. In the business world, in foods, textiles, and in household equipment, persons having received such training are in demand for many varied positions.

CURRICULUM IN HOME ECONOMICS AND NURSING

The five-year curriculum, offered in affiliation with an accredited hospital, enables the student wishing to take the degree of Bachelor of Science and the full professional training in nursing to complete this work in five years. The first three years are spent at the College. The fourth and fifth years are spent at the school of nursing of the hospital, where theoretical and practical training in nursing is given.

Before entering upon this curriculum the student must be approved by the dean of the Division of Home Economics and by the superintendent of the school of nursing. Further information may be obtained from the dean of the Division of Home Economics.

The demand for trained women to fill administrative and teaching positions in schools of nursing and to enter the various branches of public-health nursing is greater than the supply and offers a growing and attractive field of work for the college graduate.

OPTIONS FOR STUDENTS IN THE DIVISION OF HOME ECONOMICS

In order that the student's interest and efforts be directed toward the exploration and mastery of some field, instead of being scattered in a casual manner, options of 15 hours, one of which must be filled to meet the requirements for graduation, have been established in the fields of Social Science,

Modern Language, Mathematics, Music, and Physical Education. The student selects courses in one of these five fields with the advice and approval of the dean.

Option I—Social Science: Courses in Economics, Sociology, American History, and American Government are basic courses. In addition, World History or its equivalent is advised. Three hours in English may be included instead of the course in Economics, which is required.

Option II—Modern Language: Courses in German, French, or Spanish may be chosen. If the student has had one year of language in high school she will be held for 12 hours of the same language in advance of the previous work; if two years of language have been taken in high school, the student will be held for nine hours of the same language in advance of that taken. Three of the hours thus released may be used to secure an additional three hours in English.

Option III—Mathematics: Plane Trigonometry, College Algebra, Plane Analytical Geometry, and Calculus I comprise the option. If only one year of algebra has been taken in high school the student must take the five-hour course, College Algebra A.

Option IV—Music: Courses in Piano, Voice, and Orchestral Instruments, two hours each, are taken. Other subjects in the Department of Music are Harmony I and II, School Music III, History and Appreciation of Music, and Conducting I. Ear training and Sight Singing I and II may be chosen instead of Harmony I and II. In addition to the above, the student should be enrolled in Choral Ensemble for two or more semesters.

Option V—Physical Education: The student should choose the required physical education courses in the first two years to serve as background for the option in this field. Prerequisites required for the courses in General Technic included in the option are as follows:

OPTION	PREREQUISITE
General Technic IV	Tennis and Baseball
General Technic V	Speedball or Hockey
General Technic VI	Basketball and Danish Gymnastics

Two of the above courses in General Technic are chosen for the option. Other subjects are Folk Dancing I and II, Principles of Health Education W, Playground Management and Games W, History and Principles of Physical Education, and First Aid.

CERTIFICATE FOR TEACHING HOME ECONOMICS

The student who, in addition to securing the degree of Bachelor of Science, is desirous of qualifying for the three-year Kansas state teacher's certificate, renewable for life and valid in any high school or other public school in the state, should elect certain courses in the Department of Education and other technical courses which are deemed essential for vocational home economics and desirable for all teaching of home economics. These courses are as follows:

EDUCATIONAL SUBJECTS	TECHNICAL SUBJECTS
Educ. Psychology, Educ. 109..... 3(3-0)	Child Guidance I, Child Welf. 201.. 3(1-6)
Prin. of Secondary Educ., Educ. 236, 3(3-0)	Home Mgmt., Hshld. Econ. 116.... 3(1-6)
Vocational Educ., Educ. 241..... 3(3-0)	Adv. Clothing, Clo. and Text. 123.. 4(1-9)
Methods of Teach. Home Economics, Educ. 132..... 3(3-0)	
Teach. Particip. in Home Economics, Educ. 160 3(-)	

HOME ECONOMICS IN THE SUMMER SCHOOL

In addition to the regular instruction in various branches of home economics the division offers numerous courses in this subject in the Summer School. These courses apply directly on the curriculum in home economics, or on graduate credit.

Full information concerning the courses offered is contained in the Summer School number of the Kansas State College *Bulletin*, which may be obtained upon application to the vice-president of the College.

Curriculum in Home Economics

FRESHMAN

FIRST SEMESTER

College Rhetoric I, Engl. 101	*3(3-0)
Gen. Chemistry, Chem. 110.....	5(3-6)
Elementary Design I, Art 101A.....	2(0-6)
Foods I, Food and Nutr. 102.....	5(3-6) <i>or</i>
Gen. Psychology, Educ. 184.....	3(3-0) <i>and</i>
Personal Health, Child Welf. 101....	2(2-0)
H. E. Fr. Lectures, Gen. H. E. 101..	R(1-0)
Phys. Educ. W, Phys. Ed. 151A.....	R(0-3)

Total 15

SECOND SEMESTER

College Rhetoric II, Engl. 104.....	3(3-0)
Gen. Organic Chemistry, Chem. 122,	5(3-6)
Costume Design I, Art 130.....	2(0-6)
Gen. Psychology, Educ. 184.....	3(3-0) <i>and</i>
Personal Health, Child Welf. 101....	2(2-0) <i>or</i>
Foods I, Food and Nutr. 102.....	5(3-6)
H. E. Lectures, ² Gen. H. E. 121....	R
Phys. Educ. W, Phys. Ed. 152A.....	R(0-3)

Total 15

SOPHOMORE

FIRST SEMESTER

English Literature, Engl. 172.....	3(3-0)
General Zoölogy, Zoöl. 105.....	5(3-6)
Elementary Design II, Art 101B.....	2(0-6)
Foods II, Food and Nutr. 107.....	3(1-6) <i>or</i>
Clothing for the Individual, Clo. and Text. 103.....	4(1-9)
Economics I, Econ. 101.....	3(3-0)
H. E. Lectures, Gen. H. E. 121.....	R
Phys. Educ. W, Phys. Ed. 153.....	R(0-3)

Total 16 or 17

SECOND SEMESTER

American Literature, Engl. 175.....	3(3-0)
Embryology B, Zoöl. 219A.....	4(3-3) <i>or</i>
Physiology, Zoöl. 130.....	4(3-3)
Clothing for the Individual, Clo. and Text. 103.....	4(1-9) <i>or</i>
Foods, II. Food and Nutr. 107.....	3(1-6)
Current History, Hist. 126.....	1(1-0)
Household Physics, ³ Physics 101....	4(3-3)
H. E. Lectures, Gen. H. E. 121.....	R
Phys. Educ. W, Phys. Ed. 154.....	R(0-3)

Total 15 or 16

JUNIOR

FIRST SEMESTER

Human Nutr., Food and Nutr. 112..	3(3-0)
The House, Household Econ. 107....	3(2-3)
Interior Decoration I, Art 113.....	2(0-6)
Option ⁴	6(-)
Elective ⁵	2(-)
H. E. Lectures, Gen. H. E. 121.....	R

Total 16

SECOND SEMESTER

Textiles, Clo. and Text. 116.....	3(2-3)
Household Microb., Bact. 121.....	3(1-6)
Option.....	3(-)
Elective.....	6(-)
H. E. Lectures, Gen. H. E. 121.....	R

Total 15

SENIOR

FIRST SEMESTER

Dietetics, Food and Nutr. 202.....	4(3-3)
The Family, Child Welf. 216.....	2(2-0)
Option.....	3(-)
Elective.....	7(-)
H. E. Lectures, Gen. H. E. 121.....	R

Total 16

SECOND SEMESTER

Family Health, Child Welf. 211.....	3(3-0)
Option.....	3(-)
Elective.....	9(-)
H. E. Sr. Lectures, Gen. H. E. 151...	R(1-0)

Total 15

Total requirements for degree of Bachelor of Science in Home Economics, 124 hours.

* The number before the parenthesis indicates the number of hours of credit; the first number within the parentheses indicates the number of hours of recitation each week; the second shows the number of hours to be spent in laboratory work each week; and the third, where there is one, indicates the number of hours of outside work in connection with the laboratory each week.

2. Four meetings each semester.

3. General Physics may be substituted if a student plans to pursue research later.

4. See options listed on preceding page.

5. Electives are chosen with the approval of the dean during the sophomore year. They give opportunity for special training in the various fields. If the teaching of home economics is elected, certain educational and technical subjects are required as given under "Certificate for Teaching Home Economics."

Curriculum in Home Economics with Special Training in Art

FRESHMAN

FIRST SEMESTER

College Rhetoric I, Engl. 101.....	3(3-0)
Gen. Chemistry, Chem. 110.....	5(3-6)
Elementary Design I, Art 101A.....	2(0-6)
Foods I, Food and Nutr. 102.....	5(3-6) <i>or</i>
Gen. Psychology, Educ. 184.....	3(3-0) <i>and</i>
Personal Health, Child Welf. 101....	2(2-0)
H. E. Fr. Lectures, Gen. H. E. 101....	R(1-0)
Phys. Educ. W, Phys. Ed. 151A.....	R(0-3)

Total..... 15

SECOND SEMESTER

College Rhetoric II, Engl. 104.....	3(3-0)
Gen. Org. Chemistry, Chem. 122....	5(3-6)
Costume Design I, Art 130.....	2(0-6)
Gen. Psychology, Educ. 184.....	3(3-0) <i>and</i>
Personal Health, Child Welf. 101....	2(2-0) <i>or</i>
Foods I, Food and Nutr. 102.....	5(3-6)
H. E. Lectures, ¹ Gen. H. E. 121....	R
Phys. Educ. W, Phys. Ed. 152A.....	R(0-3)

Total..... 15

SOPHOMORE

FIRST SEMESTER

English Literature, Engl. 172.....	3(3-0)
General Zoölogy, ² Zoöl. 105.....	5(3-6)
Elementary Design II, Art 101B.....	2(0-6)
Clothing for the Individual, Clo. and Text. 103.....	4(1-9) <i>or</i>
Foods II, Food and Nutr. 107.....	3(1-6)
Ancient Civilizations, Hist. 101.....	3(3-0)
H. E. Lectures, Gen. H. E. 121.....	R
Phys. Educ. W, Phys. Ed. 153.....	R(0-3)

Total..... 16 or 17

SECOND SEMESTER

American Literature, Engl. 175.....	3(3-0)
Intermediate Design, Art 103.....	2(0-6)
Drawing I, Art 120.....	2(0-6)
Foods II, Food and Nutr. 107.....	3(1-6) <i>or</i>
Clothing for the Individual, Clo. and Text. 103.....	4(1-9)
Extem. Speech I, Pub. Spk. 106.....	2(2-0)
Medieval Europe, Hist. 102.....	3(3-0)
H. E. Lectures, Gen. H. E. 121.....	R
Phys. Educ. W, Phys. Ed. 154.....	R(0-3)

Total..... 15 or 16

JUNIOR

FIRST SEMESTER

Human Nutr., Food and Nutr. 112..	3(3-0) <i>or</i>
Applied Nutr., Food and Nutr. 121..	2(2-0)
Advanced Design A, Art 105.....	2(0-6)
Costume Design II, Art 134.....	2(0-6)
Textiles, Clo. and Text. 116.....	3(2-3)
The House, Household Econ. 107....	3(2-3)
Elective ¹	2 or 3 (-)
H. E. Lectures, Gen. H. E. 121.....	R

Total..... 15

SECOND SEMESTER

Costume Design III, Art 138.....	2(0-6)
Interior Decoration I, Art 113.....	2(0-6)
Option ¹	6(-)
Elective.....	6(-)
H. E. Lectures, Gen. H. E. 121.....	R

Total..... 16

SENIOR

FIRST SEMESTER

Child Guidance I, Child Welf. 201...	3(1-6)
Principles of Art I, Art 124.....	3(3-0)
Interior Decoration II, Art 115.....	2(0-6)
Option.....	3(-)
Elective.....	5(-)
H. E. Lectures, Gen. H. E. 121.....	R

Total..... 16

SECOND SEMESTER

Principles of Art II, Art 126.....	3(3-0)
Interior Decoration III, Art 117.....	2(0-6)
Option.....	3(-)
Elective.....	7(-)
H. E. Sr. Lectures, Gen. H. E. 151..	R(1-0)

Total..... 15

Number of hours required for graduation, 124

1. See respective footnote under Curriculum in Home Economics.

2. General Botany I and II may be taken as an option for General Zoölogy and the necessary adjustment made in providing the required number of hours each semester and in lessening the electives one hour if the option is desired.

Curriculum in Home Economics with Special Training in Institutional Management and Dietetics

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
College Rhetoric I, Engl. 101.....	3(3-0)	College Rhetoric II, Engl. 104.....	3(3-0)
Gen. Chemistry, Chem. 110.....	5(3-6)	Gen. Organic Chemistry, Chem. 122,	5(3-6)
Elementary Design I, Art 101A.....	2(0-6)	Costume Design I, Art 130.....	2(0-6)
Foods I, Food and Nutr. 102.....	5(3-6)or	Gen. Psychology, Educ. 184.....	3(3-0)and
Gen. Psychology, Educ. 184.....	3(3-0)and	Personal Health, Child Welf. 101...	2(2-0)or
Personal Health, Child Welf. 101....	2(2-0)	Foods I, Food and Nutr. 102.....	5(3-6)
H. E. Fr. Lectures, Gen. H. E. 101..	R(1-0)	H. E. Lectures, ¹ Gen. H. E. 121.....	R
Phys. Educ. W, Phys. Ed. 151A.....	R(0-3)	Phys. Educ. W, Phys. Ed. 152A.....	R(0-3)
Total.....	15	Total.....	15

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
English Literature, Engl. 172.....	3(3-0)	American Literature, Engl. 175.....	3(3-0)
General Zoölogy, Zoöl. 105.....	5(3-6)	Physiology, Zoöl. 130.....	4(3-3)
Elementary Design II, Art 101B....	2(0-6)	Foods II, Food and Nutr. 107.....	3(1-6)
Clothing for the Individual,		Household Physics, Physics 101.....	4(3-3)or
Clo. and Text. 103.....	4(1-9)or	Clothing for the Individual,	
Household Physics, ¹ Physics 101....	4(3-3)	Clo. and Text. 103.....	4(1-9)
Economics I, Econ. 101.....	3(3-0)	Current History, Hist. 126.....	1(1-0)
H. E. Lectures, Gen. H. E. 121.....	R	H. E. Lectures, Gen. H. E. 121.....	R
Phys. Educ. W, Phys. Ed. 153.....	R(0-3)	Phys. Educ. W, Phys. Ed. 154.....	R(0-3)
Total.....	17	Total.....	15

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
German I and II, ^{2, 3} Mod. Lang. 101		German III, ^{2, 3} Mod. Lang. 111....	3(3-0)or
and 102.....	6(6-0)or	French III, ^{2, 3} Mod. Lang. 161....	3(3-0)
French I and II, ^{2, 3} Mod. Lang. 151		Physiol. Chemistry, Chem. 231.....	5(3-6)
and 152.....	6(6-0)	Inst. Mgmt. I, Inst. Mgmt. 202....	4(1-9)
Human Nutr., Food and Nutr. 112..	3(3-0)	Inst. Food Buying, Inst. Mgmt. 215,	2(2-0)
Meth. of Teaching H. E., Educ. 132..	3(3-0)	Inst. Equipment, Inst. Mgmt. 230...	2(2-0)
Household Micro., Bact. 121.....	3(1-6)	H. E. Lectures, Gen. H. E. 121.....	R
Meats HE, An. Husb. 176.....	1(0-3)		
H. E. Lectures, Gen. H. E. 121.....	R		
Total.....	16	Total.....	16

SENIOR

FIRST SEMESTER		SECOND SEMESTER	
Dietetics, Food and Nutr. 202.....	4(3-3)	Dietetics for Abn. Conditions, Food	
Sociology, Econ. 151.....	3(3-0)	and Nutr. 205.....	2(1-3)
American History I, ³ Hist. 201.....	3(3-0)	Tea Room Mgmt., Inst. Mgmt. 225,	3(0-9)or
Exper. Cookery, Food and Nutr. 255,	2(0-6)	Field Work in Nutr., Food and Nutr.	
Inst. Mgmt. II, Inst. Mgmt. 204....	3(3-0)	215.....	3(2-3)
H. E. Lectures, Gen. H. E. 121.....	R	Food Econ. and Nutr. Seminar, Food	
		and Nutr. 251.....	2(2-0)
		Inst. Accounting, Econ. 284.....	2(2-0)
		Elective ¹	6(-)
		H. E. Sr. Lectures, Gen. H. E. 151...	R(1-0)
Total.....	15	Total.....	15

Number of hours required for graduation, 124

1. See respective footnote under curriculum in Home Economics.

2. Students in the Division of Home Economics take a minimum of nine hours of French or German unless they have had one or more years of either language in high school. In case one year of language has been taken in high school, the student will be held for six hours of the same language in advance of the previous work; if two years of language have been taken in high school, the student will be held for three hours of the same language. The requirement of three or six hours of language not taken because of language study in high school may be met by advanced language courses or by electives chosen with the approval of the dean.

3. An option of equivalent hours in the fields of mathematics, chemistry, physics, botany, zoölogy, economics, or agricultural economics may be taken instead of the course marked, with the advice and approval of the dean.

Curriculum in Home Economics with Special Training in Journalism

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
College Rhetoric I, Engl. 101.....	3(3-0)	College Rhetoric II, Engl. 104.....	3(3-0)
Gen. Chemistry, Chem. 110.....	5(3-6)	Gen. Org. Chemistry, Chem. 122....	5(3-6)
Elementary Design I, Art 101A.....	2(0-6)	Costume Design I, Art 130.....	2(0-6)
Foods I, Food and Nutr. 102.....	5(3-6)or	Gen. Psychology, Educ. 184.....	3(3-0)and
Gen. Psychology, Educ. 184.....	3(3-0)and	Personal Health, Child Welf. 101....	2(2-0)or
Personal Health, Child Welf. 101....	2(2-0)	Foods I, Food and Nutr. 102.....	5(3-6)
H. E. Fr. Lectures, Gen. H. E. 101...	R(1-0)	H. E. Lectures, ¹ Gen. H. E. 121....	R
Phys. Educ. W, Phys. Ed. 151A.....	R(0-3)	Phys. Educ. W, Phys. Ed. 152A.....	R(0-3)
Total.....	15	Total.....	15

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
English Literature, Engl. 172.....	3(3-0)	American Literature, Engl. 175.....	3(3-0)
General Zoölogy, Zoöl. 105.....	5(3-6)	Embryology B, Zoöl. 219A.....	4(3-3)or
Elementary Design II, Art 101B.....	2(0-6)	Physiology, Zoöl. 130.....	4(3-3)
Clothing for the Individual, Clo. and Text. 103.....	4(1-9)or	Foods II, Food and Nutr. 107.....	3(1-6)
Household Physics, ¹ Physics 101....	4(3-3)	Household Physics, Physics 101....	4(3-3)or
El. Journalism, Ind. Jour. 151.....	2(2-0)	Clothing for the Individual, Clo. and Text. 103.....	4(1-9)
H. E. Lectures, Gen. H. E. 121.....	R	Jour. for Women, Ind. Jour. 172....	2(2-0)
Phys. Educ. W, Phys. Ed. 153.....	R(0-3)	H. E. Lectures, Gen. H. E. 121.....	R
Total.....	16	Phys. Educ. W, Phys. Ed. 153.....	R(0-3)
		Total.....	16

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
German I and II, ² Mod. Lang. 101 and 102.....	6(6-0)or	German III, Mod. Lang. 111.....	3(3-0)or
French I and II, ² Mod. Lang. 151 and 152.....	6(6-0)	French III, Mod. Lang. 161.....	3(3-0)
Human Nutr., Food and Nutr. 112..	3(3-0)	The House, Household Econ. 107....	3(2-3)
Ind. Feat. Writing, Ind. Jour. 167..	2(2-0)	Prin. of Adv., Ind. Jour. 178.....	4(4-0)
Elective ¹	5(-)	Current History, Hist. 126.....	1(1-0)
H. E. Lectures, Gen. H. E. 121.....	R	Elective.....	5(-)
Total.....	16	H. E. Lectures, Gen. H. E.....	R
		Total.....	16

SENIOR

FIRST SEMESTER		SECOND SEMESTER	
Dietetics, Food and Nutr. 202.....	4(3-3)	American History I, ² Hist. 201.....	3(3-0)
Child Guidance I, Child Welf. 201....	3(1-6)	The Family, Child Welf. 216.....	2(2-0)
Sociology, Econ. 151.....	3(3-0)	Elective.....	10(-)
Am. Govt., ² Hist. 151, 152, or 153...	3(3-0)	H. E. Sr. Lectures, Gen. H. E. 151...	R(1-0)
Elective.....	2(-)	Total.....	15
H. E. Lectures, Gen. H. E. 121.....	R		
Total.....	15		

Number of hours required for graduation, 124

Curriculum in Home Economics and Nursing

FRESHMAN

FIRST SEMESTER		SECOND SEMESTER	
College Rhetoric I, Engl. 101.....	3(3-0)	College Rhetoric II, Engl. 104.....	3(3-0)
Gen. Chemistry, Chem. 110.....	5(3-6)	Gen. Org. Chemistry, Chem. 122....	5(3-6)
Foods I, Food and Nutr. 102.....	5(3-6)	Gen. Psychology, Educ. 184.....	3(3-0)
Modern Language, Mod. Lang. 101, 151, or 176.....	3(3-0)	Current History, Hist. 126.....	1(1-0)
H. E. Fr. Lectures, Gen. H. E. 101...	R(1-0)	Modern Language, Mod. Lang. 102, 152, or 177.....	3(3-0)
Phys. Educ. W, Phys. Ed. 151A.....	R(0-3)	H. E. Lectures, Gen. H. E. 121.....	R
Total.....	16	Phys. Educ. W, Phys. Ed. 152A.....	R(0-3)
		Total.....	15

1. See respective footnote under curriculum in Home Economics.

2. See respective footnotes under curriculum in Home Economics with Special Training in Institutional Management and Dietetics.

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
English Literature, Engl. 172.....	3(3-0)	American Literature, Engl. 175.....	3(3-0)
General Zoölogy, Zoöl. 105.....	5(3-6)	Physiology, Zoöl. 130.....	4(3-3)
Foods II, Food and Nutr. 107.....	3(1-6)	Gen. Microbiology, Bact. 101.....	3(1-6)
Extm. Speech I, Pub. Spk. 106.....	2(2-0)	Abn. Psychology, Educ. 254.....	3(3-0)
Modern Language, Mod. Lang. 111, 161, or 180.....	3(3-0)	Sociology, Econ. 151.....	3(3-0)
H. E. Lectures, Gen. H. E. 121.....	R	H. E. Lectures, Gen. H. E. 121.....	R
Phys. Educ. W, Phys. Ed. 153.....	R(0-3)	Phys. Educ. W, Phys. Ed. 154.....	R(0-3)
Total.....	16	Total.....	16

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
Embryology B, Zoöl. 219A.....	4(3-3) or	Child Guidance I, Child Welf. 201...	3(1-6)
Human Anatomy, Zoöl. 123A.....	5(3-6)	The Family, Child Welf. 216.....	2(2-0)
Physiol. Chemistry, Chem. 231.....	5(3-6)	Economics I, Econ. 101.....	3(3-0)
Dietetics, Food and Nutr. 202.....	4(3-3)	Elective.....	7(-)
H. E. Lectures, Gen. H. E. 121.....	R	H. E. Sr. Lectures, Gen. H. E. 151...	R(1-0)
Elective.....	1 or 2(-)		
Total.....	15	Total.....	15

SENIOR

(Replaced by two years at affiliated hospital)

(Equivalent to 31 college hours)

Theoretical and practical work during the time includes:

FIRST YEAR
History and Ethics of Nursing.
Hospital Economics.
Nursing Methods.
Medical Nursing.
Communicable Diseases.
Special Therapeutics and Massage.

SECOND YEAR
Surgery and Surgical Nursing and Bandaging.
Obstetrics and Gynecology.
Pediatrics.
Diseases of Eye, Ear, Nose and Throat.
Nervous and Mental Diseases.
Materia Medica.
Problems in Nursing.

Number of hours required for graduation, 124

Groups of Electives for Students in the Division of Home Economics

The groups given below are selected with a view to training students for the vocations in which home economics may be directly applied.

A sufficient number of hours may be chosen from any group to fill the elective requirement, or a smaller number of hours may be taken from a group and, for the remaining elective hours, advanced courses of related subject matter may be chosen.

Music may be added to any group, in a minimum of six hours.

Child Care and Training

Sociology, Econ. 151.....	3(3-0)	History of the Home, Hist. 225.....	3(3-0)
Social Problems, Econ. 257.....	2(2-0)	Psyc. of Childhood and Adolescence, Educ. 250.....	3(3-0)
The Family, Child Welf. 216.....	2(2-0)	Child Guidance II, Child Welf. 206...	3(3-0)
Field Work in Nutr., Food and Nutr. 215.....	3(2-3)	Problems in Child Welfare and Euthen- ics, Child Welf. 221.....	1 to 5
Heredity and Eugenics, Zoöl. 216.....	2(2-0)		
Child Guidance I, Child Welf. 201.....	3(1-6)		
Seminar in Child Welfare and Euthenics, Child Welf. 226.....	1 or 2		

Costuming

Hist. of Costume, Clo. and Text. 225...	2(2-0)	Prin. of Adv., Ind. Jour. 178.....	4(4-0)
Adv. Clothing, Clo. and Text. 123.....	4(1-9)	Prin. of Art I, Art 124.....	3(3-0)
Clothing Econ., Clo. and Text. 201.....	3(3-0)	Medieval Europe, Hist. 102.....	3(3-0)
Sociology, Econ. 151.....	3(3-0)	Problems in Clothing and Textiles, Clo. and Text. 215.....	1 to 3
Costume Design II, Art 134.....	2(0-6)	Modern Europe I, Hist. 115.....	3(3-0)
Intermediate Design, Art 103.....	2(0-6)		

Food and Nutrition

Physical Chemistry I, Chem. 206.....	5(3-6)	College Algebra, Math. 104.....	3(3-0)
Chemical Microscopy, Chem. 245.....	1(0-3)	Plane Trigonometry, Math. 101.....	3(3-0)
Human Physiology, Zoöl. 235.....	4(3-3)	Physiol. Chemistry, Chem. 231.....	5(3-6)
Hygienic Bacteriology, Bact. 206.....	4(2-6)	Biochem. Prep., Chem. 234.....	5(0-15)
Problems in Food Econ. and Nutrition, Food and Nutr. 248.....	1 to 5	Quan. Analysis, Chem. 241.....	5(1-12)
Food Econ. and Nutrition Seminar, Food and Nutr. 251.....	1 to 2	Food Analysis, Chem. 257.....	3(0-9)
Field Work in Nutrition, Food and Nutr. 215.....	3(2-3)	Histology I, Path. 102.....	4(2-6)
Bact. Problems, Bact. 270.....	1 to 4	Human Parasitology, Zoöl. 218.....	3(3-0)
Stat. Meth. Ap. to Educ., Educ. 223....	3(3-0)	Nutr. of Dev., Food and Nutr. 210....	2(2-0)

Home Making

Child Guidance I, Child Welf. 201.....	3(1-6)	Child Guidance II, Child Welf. 206...	3(3-0)
The Family, Child Welf. 216.....	2(2-0)	Principles of Art I, Art 124.....	3(3-0)
Sociology, Econ. 151.....	3(3-0)	Econ. of Household, Hshld. Econ. 265..	2(2-0)
Com. Organization, Econ. 267.....	3(3-0)	Adv. Clothing, Clo. and Text. 123....	4(1-9)
Problems in Foods, Food and Nutr. 310,	1 to 3	Meats HE, An. Husb. 176.....	1(0-3)
Home Mgmt., Household Econ. 116....	3(1-6)	Hist. of Engl. Literature, Engl. 181....	3(3-0)
World Classics I, Engl. 280.....	3(3-0)	Psyc. of Childhood and Adolescence, Educ. 250.....	3(3-0)
Nutr. of Dev., Food and Nutr. 210....	2(2-0)		

Lecturing and Demonstrating

Oral English, Engl. 128.....	3(3-0)	Dramatic Reading, Pub. Spk. 102.....	2(2-0)
Extem. Speech I, Pub. Spk. 106.....	2(2-0)	Extem. Speech II, Pub. Spk. 108.....	2(2-0)
Oral Interp., Pub. Spk. 101.....	2(2-0)	Rural Sociology, Econ. 156.....	3(3-0)
Sociology, Econ. 151.....	3(3-0)	Com. Organization, Econ. 267.....	3(3-0)
Technical Writing, Engl. 207.....	2(2-0)	Ind. Writing, Ind. Jour. 161.....	2(2-0)
Meats H. E., An. Husb. 176.....	1(0-3)		
Ind. Feat. Writing, Ind. Jour. 167....	2(2-0)		

Social and Welfare Work

Child Guidance I, Child Welf. 201....	3(1-6)	Child Guidance II, Child Welf. 206...	3(3-0)
The Family, Child Welf. 216.....	2(2-0)	Labor Problems, Econ. 233.....	2(2-0)
Econ. of the Household, Hshld. Econ. 265.....	2(2-0)	Rural Sociology, Econ. 156.....	3(3-0)
Sociology, Econ. 151.....	3(3-0)	Social Problems, Econ. 257.....	2(2-0)
Latin America, Hist. 208.....	3(3-0)	Modern Europe II, Hist. 223.....	3(3-0)
Com. Organization, Econ. 267.....	3(3-0)	Immi. and Int. Rel., Hist. 228.....	2(2-0)
Field Work in Nutrition, Food and Nutr. 215.....	3(2-3)	Probs. in Child Welfare and Euthenics, Child Welf. 221.....	1 to 5

Textiles

College Algebra, Math. 104.....	3(3-0)	Physical Chemistry I, Chem. 206.....	5(3-6)
General Physics I, Physics 135.....	4(3-3)	Qual. Organ. Analysis, Chem. 224.....	2(0-6)
General Physics II, Physics 140.....	4(3-3)	Probs. in Clo. and Text., Clo. and Text. 215.....	1 to 3
Plane Trigonometry, Math. 101.....	3(3-0)	Human Physiology, Zoöl. 235.....	4(3-3)
Clothing Econ., Clo. and Text. 201....	3(3-0)	Statis. Meth. Ap. to Educ., Educ. 223..	3(3-0)
Experi. Textiles, Clo. and Text. 312....	2 to 5	Bact. Problems, Bact. 270.....	1 to 4
		Adv. Textiles, Clo. and Text. 205.....	3(1-6)

Art

Professor BARFOOT
Associate Professor EVERHARDY
Assistant Professor HARRIS
Assistant Professor MORRIS

Instructor DUTTON
Instructor DARST
Instructor PERLE

There is an increasing realization of the need for a usable knowledge of art. The curriculum in art is designed to develop the general culture afforded by art study, and to provide an art background for homemaking or other professional work. Depending upon the interests of the students they may specialize in design, interior decoration, costume design, or teaching of art.

COURSES IN ART

FOR UNDERGRADUATE CREDIT

101A. ELEMENTARY DESIGN I. 2(0-6)*; I, II, and SS. Miss Barfoot, Miss Everhardy, Miss Harris, Miss Morris, Miss Dutton, Miss Darst, and Miss Perle.

* See footnote, page 278.

A fundamental course in the study of color and form and the application of their principles to daily living. Charge, \$1; deposit, 25 cents.†

101B. ELEMENTARY DESIGN II. 2(0-6); I, II, and SS. Prerequisite: Art 101A. Miss Barfoot, Miss Everhardy, Miss Harris, Miss Morris, Miss Dutton, Miss Darst, and Miss Perle.

A continuation of Art 101A, incorporating a unit in history and appreciation of art. Charge, \$1; deposit, 25 cents.

102. DESIGN IN THE CRAFTS. 2(0-6); I, II,‡ and SS. Prerequisite: Art 101A. Miss Barfoot, Miss Everhardy, Miss Harris, and Miss Dutton.

An application of design principles to various technical processes as batik, block printing, carving, decorative stitchery, leatherwork, modeling, metalwork, tie-dyeing, and weaving. Charge, \$1.50; deposit, 25 cents.

103. INTERMEDIATE DESIGN. 2(0-6); I, II, and SS. Prerequisite: Art 101B. Miss Barfoot, Miss Everhardy, Miss Harris, and Miss Morris.

A continuation of Art 101B, with special emphasis on color possibilities and different design media. Charge, \$1; deposit, 25 cents.

105. ADVANCED DESIGN A. 2(0-6); I and II. Prerequisite: Art 103. Miss Barfoot, Miss Everhardy, and Miss Morris.

A continuation of Art 103, with emphasis on art structure. Charge, \$1; deposit, 25 cents.

107. DESIGN FOR CAMP COUNSELORS. 2(0-6); II. Prerequisite: Art 101B. Miss Barfoot, Miss Everhardy, and Miss Harris.

A course to meet the needs of camp directors and students interested in industrial arts. Theory and practice in design and processes. Charge, \$1; deposit, 25 cents.

110. PUBLIC-SCHOOL ART. 2(1-3); SS. Prerequisite: Art 101B. Miss Barfoot, Miss Everhardy, Miss Harris, Miss Morris, Miss Dutton, and Miss Darst.

Methods and problems in art as aids for the public-school teacher. Charge, \$1; deposit, 25 cents.

111. ART OF THE SOUTHWEST INDIANS. 1(1-0); I, II, and SS. Prerequisite: Art 101A. Miss Everhardy.

Discussions designed to familiarize the student with the origin and development of the decorative arts and ceremonials of the Southwest area from prehistoric times to the present.

113. INTERIOR DECORATION I. 2(0-6); I, II, and SS. Prerequisite: Art 101B. Miss Barfoot, Miss Everhardy, Miss Harris, Miss Morris, Miss Dutton, Miss Darst, and Miss Perle.

A study of the design of the small modern home. Charge, \$1; deposit, 25 cents.

115. INTERIOR DECORATION II. 2(0-6); I. Prerequisite: Art 113. Miss Everhardy, Miss Harris, Miss Morris, Miss Darst, and Miss Perle.

A continuation of Art 113, with attention paid especially to the relationship between the American home and modern culture and art. Charge, \$1; deposit, 25 cents.

117. INTERIOR DECORATION III. 2(0-6); II. Prerequisite: Art 115. Miss Everhardy, Miss Morris, and Miss Harris.

* The number before the parenthesis indicates the number of hours of credit; the first number within the parentheses indicates the number of hours of recitation each week; the second shows the number of hours to be spent in laboratory work each week; and the third, where there is one, indicates the number of hours of outside work in connection with the laboratory required each week. I, II, and SS indicate that the course is given the first semester, second semester, and summer school, respectively.

† Only one key deposit is made in a given semester, regardless of the number of art courses taken.

‡ Effective January, 1936.

A continuation of Art 115, with a study also of the historic background of architecture and furniture. Charge, \$1; deposit, 25 cents.

120. DRAWING I. 2(0-6); I and II. Prerequisite: Art 101B. Miss Barfoot, Miss Harris, Miss Morris, Miss Dutton, and Miss Perle.

Representative sketching, decorative illustrating, and creative designing in which a variety of mediums and technique is employed. Charge, \$2; deposit, 25 cents.

122. DRAWING II. 2(0-6); I and II. Prerequisite: Art 120. Miss Barfoot, Miss Harris, and Miss Morris.

A continuation of Art 120, with study of the figure. Charge, \$2.50; deposit, 25 cents.

124. PRINCIPLES OF ART I. 3(3-0); I. Prerequisite: Art 101B. Miss Barfoot, Miss Harris, and Miss Morris.

A study of color and form with relation to the history of architecture and the minor arts.

126. PRINCIPLES OF ART II. 3(3-0); II. Prerequisite: Art 124. Miss Barfoot, Miss Harris, and Miss Morris.

A continuation of Art 124, with emphasis on the history of painting and sculpture.

127. LETTERING. 2(0-6); I, II, and SS. Prerequisite: Art 101B. Miss Harris, Miss Morris, and Miss Darst.

A course to develop skill in lettering, using historic and creative forms in letters. Charge, \$1; deposit, 25 cents.

130. COSTUME DESIGN I. 2(0-6); I, II, and SS. Prerequisite: Art 101A. Miss Barfoot, Miss Everhardy, Miss Harris, Miss Morris, Miss Dutton, Miss Darst, and Miss Perle.

Line, form, color, texture in costume design and selection as related to the requirements of the individual. This course is a design basis for garment selection and construction. Charge, \$1; deposit, 25 cents.

134. COSTUME DESIGN II. 2(0-6); I and II. Prerequisite: Art 130. Miss Morris, Miss Harris, and Miss Dutton.

A continuation of Art 130, with review and application of the art principles in modern costume in relation to the human figure as the structural basis for costume; the Hambidge Theory of Dynamic Symmetry. Charge, \$1; deposit, 25 cents.

138. COSTUME DESIGN III. 2(0-6); I and II. Prerequisite: Art 134. Miss Harris, Miss Morris, and Miss Dutton.

A continuation of Art 134, particularly in relation to figure difficulties. It is expected that each student complete an entire costume ensemble. Charge, \$1; deposit, 25 cents.

FOR GRADUATE AND UNDERGRADUATE CREDIT

203. ADVANCED DESIGN B. 2(0-6); I, II, and SS. Prerequisite: Art 105, 120, or permission of instructor. Miss Barfoot, Miss Everhardy, and Miss Harris.

A continuation of advanced design, emphasizing creative skill and the development of style. Charge, \$1; deposit, 25 cents.

207. COSTUME DESIGN IV. 2(0-6); I, II, and SS. Prerequisite: Art 138 or permission of the instructor. Miss Harris and Miss Morris.

A course to develop skill and further creative expression in dress design. Charge, \$1; deposit, 25 cents.

220. PROBLEMS IN ELEMENTARY DESIGN. Credit to be arranged; I, II, and SS. Prerequisite: Eight hours in art or permission of instructor. Miss Barfoot, Miss Everhardy, Miss Harris, Miss Morris, Miss Dutton, and Miss Darst.

Problems in design planned with the student to meet her particular needs. Charge, \$1; deposit, 25 cents.

225. PROBLEMS IN INTERMEDIATE DESIGN. Credit to be arranged; I, II, and SS. Prerequisite: Art 220 or permission of instructor. Miss Barfoot, Miss Everhardy, Miss Harris, and Miss Morris.

Problems in advance of Art 220. Charge, \$1; deposit, 25 cents.

230. PROBLEMS IN TEACHING ART. Credit to be arranged; SS. Prerequisite: Art 101B, and Educ. 132 or its equivalent. Miss Barfoot and Miss Everhardy.

For the high-school teacher who is correlating art with home economics subjects, particularly for the teacher of art subjects connected with vocational training; training given through lectures and class discussions of methods, consideration of suitable laboratory equipment, use of illustrative material, and preparation of courses of study. Charge, \$1; deposit, 25 cents.

232. PROBLEMS IN INTERIOR DECORATION. Credit to be arranged; I, II, and SS. Prerequisite: Art 117 or permission of instructor. Miss Harris, Miss Morris, and Miss Darst.

Problems in interior decoration planned with the students to meet their particular needs. Charge, \$1; deposit, 25 cents.

235. PROBLEMS IN COSTUME DESIGN. Credit to be arranged; I, II, and SS. Prerequisite: Eight hours in art or permission of instructor. Miss Harris, Miss Morris, and Miss Dutton.

Problems in costume design planned with the student to meet her particular needs. Charge, \$1; deposit, 25 cents.

FOR GRADUATE CREDIT

301. RESEARCH IN ART. Credit to be arranged; I, II, and SS. Prerequisite: Consult instructors. Miss Barfoot, Miss Everhardy, Miss Harris, Miss Morris, Miss Dutton, and Miss Darst.

A problem in art selected from some of the following fields: (a) Historic research; (b) organization of curriculum; (c) methods of teaching; and (d) theoretical aspects of art education.

305. PROBLEMS IN ADVANCED DESIGN. Credit to be arranged; I, II, and SS. For prerequisite, consult instructors. Miss Barfoot, Miss Everhardy, Miss Morris, Miss Harris, Miss Dutton, and Miss Darst.

Problems in advance of Art 225 designed primarily for the graduate student. Charge, \$1; deposit, 25 cents.

Child Welfare and Euthenics

Professor FORD
Associate Professor TRIPLETT
Instructor KELL

Instructor WILLIAMS
Instructor FISHER

The aim of this department is to study with students the problems of physical and mental health, child guidance, and human relationships in such a way that students and teachers may develop a deeper faith that life can be finer than it is, a growing vision of this finer life, an understanding of how it may be brought about, and an earnest determination to work toward its realization.

COURSES IN CHILD WELFARE AND EUTHENICS

FOR UNDERGRADUATE CREDIT

101. PERSONAL HEALTH. 2(2-0); I, II. Dr. Triplett and Miss Williams. The maintaining and improving of physical and mental health.

FOR GRADUATE AND UNDERGRADUATE CREDIT

201. CHILD GUIDANCE I. 3(1-6); I, II, and SS. Prerequisite: Junior standing. Dr. Ford, Dr. Triplett, Mrs. Kell, and Mrs. Fisher.

Guiding personality and character development of young children.

Laboratory.—Directed observations and assisting in the nursery school. Charge, \$1.

206. CHILD GUIDANCE II. 3(3-0); II. Prerequisite: Child Welf. 201. Dr. Ford.

Guiding personality and character development of older children.

211. FAMILY HEALTH. 3(3-0); I, II. Prerequisite: Junior standing. Dr. Ford and Miss Williams.

Factors conducive to family and community health; physical development and care of the child; simple first-aid and home-nursing procedures; how family members may work together toward healthy personalities.

216. THE FAMILY. 2(2-0); I, II, and SS. Prerequisite: Educ. 184 and junior standing. Dr. Ford.

Factors that play a part in successful family life today.

221. PROBLEMS IN CHILD WELFARE AND EUTHENICS. Credit to be arranged; I, II, and SS. Prerequisite: Child Welf. 201; consult instructors. Dr. Ford, Dr. Triplett, and Mrs. Kell.

Individual investigation of a special problem in some phase of child welfare or euthenics; conferences and reports at appointed hours.

226. SEMINAR IN CHILD WELFARE AND EUTHENICS. 1 or 2 hours; I and II. Prerequisite: Child Welf. 201. Dr. Ford.

Discussions and reports dealing with important publications and activities in the field of child welfare and euthenics.

FOR GRADUATE CREDIT

301. RESEARCH IN CHILD WELFARE AND EUTHENICS. Credit to be arranged; I and II. Prerequisite: Consult instructors. Dr. Ford and Dr. Triplett.

Opportunity for original research in the field of child welfare and euthenics which may form the basis of work for a master's thesis.

Clothing and Textiles

Professor LATZKE
Associate Professor COWLES
Associate Professor HESS

Associate Professor QUINLAN
Assistant Professor BRUNER
Research Assistant CHURCH

Clothing is an important factor in both the physiological and psychological well-being of the individual and of the family. The wise selection of clothing requires a high degree of skill in the application of hygienic, economic, and aesthetic principles. The preservation of clothing is based upon a practical knowledge of chemistry, entomology, and bacteriology. In the construction of garments, art and technic are presented in their proper relations in order to train students in fundamental principles and enable them to utilize these principles in their everyday practices. In this department advanced courses are offered for students who wish to prepare for vocational, professional, and business positions such as college teachers, research workers, textile chemists, clothing consultants, purchasing agents for institutions and department stores, and extension workers.

COURSES IN CLOTHING AND TEXTILES

FOR UNDERGRADUATE CREDIT

103. CLOTHING FOR THE INDIVIDUAL. 4(1-9); I, II, and SS. Prerequisite: Art 130. Miss Latzke, Miss Cowles, Mrs. Hess, and Miss Bruner.

The factors that influence the individual in the selection and purchase of clothing; self-analysis as a basis of clothing choices; knowledge of clothing fabrics; the use of the clothing budget; knowledge of buying procedures; the care of clothing.

Laboratory.—Design and construction of costumes that express individuality through the correct use of line and color. Charge, \$2.50; deposit, 25 cents.

110. CLOTHING SELECTION. 2(2-0); I and II. Miss Latzke and Miss Quinlan.

A study of the fundamentals of clothing selection, with self-analysis as a basis; economic considerations for being suitably dressed. Designed for students not majoring in home economics, or those not planning to take Clo. and Text. 103.

116. TEXTILES. 3(2-3); I, II, and SS. Prerequisite: Chem. 122; Phys. 101 recommended. Mrs. Hess and Miss Bruner.

Fabrics and the factors that influence their wearing qualities and appearance; practical application of this knowledge to the everyday problems of the consumer.

Laboratory.—Becoming acquainted with fabrics and their uses; identification of fibers microscopically and chemically; tests of the effect on fabrics of various methods of cleaning. Charge, \$2; deposit, 25 cents.

123. ADVANCED CLOTHING. 4(1-9); I, II, and SS. Prerequisite: Clo. and Text. 103. Open to juniors and seniors. Miss Quinlan and Miss Cowles.

Development of understanding and appreciation of the use of line, form, texture and color by draping garments to express the characteristics of the individual. A study of the social significance of fashion as explained through its origin and function.

Laboratory.—Designs are worked out first in cotton and then in silk or wool. Charge, \$3; deposit, 25 cents.

FOR GRADUATE AND UNDERGRADUATE CREDIT

201. CLOTHING ECONOMICS. 3(3-0); I and SS. Prerequisite: Clo. and Text. 103 and 116 and Econ. 101. Miss Latzke.

The organization of textile industries and markets; the consumer problem in relation to existing market conditions from an economic and psychological viewpoint; standardization of clothing and textiles.

205. ADVANCED TEXTILES. 3(1-6); I and SS. Prerequisite: Clo. and Text. 116. Mrs. Hess and Miss Bruner.

Consumer problems in textiles; approved methods and techniques suited to routine testing and research; equipment and apparatus used; sources of information concerning textile testing laboratories and persons connected with textile research.

Laboratory.—Charge, \$3; deposit 25 cents.

215. PROBLEMS IN CLOTHING AND TEXTILES. Credit to be arranged; I, II, and SS. Prerequisite: Senior or graduate standing; consult instructors. Miss Latzke, Miss Cowles, Mrs. Hess, Miss Quinlan and Miss Bruner.

An assigned problem in some phase of clothing or textiles. Charge, to be arranged with the instructor.

225. HISTORY OF COSTUME. 2(2-0); I and II. Prerequisite: Hist. 101 or equivalent. Miss Cowles.

History of ancient and modern costume in its various phases of development and in relation to the life of the people and the growth of civilization.

FOR GRADUATE CREDIT

301. RESEARCH IN CLOTHING AND TEXTILES. Credit to be arranged; I, II, and SS. Prerequisite: Graduate standing; consult instructors. Miss Latzke, Mrs. Hess, and Miss Bruner.

A research problem considering the hygienic or economic aspects of textiles, or an investigation of clothing as it is related to art, psychology, and other sciences may be chosen as the problem, depending on the courses elected. Charge, to be arranged with the instructor.

304. CLOTHING AND TEXTILES SEMINAR. 1(1-0); II. Prerequisite: Graduate standing. Miss Latzke, Mrs. Hess, Miss Quinlan, and Miss Bruner.

A study of the field of clothing and textiles through assigned readings and discussions; special attention is given recent literature bearing on progress in the field.

312. EXPERIMENTAL TEXTILES. 2 to 5 hours; I, II, and SS. Prerequisite: Clo. and Text. 205. Mrs. Hess and Miss Bruner.

The work covered in this course consists primarily of experimental work with textiles. Fee arranged by instructor.

Food Economics and Nutrition

Professor PITTMAN
Professor KRAMER
Professor AHLBORN
Assistant Professor TUCKER
Assistant Professor VAIL

Instructor McMILLAN
Instructor BROWNING
Technician KUNERTH
Grad. Research Asst. _____
Grad. Research Asst. _____

Food is an important factor in the health of the individual and the family. Selection of wholesome and economical food requires the application of chemistry, physiology, sanitary science, and economics. Preparation and preservation of food involve processes dependent upon physics, chemistry, and bacteriology. In the modern science of nutrition and dietetics the student learns the chemical and physiological principles involved in the nutrition of the body and applies these to planning the food for the individual and the group.

Advanced courses in this department provide training for teachers of foods, dietitians, demonstrators, extension workers, and similar professions.

COURSES IN FOOD ECONOMICS AND NUTRITION

FOR UNDERGRADUATE CREDIT

102. FOODS I. 5(3-6); I and II. Miss Tucker, Miss Vail, Miss McMillan, and Miss Browning.

A study of fundamentals of elementary nutrition and food economics. Practice in food preparation and meal service. Charge, \$5; deposit, 25 cents.

107. FOODS II. 3(1-6); I and II. Prerequisite: Chem. 122 and Food and Nutr. 102 or equivalent. Miss Tucker, Miss Vail, Miss McMillan, and Miss Browning.

Practice in testing, formulating, and stating food principles as applied to food preparation. Charge, \$4; deposit, 25 cents.

112. HUMAN NUTRITION. 3(3-0); I and II. Prerequisite: Food and Nutr. 107 and Zoöl. 219A or 130.† Dr. Kramer.

The chemistry of food and nutrition, with emphasis upon the food nutrients, digestion, and metabolism.

† Students from other divisions desiring to elect Human Nutrition may substitute an equivalent number of hours in other sciences for Embryology or Physiology, and Foods II.

121. APPLIED NUTRITION. 2(2-0); I and II. Prerequisite: Chem. 122 or permission of instructor. Dr. Pittman and Miss Ahlborn.

Practical nutrition for the college student, including food requirements, food selection and food habits. Designed for men and women students not majoring in home economics.

176. MEATS HE. 1(0-3); I and II.

See Department of Animal Husbandry, Division of Agriculture, An. Husb. 176.

FOR GRADUATE AND UNDERGRADUATE CREDIT

202. DIETETICS. 4(3-3); I, II, and SS. Prerequisite: Food and Nutr. 112. Dr. Pittman, Miss Ahlborn, and Miss Tucker.

Consideration of food requirements in health throughout infancy, childhood, adolescence, adult life, and old age. Practical application of principles of human nutrition and emphasis on adequate diets at different cost levels.

Laboratory.—Studies of weight, measure, and cost of some common food materials; standard portions of foods; charted recipes; weighed portions of proteins and minerals; vitamin exhibits; shares. Ideal diets for infants, children, and adults, individually and in groups. Charge, \$4.50; deposit, 25 cents.

205. DIETETICS FOR ABNORMAL CONDITIONS. 2(1-3); I and II. Prerequisite: Food and Nutr. 202. Dr. Kramer.

Varying dietetic requirements in different pathological conditions, such as diabetes, nephritis, gout, gastric ulcer, etc. (For students who expect to qualify as professional dietitians.)

Laboratory.—Demonstrations of special foods used in such conditions, and computation of dietaries. Charge, \$1; deposit, 25 cents.

210. NUTRITION OF DEVELOPMENT. 2(2-0); II. Prerequisite: Food and Nutr. 202. Dr. Pittman.

Detailed study of nutrition of the mother in pregnancy and lactation. Food requirements of the fetus, infant, and pre-school child, and the school child through the period of adolescence.

215. FIELD WORK IN NUTRITION. 3(2-3); I and II. Prerequisite: Food and Nutr. 202. Miss Tucker and Miss Browning.

Survey of field of child nutrition, study of malnutrition, field work with school children, special work with malnourished and normal individuals. Charge to be arranged with instructor.

245. PROBLEMS IN FOODS. Credit to be arranged; I, II, and SS. Prerequisite: Consult instructors. Dr. Pittman, Miss Vail, Miss McMillan, and Miss Browning.

Food problems are assigned for individual study. Charge to be arranged with instructor.

248. PROBLEMS IN FOOD ECONOMICS AND NUTRITION. Credit to be arranged; I, II, and SS. Prerequisite: Senior or graduate standing. Dr. Pittman, Dr. Kramer, Miss Ahlborn, and Miss Tucker.

Problems dealing with the nutritive value of foods; feeding experiments; dietary studies, or practice in the methods commonly used in the simpler experiments in nutrition, are assigned for individual study. Charge to be arranged with instructor.

251. FOOD ECONOMICS AND NUTRITION SEMINAR. 1 to 2 hours a semester; maximum, 4 credits; I, II, and SS. Prerequisite: Food and Nutr. 112. Dr. Kramer.

Assigned reading and discussion of topics in the fields of food economics and nutrition, with special attention to recent literature bearing on problems in dietetics in both normal and pathological conditions, on growth, and on normal and subnormal nutrition in infancy and childhood.

255. EXPERIMENTAL COOKERY. 2 hours; I and II. Prerequisite or parallel: Food and Nutr. 202. Miss Vail, Miss McMillan, and Miss Browning.

Presentation of processes of food preparation from the experimental standpoint. Charge, \$1 to \$3.

FOR GRADUATE CREDIT

305. RESEARCH IN FOOD ECONOMICS AND NUTRITION. Credit to be arranged; I, II, and SS. Prerequisite: Consult instructors. Dr. Pittman, Dr. Kramer, Miss Ahlborn, Miss Tucker, Miss Vail, Miss McMillan, and Miss Browning.

Individual research problems which may form the basis for the thesis submitted for the master's degree. Charge to be arranged with instructor.

306. ANIMAL NUTRITION SEMINAR. 1(1-0) per year; I and II. Prerequisite: Senior or graduate standing. Dr. Pittman and Dr. Kramer.

Reports of experiments in nutrition. Methods employed and validity of conclusions discussed.

General Home Economics

Dean JUSTIN
Assistant Dean AHLBORN

COURSES IN GENERAL HOME ECONOMICS

FOR UNDERGRADUATE CREDIT

101. HOME ECONOMICS FRESHMAN LECTURES. R(1-0); I. Dean Justin, Assistant Dean Ahlborn, department heads of the division, and professors of subject matter departments.

The purpose of the seminar is: (1) The orientation of the student to her college environment. (2) The development of the ability to study. (3) Guidance in choice of one of the several fields of home economics for her profession. Charge, 75 cents.

121. HOME ECONOMICS LECTURES. R; (Four meetings each semester).

Discussion of general questions in the field of Home Economics and of Home Economics student affairs. Programs presented by speakers from outside, faculty members, and students. Insofar as possible the course serves as an introduction to the professional aspect of Home Economics. The Home Economics Club is used as an organ for expression and experience. Charge, 75 cents.

151. HOME ECONOMICS SENIOR LECTURES. R(1-0); II. Dean Justin.

The opportunities and responsibilities of the home economist are presented, and means for professional growth and personal advancement of the trained woman are stressed. Charge, 75 cents.

COURSES IN HOME ECONOMICS EDUCATION*

Professor RUST

Assistant Professor BAXTER

FOR UNDERGRADUATE CREDIT

132. METHODS OF TEACHING HOME ECONOMICS. 3(3-0); I, II, and SS. Mrs. Rust and Mrs. Baxter.

See Department of Education, Division of General Science.

160. TEACHING PARTICIPATION IN HOME ECONOMICS. 3(-); I, II, and SS. By appointment. Mrs. Rust and Mrs. Baxter.

See Department of Education, Division of General Science.

* The six courses named here are given by the Department of Education for the Division of Home Economics. Professor Rust and Assistant Professor Baxter are appointed coöperatively by that department and the Division of Home Economics.

FOR GRADUATE AND UNDERGRADUATE CREDIT

232. **TEACHING SUBJECTS RELATED TO HOME ECONOMICS.** 1 to 3 hours; I, II, and SS. Prerequisite: Educ. 184 and 132. Mrs. Rust.
See Department of Education, Division of General Science.

FOR GRADUATE CREDIT

313. **RESEARCH IN ORGANIZATION AND PRESENTATION OF HOME ECONOMICS.** Credit to be arranged; I, II, and SS. Prerequisite: Graduate standing and confirmation of Division of Home Economics. Dean Justin and Mrs. Rust.
See Department of Education, Division of General Science.

314. **PROBLEMS IN ORGANIZATION AND PRESENTATION OF HOME ECONOMICS.** Credit to be arranged; I, II, and SS. Prerequisite: Senior or graduate standing. Dean Justin and Mrs. Rust.

See Department of Education, Division of General Science.

315. **SUPERVISION IN HOME ECONOMICS.** 2 hours; I, II, and SS. Prerequisite: Educ. 132 and experience in teaching home economics. Mrs. Rust.
See Department of Education, Division of General Science.

Household Economics

Dean JUSTIN
Associate Professor DOMAN
Assistant Professor GUNSELMAN

Assistant Professor ————
Instructor AGAN

The modern home is greatly influenced by social and economic conditions in the world outside. An understanding of the interaction of these forces on the home is fundamental to a grasp of its problems and its successful management. These forces influence the amount of the money income and the available information that will make its wise expenditure possible, as well as the kind and amount of home production carried on. Through the courses in this department an opportunity is offered for studying the effect of social and economic forces on the home and its management. The phases presented for study include housing, household administration, household equipment, and economic problems of the household. Graduate students preparing to become directors of home management houses, specialists in home management, teachers, homemakers, or research workers in this field find suitable courses in this department.

COURSES IN HOUSEHOLD ECONOMICS

FOR UNDERGRADUATE CREDIT

107. **THE HOUSE.** 3(2-3); I, II, and SS. Prerequisite: Food and Nutr. 102; Phys. 101 recommended. Dr. Doman and Miss Agan.

Criteria for judging the adequacy of certain types of dwellings in meeting the housing needs of the family; management of time, effort, and income—important factors in providing and maintaining family life in the home; choice of equipment.

Laboratory.—Selection, care, and operation of certain equipment for the home. Charge, \$1.

116. **HOME MANAGEMENT.** 3(1-6); I, II, and SS. Prerequisite: Senior standing. Dr. Doman and Miss Agan.

Offers opportunity and help to the student in the application of the knowledge received in the basic home economics courses to the management of a home; and helps to develop an understanding of the essential attitudes that bring satisfaction in group living and family life.

Laboratory.—Residence is required in the management houses for a period of six weeks.

FOR GRADUATE AND UNDERGRADUATE CREDIT

203. HOUSEHOLD EQUIPMENT I.* 2(0-6); I, II, and SS. Prerequisite: Phys. 101.

Practical studies which involve care, construction, operation, and repair of various pieces of equipment used in the home. Charge, \$2.50.

206. HOUSEHOLD EQUIPMENT II.* 3(1-6); II. Prerequisite: Hshld. Econ. 203.

Selection, care, construction, operation, and testing of mechanical, electrical, and heat equipment from the standpoint of the physical and chemical principles involved. Charge, \$2.50.

238. PROBLEMS IN HOUSEHOLD EQUIPMENT.* Credit to be arranged; I, II, and SS. Prerequisite: Hshld. Econ. 203.

Special problems in selection, care, operation, and testing of household equipment. Charge, \$1.

243. PROBLEMS IN HOUSEHOLD ECONOMICS. Credit to be arranged; I, II, and SS. Prerequisite: Consult instructors. Dr. Justin, Dr. Doman, Miss Gunselman, and Miss Agan.

Special problems for individual investigation in standards of living and family expenditures; housing, household equipment, organization and methods of housework; use of home-makers' leisure time or social aspects of the household and of the family.

265. ECONOMICS OF THE HOUSEHOLD. 2(2-0); I, II, and SS. Prerequisite: Econ. 101. Miss Gunselman.

Problems of household production, problems incident to earning and spending the money income, factors determining the purchasing power of the "dollar of the home," and problems arising in the disbursement of the money income.

270. CONSUMER BUYING. 2(2-0); II† and SS. Prerequisite: Econ. 101 and junior standing. Dr. Doman, Miss Gunselman, and others from related subject matter fields.

Consideration is given to the problems faced by the consumer in the present market, aids toward intelligent buying of commodities used by the consumer, and the need for protective legislation.

FOR GRADUATE CREDIT

301. RESEARCH IN HOUSEHOLD ECONOMICS. Credit to be arranged; I, II, and SS. Prerequisite: Consult instructors. Dr. Justin, Dr. Doman, and Miss Gunselman.

An individual research problem in the field of household economics, housing, or equipment. This may form the basis for a part or all of a master's thesis.

Institutional Management

Professor WEST
Assistant Professor WOOD
Instructor JAMES
Instructor FOWLER

Assistant QUIST
Graduate Assistant FULKS
Graduate Assistant GATTEN
Graduate Assistant HAROLD

The successful administration of an institution involves the wise expenditure of time, energy, and money, in order that requirements of food and shelter may be satisfactorily furnished to large groups. Courses in this department provide training for cafeteria, tea-room, lunch-room managers, dietitians, and directors of residence halls.

* Not offered in 1935-1936.

† Effective January, 1936.

COURSES IN INSTITUTIONAL MANAGEMENT

FOR GRADUATE AND UNDERGRADUATE CREDIT

202. INSTITUTIONAL MANAGEMENT I. 4(1-9); I, II, and SS. Prerequisite: Food and Nutr. 107. Miss James.

Food problems of institutions, including preparation and serving of food in large quantities, menu planning, and food costs.

Laboratory.—Carried on in College cafeteria where food is prepared and served in large quantities. Charge, \$2.50.

204. INSTITUTIONAL MANAGEMENT II. 3(3-0); I, II, and SS.* Prerequisite: Inst. Mgmt. 202. Graduate students may parallel Inst. Mgmt. 202 and 204. Mrs. West.

A study of the organization and administration problems of the food and house department of certain institutions such as the school lunch, residence halls, hospitals, cafeteria; floor plans of institutional kitchens and dining rooms.

210. PROBLEMS IN INSTITUTIONAL MANAGEMENT. Credit to be arranged; I, II, and SS. Prerequisite or parallel: Inst. Mgmt. 204; consult instructor. Mrs. West.

Individual investigation of problems in the field of institutional management. Conferences are held and reports made at appointed hours.

215. INSTITUTIONAL FOOD BUYING. 2(2-0); I and II. Prerequisite: Inst. Mgmt. 202. Mrs. West.

Study of producing areas, the distribution of food products, and methods of purchasing food in large quantities.

218. SCHOOL LUNCH-ROOM MANAGEMENT. 2(1-3); II and SS. Prerequisite: Food and Nutr. 107. Mrs. West.

Organization, administration, equipment, food buying, food costs, and menu planning for the school lunch; banquet service for secondary schools.

225. TEA-ROOM MANAGEMENT. 3(0-9); I, II, and SS. Prerequisites or parallel: Inst. Mgmt. 204 and 215. Miss James.

Practical experience in the planning, preparation, and serving of food to the public. The College Tea Room serves as a laboratory for this course. Charge, \$2.50.

230. INSTITUTIONAL EQUIPMENT. 2(2-0); I and II. Prerequisite: Food and Nutr. 107. Mrs. West.

A study of the different types of equipment for the house and food departments of institutions, including selection, arrangement, installation, and care.

235. INSTITUTIONAL HOUSEKEEPING. 2(1-3); II. Prerequisite or parallel: Inst. Mgmt. 204. Miss Wood.

Problems involved in the management and care of the house departments of various types of institutions. Charge, \$1.

FOR GRADUATE CREDIT

301. RESEARCH IN INSTITUTIONAL MANAGEMENT. Credit to be arranged; I, II, and SS. Prerequisites: Consult instructor. Mrs. West.

* Effective SS, 1936.

Bureau of Research in Home Economics

The Bureau of Research in Home Economics conducts investigations in the scientific, economic, and social problems of the home. The purpose of this research is to discover new facts and new methods of the application of scientific knowledge bearing upon the welfare of the members of the family and the conditions under which they live.

The fields of research included in the bureau are: Child welfare, clothing and textiles, food economics, household administration, institutional management, human nutrition, dietetics, and public health.

The laboratories of the Division of Home Economics include equipment suitable for work on certain of the problems. Opportunities for surveys and investigations of conditions in the state are found through the coöperation of various educational and social agencies.

The results of all investigations are published from time to time and are available on request to all citizens of the state.

The personnel of the bureau staff includes members of the teaching faculty in home economics. Several of the departments in other divisions of the College advise or collaborate with officers of the bureau on problems of related interest.

Among the investigations in progress are the following:

- *A study of calcium and phosphorus in various forms of milk and cheese.
- *Effect upon the animal body of varying the amount of vitamin in the diet.

- *Vitamin content of foods relating to human nutrition:

- a. Fruits.
- b. Vegetables.
- c. Cereals.
- d. Eggs.

Utilization by human subjects of the nitrogen and phosphorus of different cuts of meat.

Factors affecting the quality of cakes.

- *Composition of cooked meats.

Dietary studies—group, individual.

- *A study of the coefficient of protection of clothing and household fabrics.

- *A study of the silk fiber, weighted and unweighted, as affected by:

- a. Light.
- b. Light and moisture.
- c. Light and perspiration.

Coefficient of absorption of textile materials.

Comparative study of certain body measurements:

- a. With those of selected commercial patterns.
- b. With those of certain commercial made garments.

Methods in parent education.

Behavior records for nursery school.

The difference in individuals in maintaining physical equilibrium under varying conditions.

Studies of factors affecting the expenditures for family living.

* The investigations starred are being supported in part by funds from the Agricultural Experiment Station.

The Division of Veterinary Medicine

RALPH R. DYKSTRA, *Dean*

The College has one of the best-equipped schools of veterinary medicine in the West. In addition to giving the student the best possible technical training in veterinary medicine, the course is designed to give the broad culture necessary for men who are to take their places in public affairs. Professional men, such as veterinarians, are placed in a more or less public relation to the communities they serve. They must have a broad groundwork in culture and ethical training, which will win them the confidence and respect of their communities. Success is measured in something more than dollars and cents, and the man whose view of life is no broader than his profession adds but little to the world and its happiness. The training given by the College in veterinary science seeks to emphasize the value of the man as a man, as much as his value as a specialist.

The Division of Veterinary Medicine gives most of the technical work in the curriculum in veterinary medicine, a general description of which follows. The division is housed in the veterinary buildings, which were erected at a cost of more than \$200,000, and are thoroughly equipped throughout. Veterinary Hall contains modern classrooms, and its laboratories possess the necessary appliances for illustrating the several subjects offered. The mode of instruction is more specifically detailed in succeeding sections.

The policy adhered to in the instruction in all the departments is that the science of veterinary medicine is the foundation, and the art merely supplementary. A thorough drill is given in the foundation studies, and later in the curriculum practical application of these is made in actual field work. The result is a thoroughly scientific veterinary education.

In the arrangement of the schedule of the veterinary curriculum it is implied that the courses should be followed in regular sequence, as each year's work depends upon the work done the previous year. Certain courses, however, may be selected as electives if a student has the necessary prerequisites. These courses are mentioned in the list of extracurricular electives.

CURRICULUM IN VETERINARY MEDICINE

Veterinary medicine has made remarkable advances within recent years, and is taking its place alongside human medicine as a science. In truth, medical science and veterinary science are but specialized branches of the same science, and must be developed together. The modern veterinarian takes his place in the community as a professional man of education and culture. With the general improvement of the livestock on the farms, and with the advance of livestock in value, there is constant increase in the demand for skilled physicians to care for them.

The veterinarian, while primarily trained to conserve the health of farm animals, has yet larger service to render in preventing disease common to both man and beast from being communicated from domestic animals to man. Moreover he must see that the animals slaughtered for meat are healthy and that products are handled under such conditions as to render them suitable for human food. The public is now demanding that milk and other food products be free from contamination and that they be incapable of transmitting dangerous diseases, like tuberculosis, typhoid fever, scarlet fever, and diphtheria. There is ample work for all of the thoroughly competent veterinarians that the colleges of the country will train.

The curriculum in veterinary medicine at the Kansas State College was established to give the young men of this state an opportunity to pursue these studies in an agricultural environment, where the facilities offered by other branches of the College would be at their command. While the instruction in this curriculum is largely technical, enough subjects of a general character are

included to give a sound education and a broad outlook. Better to fit the veterinarian to deal wisely with the livestock problems which he has to meet, he is required to take the work in livestock feeding, breeding and judging, in milk inspection, and in zoölogy, in addition to his purely professional work.

The diploma from this school is recognized by the United States Department of Agriculture, by the United States Civil Service Commission, by the American Veterinary Medical Association, and by the various examining boards of the several states and territories of America where it has been presented.

VETERINARY ENROLLMENT LIMITED

By authority of the State Board of Regents, enrollment in the four professional years following the preveterinary year in the curriculum in Veterinary Medicine is limited to a total of 200 students. Persons wishing to enter this curriculum should apply several weeks in advance of the opening of the college year. Admission to each of the four professional years is based on the applicant's scholarship record and other evidence of his fitness. When all other factors are equal, first preference is given to applicants who are residents of Kansas, and second preference to applicants who are residents of those states having no standard college of veterinary medicine. In general, no requests for admission will be approved after August 15. Application blanks may be obtained from the dean of the Division of Veterinary Medicine.

CURRICULUM IN ANIMAL HUSBANDRY AND VETERINARY MEDICINE

The combined curriculum in animal husbandry and veterinary medicine has been outlined so that students may receive the degree of Bachelor of Science in Agriculture at the end of four years, and the degree of Doctor of Veterinary Medicine at the end of two more years, thus securing both degrees in six years.

This curriculum is prepared especially for students who intend to become managers of livestock farms or to enter special lines of veterinary practice.

CURRICULUM IN GENERAL SCIENCE AND VETERINARY MEDICINE

The combined curriculum in general science and veterinary medicine has been arranged so that students may receive the degree of Bachelor of Science at the end of four years, and the degree of Doctor of Veterinary Medicine at the end of two more years, thus securing both degrees in six years. This curriculum is prepared especially for students who intend to pursue teaching or research work in agricultural experiment stations.

Curriculum in Veterinary Medicine

PRE-VETERINARY OR FIRST YEAR ¹

(Thirty-two semester hours of approved college or university work, having the following distribution, are required.)

English	5 or 6 semester hours
General Inorganic Chemistry	5 to 10 semester hours
Zoölogy	5 semester hours
Military Science	2 semester hours
Physical Education	R
Optional Courses	9 to 15 semester hours
Total	32 semester hours

The optional courses should preferably be selected from a modern language (German or French), physics, and mathematics.

1. The courses of the pre-veterinary year may be taken in Kansas State College or in an approved junior college, college, or university.

FRESHMAN OR SECOND YEAR

FIRST SEMESTER		SECOND SEMESTER	
Anatomy I, Anat. 104.....	*4(3-3)	Anatomy II, Anat. 110.....	8(4-12)
Histology I, Path. 102.....	4(2-6)	Histology II, Path. 106.....	3(1-6)
Gen. Org. Chemistry, Chem. 122.....	5(3-6)	Path. Bact. I, Bact. 111.....	4(2-6)
Medical Botany, Bot. 126.....	2(1-3)	Infantry IV, Mil. Sc. 104A.....	1(0-3)
Infantry III, Mil. Sc. 103A.....	1(0-3)	Phys. Educ. M, Phys. Ed. 106.....	R(0-2)
Phys. Educ. M, Phys. Ed. 105.....	R(0-2)		
Total.....	16	Total.....	16

SOPHOMORE OR THIRD YEAR

FIRST SEMESTER		SECOND SEMESTER	
Anatomy III, Anat. 112.....	4(1-9)	Pathology I, Path. 203.....	5(3-6)
Comp. Physiology I, Anat. 222.....	4(3-3)	Comp. Physiology II, Anat. 227.....	4(3-3)
El. of An. Husb., An. Husb. 125.....	3(2-4)	Farm Poul. Prod., Poul. Husb. 101..	2(1-2, 1)
Path. Bact. II, Bact. 116.....	4(2-6)	Feeds and Feeding, An. Husb. 189...	3(3-0)
Dairy Cattle Judg., Dairy Husb. 104,	1(0-3)	Dairy Inspec. II, Dairy Husb. 119...	2(1-3)
Total.....	16	Total.....	16

JUNIOR OR FOURTH YEAR

FIRST SEMESTER		SECOND SEMESTER	
Surgery I, Surg. and Med. 102.....	5(5-0)	Surgery II, Surg. and Med. 107.....	5(5-0)
Materia Medica, Surg. and Med. 158,	4(3-3)	Dis. of Large Animals I, Surg. and	
Pathology II, Path. 208.....	4(3-3)	Med. 175.....	5(5-0)
Parasitology, Zool. 208.....	3(2-3)	Pathology III, Path. 211.....	3(2-3)
Clinics I, Surg. and Med. 138.....	2(0-6)	Therapeutics, Surg. and Med. 163...	3(3-0)
		Clinics II, Surg. and Med. 141.....	2(0-6)
Total.....	18	Total.....	18

SENIOR OR FIFTH YEAR

FIRST SEMESTER		SECOND SEMESTER	
Dis. of Large Animals II, Surg. and		Inf. Dis. of Large Animals, Surg. and	
Med. 177.....	5(5-0)	Med. 181.....	5(5-0)
Dis. of Small Animals, Surg. and Med.		Obst. and Breed. Dis., Surg. and Med.	
186.....	2(2-0)	130.....	5(5-0)
Surgical Exercises, Surg. and Med.		Poultry Diseases, Bact. 217.....	2(2-0)
112.....	1(0-3)	Med. Econ. and Law, Surg. and Med.	
Meat Hygiene, Path. 217.....	3(3-0)	191.....	2(2-0)
Pathology IV, Path. 214.....	3(2-3)	Clinics IV, Surg. and Med. 147.....	4(0-12)
Clinics III, Surg. and Med. 144.....	4(0-12)		
Total.....	18	Total.....	18

Number of hours required in the pre-veterinary year..... 32
 Number of hours required in the freshman, sophomore, junior, and senior years..... 136

Total number of hours required for graduation..... 168

EXTRACURRICULAR ELECTIVES

FIRST SEMESTER		SECOND SEMESTER	
Vaccine Manu. I, Path. 228.....	2(1-3)	Vaccine Manu. II, Path. 231.....	2(1-3)

FIRST OR SECOND SEMESTER

Special Histology, Path. 252.....	3(1-6)
Pathological Technic and Diagnosis I, Path. 222.....	2 to 5(-)
Pathological Technic and Diagnosis II, Path. 223.....	2 to 5(-)
Special Anatomy, Anat. 202.....	2 to 4(-)
Applied Anatomy, Anat. 206.....	1(0-3)
Research in Pathology, Path. 302.....	Credit to be arranged
Problems in Physiology, Anat. 215.....	Credit to be arranged
Research in Medicine, Surg. and Med. 310.....	Credit to be arranged
Research in Surgery, Surg. and Med. 301.....	Credit to be arranged

* The number before the parenthesis indicates the number of hours of credit; the first number within the parentheses indicates the number of hours of recitation each week; the second shows the number of hours to be spent in laboratory work each week; and the third, where there is one, indicates the number of hours of outside work in connection with the laboratory each week.

Six-year Curriculum in Animal Husbandry and Veterinary Medicine

FRESHMAN

Freshman year of the curriculum in Agriculture

SOPHOMORE

FIRST SEMESTER		SECOND SEMESTER	
Ag. Econ., Ag. Econ. 101.....	3(3-0)	Farm Crops, Agron. 101.....	4(2-6)
Soils, Agron. 130.....	4(3-3)	Feeds and Feeding, An. Husb. 189...	3(3-0)
College Rhetoric II, Engl. 104.....	3(3-0)	Genetics, An. Husb. 221.....	3(3-0)
General Zoology, Zoöl. 105.....	5(3-6)	Farm Poul. Prod., Poul. Husb. 101..	2(1-2, 1)
Infantry III, Mil. Sc. 103A.....	1(0-3)	Gen. Econ. Entomol., Ent. 203.....	3(2-3)
Phys. Educ. M, Phys. Ed. 105.....	R(0-2)	Infantry IV, Mil. Sc. 104A.....	1(0-3)
Ag. Seminar, Gen. Ag. 103.....	R	Phys. Educ. M, Phys. Ed. 106.....	R(0-2)
		Ag. Seminar, Gen. Ag. 103.....	R
Total.....	16	Total.....	16

JUNIOR

FIRST SEMESTER		SECOND SEMESTER	
Anatomy I, Anat. 104.....	4(3-3)	Anatomy II, Anat. 110.....	8(4-12)
Histology I, Path. 102.....	4(2-6)	Histology II, Path. 106.....	3(1-6)
Medical Botany, Bot. 126.....	2(1-3)	Path. Bact. I, Bact. 111.....	4(2-6)
Elective.....	6(-)	Elective.....	1(-)
Ag. Seminar, Gen. Ag. 103.....	R	Ag. Seminar, Gen. Ag. 103.....	R
Total.....	16	Total.....	16

SENIOR

FIRST SEMESTER		SECOND SEMESTER	
Anatomy III, Anat. 112.....	4(1-9)	Pathology I, Path. 203.....	5(3-6)
Comp. Physiology I, Anat. 222.....	4(3-3)	Comp. Physiology II, Anat. 227.....	4(3-3)
Path. Bact. II, Bact. 116.....	4(2-6)	Dairy Inspec. II, Dairy Husb. 119...	2(1-3)
Elective.....	4(-)	Elective.....	5(-)
Ag. Seminar, Gen. Ag. 103.....	R	Ag. Seminar, Gen. Ag. 103.....	R
Total.....	16	Total.....	16

FIFTH YEAR

Fourth year of the curriculum in Veterinary Medicine

SIXTH YEAR

Fifth year of the curriculum in Veterinary Medicine

Number of hours required for completion of six-year curriculum, 200

The work of the first four years leads to the degree Bachelor of Science in Agriculture. The junior and senior electives provided must be officially approved, before assignment, by the dean of the Division of Agriculture and the head of the Department of Animal Husbandry. Upon the completion of the fifth and sixth years the student is eligible for the degree Doctor of Veterinary Medicine.

Six-year Curriculum in General Science and Veterinary Medicine

FIRST YEAR

Freshman year of curriculum in General Science

SECOND YEAR

FIRST SEMESTER		SECOND SEMESTER	
English Literature, Engl. 172.....	3(3-0)	Amer. Literature, Engl. 175.....	3(3-0)
Modern Europe II, Hist. 223.....	3(3-0)	Economics I, Econ. 101.....	3(3-0)
Gen. Physics I, Phys. 135.....	4(3-3)	Gen. Physics II, Phys. 140.....	4(3-3)
Gen. Org. Chemistry, Chem. 122....	5(3-6)	General Zoölogy, Zoöl. 105.....	5(3-6)
Infantry III, Mil. Sc. 103A.....	1(0-3)	Infantry IV, Mil. Sc. 104A.....	1(0-3)
Phys. Educ. M, Phys. Ed. 105.....	R(0-2)	Phys. Educ. M, Phys. Ed. 106.....	R(0-2)
Total.....	15	Total.....	16

THIRD YEAR

FIRST SEMESTER		SECOND SEMESTER	
American History I, Hist. 201.....	3(3-0)	Extens. Speech I, Pub. Spk. 106.....	2(2-0)
Amer. Govt., Hist. 151, 152, or 153..	3(3-0)	Path. Bact. I, Bact. 111.....	4(2-6)
Medical Botany, Bot. 126.....	2(1-3)	Histology II, Path. 106.....	3(1-6)
Histology I, Path. 102.....	4(2-6)	Anatomy II, Anat. 110.....	8(4-12)
Anatomy I, Anat. 104.....	4(3-3)		
Total.....	16	Total.....	17

FOURTH YEAR

Sophomore year of the curriculum in Veterinary Medicine

FIFTH YEAR

Fourth year of the curriculum in Veterinary Medicine

SIXTH YEAR

Fifth year of the curriculum in Veterinary Medicine

Number of hours required for completion of six-year curriculum, 200

The work of the first four years leads to the degree Bachelor of Science. Upon the completion of the fifth and sixth years the student is eligible for the degree Doctor of Veterinary Medicine.

Anatomy and Physiology

Professor BURT
 Professor MCLEOD
 Professor LEASURE
 Instructor LINK
 Instructor SPANGLER

This branch of veterinary medicine extends over the freshman year and the first semester of the sophomore year for veterinary students, and one semester is required in the curriculum in agriculture.

The classroom instruction consists of lectures, quizzes and recitations, and special dissection of the part under discussion; also a study of dissected specimens, various models, and the Azoux model of the horse. Mounted skeletons and limbs and loose bones are abundant in the museum. The horse is taken as a type, and the other domestic animals are compared with the horse. As often as necessary parts of other animals are dissected to show the differences.

The courses in anatomy require several lecture rooms, which contain models, skeletons, and bones of all kinds, and a thoroughly sanitary dissecting room equipped with all the latest materials necessary to give a course in anatomy second to none on the continent.

The equipment for instruction in physiology is ample to give the student a thoroughly comprehensive course of laboratory study.

COURSES IN ANATOMY

FOR UNDERGRADUATE CREDIT

104. ANATOMY I. 4(3-3)*; I. Drs. McLeod and Spangler.

A detailed study of the bones of the horse, and a comparative study of the bones of other animals and of man. Deposit, \$3.

110. ANATOMY II. 8(4-12); II. Prerequisite: Anat. 104. Drs. Burt, McLeod, and Spangler.

Dissection of the trunk and limbs of the horse; study of the muscles, viscera, and joints, and of the blood and nerve supply of the same. Deposit, \$5.

112. ANATOMY III. 4(1-9); I. Prerequisite: Anat. 104. Drs. Burt and Spangler.

Dissection and study of all structures of the head of the horse with exception of the bones of the head; the comparative anatomy of other domestic animals. Deposit, \$5.

FOR GRADUATE AND UNDERGRADUATE CREDIT

202. SPECIAL ANATOMY. 2 to 4 hours; II. Prerequisite: Anat. 104 or 110 or 112 or 131 or equivalent. Drs. Burt and McLeod.

Study of any part of the horse, as the digestive system, the genital system, etc., or of similar parts of the ox, sheep, pig, etc., or of poultry anatomy; this course being adaptable to the requirements of the line of work in which the student is specializing. Deposit, \$5.

206. APPLIED ANATOMY. 1(0-3); I. Prerequisite: Anat. 112. Drs. Burt, McLeod, and Spangler.

Dissection of certain areas embraced in performing the various surgical operations, and study of all the structures in each area and their relation to one another as they would present themselves during an operation.

COURSES IN ANATOMY AND PHYSIOLOGY

FOR UNDERGRADUATE CREDIT

131. ANATOMY AND PHYSIOLOGY. 3(2-3); I. Drs. Burt and Spangler.

Physiology of the domestic animals with special emphasis on digestion, absorption, metabolism, and excretion; sufficient anatomy to give a thorough understanding of the correlation between the two subjects and of the physiological relations existing among the various organs of the body. Charge, \$1.

COURSES IN PHYSIOLOGY

FOR GRADUATE AND UNDERGRADUATE CREDIT

215. PROBLEMS IN PHYSIOLOGY. Credit to be arranged; I and II. Prerequisite: Anat. 131 or 222 or 227 or its equivalent. Drs. Leasure and Link.

Individual investigational problems in the physiology of digestion, reproduction, endocrine glands, etc. Charge, \$1.50 per semester hour.

222. COMPARATIVE PHYSIOLOGY I. 4(3-3); I. Prerequisite: For veterinary students, Anat. 104 and 110 and Chem. 122; for others, an approved course in organic chemistry. Drs. Leasure and Link.

Physiology of domestic animals and the study of the blood, heart, blood vessels, and continuing with the ductless glands and internal secretions, respiration, digestion, and absorption.

* The number before the parenthesis indicates the number of hours of credit; the first number within the parentheses indicates the number of hours of recitation each week; the second shows the number of hours to be spent in laboratory work each week; and the third, where there is one, indicates the number of hours of outside work in connection with the laboratory required each week. I, II, and SS indicate that the course is given the first semester, second semester, and summer school, respectively.

Laboratory.—A practical application of the knowledge derived in the classroom. Laboratory directions furnished the student. Deposit, \$3.

227. COMPARATIVE PHYSIOLOGY II. 4(3-3); II. Prerequisite: Same as for Anat. 222. Drs. Leasure and Link.

The urine and urinary system, nutrition, animal heat, muscular and nervous systems, locomotion, generation and development, growth and decay. Deposit, \$3.

FOR GRADUATE CREDIT

301. ANIMAL NUTRITION SEMINAR. 1(1-0); I and II. For prerequisite, consult Dr. Burt.

Study and criticism of experimental work in animal nutrition, of the methods employed, and of validity of conclusions drawn.

Pathology

Professor LIENHARDT
Professor SCOTT
Professor KITSelman

Assistant Professor FARLEY
Assistant Professor MORRILL
Instructor WHITLOCK

The Department of Pathology presents courses in histology, pathology, and meat inspection. The instruction is presented by lectures or recitations, laboratory periods, and demonstrations which are carried out by the use of the projectoscope and by autopsies.

The laboratory is fully equipped and entirely up to date. The equipment consists of microtomes, paraffin ovens, microphotographic and projection apparatus, centrifuge, shaking machines, sterilizers, etc. Each student is furnished a drawer, microscope, prepared slides for study, and all other essentials needed for study in the laboratory courses.

The department is also in possession of a fairly complete pathological museum, which contains specimens of organs and tissues that show lesions typical of the various infectious, and some noninfectious diseases. These specimens are used in the study of pathology, and together with the specimens sent in from over the state and fresh material from the immediate vicinity, they furnish ample material for the course in pathology.

The department library contains text and reference books on pathology and allied subjects, also the current files of the important technical periodicals relating to pathology. These books are at the constant disposal of the student for reference.

The course in meat inspection together with the allied subjects required for a degree in veterinary medicine make the student eligible to take the civil-service examination for meat inspection. In this course visits are made to packing plants in Topeka and Kansas City.

COURSES IN HISTOLOGY

FOR UNDERGRADUATE CREDIT

102. HISTOLOGY I. 4(2-6); I. Prerequisite: Zoöl. 105. Drs. Farley and Whitlock.

Care and manipulation of the microscope; microscopical examination and study of the cell, the developing embryo, the specialized tissues, blood-forming organs, the digestive tract, etc. Previously prepared specimens are studied with the microscope and drawn by the student. Deposit, \$3.

106. HISTOLOGY II. 3(1-6); II. Prerequisite: Path. 102. Drs. Farley and Whitlock.

Study of the stomachs of the dog, the horse, and the ox; the intestines, the liver, pancreas, respiratory tract, the urinary organs, genital organs, the skin and appendages, suprarenal gland, the brain, the eye, and the ear; these tissues studied with the microscope and drawn by the student. Deposit, \$3.

FOR GRADUATE AND UNDERGRADUATE CREDIT

252. SPECIAL HISTOLOGY. 3(1-6); I, II, and SS. Prerequisite: Anat. 131 or equivalent. Drs. Lienhardt and Whitlock.

A course dealing with special organs, as those concerned with digestion, respiration, etc.; tissues fixed, dehydrated, imbedded, sectioned, stained, mounted, and studied. Charge, \$3.

COURSES IN PATHOLOGY

FOR GRADUATE AND UNDERGRADUATE CREDIT

203. PATHOLOGY I. 5(3-6); II. Prerequisite: Anat. 222, Bact. 116, Chem. 122, and Path. 106. Drs. Lienhardt, Scott, and Morrill.

General pathology, treating of the history of pathology, predisposition, immunity, congenital and inherited disease, etiology, course and termination of disease. Deposit, \$3.

208. PATHOLOGY II. 4(3-3); I. Prerequisite: Path. 203 and Anat. 227. Drs. Lienhardt, Scott, and Morrill.

Special pathology, study of specific pathological processes occurring in the various organs of the body. Sectioned and mounted specimens of diseased tissues are studied microscopically and drawn by the student. Deposit, \$3.

211. PATHOLOGY III. 3(2-3); II. Prerequisite: Path. 208. Drs. Lienhardt, Scott, and Morrill.

Special pathology; continuation of Pathology II; also clinical pathology. Deposit, \$3.

214. PATHOLOGY IV. 3(2-3); I. Prerequisite: Path. 211. Dr. Lienhardt. Pathology of the infectious diseases and laboratory diagnosis. Deposit, \$2.50.

217. MEAT HYGIENE. 3(3-0); I. Prerequisite: Path. 211. Dr. Kitselman. Kinds and classes of stock, traffic and transportation of animals, inspection before and after slaughter, disposition of the condemned from economic and hygienic standpoints, different methods of preservation, adulterations, and sanitary laws and regulations dealing with healthful meat production.

222, 223. PATHOLOGICAL TEACHING AND DIAGNOSIS. I and II. 2 to 5 hours each; I and II each. Prerequisite: For I, Path. 203; for II, Path. 211 and 222. Drs. Lienhardt and Morrill.

Pathological technic; collecting, fixing, hardening, embedding in celloidin and paraffin, also freezing and sectioning of tissues; methods of preserving gross specimens; practice in post-mortem and laboratory diagnosis. Deposit, \$3 to \$7.50 for each course.

228, 231. VACCINE MANUFACTURE. I and II. 2 to 5 hours each; I and II each. Prerequisite: Bact. 116. Dr. Scott.

I: Theory and practice of immunization as applied to blackleg and hog cholera.

Laboratory.—Isolation and identification of the blackleg organism and of related anaërobes, and practical production of blackleg biological products and antihog-cholera serum and virus. Deposit, \$3 to \$7.50 for each course.

II: Preparation and standardization of various veterinary biological products, such as tuberculin, bacterial vaccines, and bacterins.

Laboratory.—Production of some of the products mentioned and special work on blackleg biological products and antihog-cholera serum and virus. Deposit, \$3.

FOR GRADUATE CREDIT

302. RESEARCH IN PATHOLOGY. Credit to be arranged; I and II. Prerequisite: Path. 214 and 222, Bact. 116, and Chem. 235, or equivalent. Drs. Lienhardt and Scott.

Individual research problem in pathology of the nervous system, eye, and ear; investigational work on disease caused by a filterable virus. This work may form the basis for a master's thesis. Deposit, \$1.50 to \$15.

310. ANIMAL NUTRITION SEMINAR. 1(1-0); I and II. For prerequisite, consult Dr. Lienhardt.

Study and criticism of experimental work in animal nutrition, of the methods employed, and of validity of conclusions drawn.

Surgery and Medicine

Professor DYKSTRA
Professor FRICK
Professor FRANK

Assistant Professor DANKS
Instructor LEONARD

For instruction in surgery and clinics the equipment is excellent. The veterinary hospital, recently completed at a cost of more than \$100,000, is equipped with every modern appliance for surgical operations and diagnosis of animal diseases. The hospital has capacity for more than fifty horses or cattle, and in addition it can accommodate fifty small animals, such as sheep, swine, cats, dogs, etc. In addition to the foregoing, members of the clinical staff, accompanied by students, make trips into the surrounding country to give veterinary attention to ailing patients. In this way the students come in contact every year with the diseases of animals and their treatment. The work is always under the guidance of proficient practitioners.

For the study of materia medica and pharmacy there is a general pharmacy laboratory containing all the drugs used in the practice of veterinary medicine and a practicing pharmacy where medicines are compounded for the everyday practice connected with the College.

COURSES IN SURGERY

FOR UNDERGRADUATE CREDIT

102. SURGERY I. 5(5-0); I. Prerequisite: Junior or senior classification in Veterinary Medicine. Dr. Frank.

Lectures, recitations, and demonstrations on the fundamental principles of surgery, methods of restraint, asepsis and antisepsis, anaesthesia, division of tissues, union of tissues, control of hemorrhage, neoplasms, and animal dentistry.

107. SURGERY II. 5(5-0); II. Prerequisite: Surg. 102. Dr. Frank.

Lectures, recitations, and demonstrations on the surgical diseases of domesticated animals; horseshoeing is included.

112. SURGICAL EXERCISES. 1(0-3); I. Drs. Dykstra, Frick, Frank, Danks, and Leonard.

Major surgical operations on anaesthetized domesticated animals and on cadavers. Charge, \$5.

FOR GRADUATE CREDIT

301. RESEARCH IN SURGERY. Credit to be arranged; I and II. Prerequisite: Anat. 104, 110, and 112 and Surg. 102, 107, and 163. Dr. Dykstra.

The purpose of this course is to attempt to solve many of the surgical problems confronting the average veterinary practitioner. Offered especially for graduates in veterinary medicine.

COURSES IN OBSTETRICS**FOR UNDERGRADUATE CREDIT**

130. OBSTETRICS AND BREEDING DISEASES. 5(5-0); II. Prerequisite: Senior classification in Veterinary Medicine. Dr. Danks.

Physiology of reproduction, principles of normal and abnormal parturition, special attention given to handling of reduced fertility.

COURSES IN CLINICS**FOR UNDERGRADUATE CREDIT**

138, 141. CLINICS I AND II. 2(0-6) each; I and II, respectively. Drs. Dykstra, Lienhardt, Frick, Frank, Danks, and Leonard.

A free clinic is conducted, at which all species of domesticated animals are presented for treatment. In Clinics I and II junior students assist in these treatments, become proficient, by practical experience, in the restraint of animals, in bandaging, etc., and have charge of compounding prescriptions, preparation of antiseptics and other medical agents. Deposit, \$5 for each course.

144, 147. CLINICS III AND IV. 4(0-12) each; I and II, respectively. Prerequisite: Junior or senior classification in Veterinary Medicine. Drs. Dykstra, Lienhardt, Frick, Frank, Danks, and Leonard.

Diagnosis and treatment of hospital patients, including the keeping of clinic records, the administering of all medicines, changing of dressings on surgical wounds, X-ray technique, etc.; assisting clinicians in out-clinic work. Deposit, \$5 for each course.

150. EXTRA CLINICS. 1(0-3); I, II, and SS. Prerequisite: Surg. 141 or 147. Drs. Dykstra, Frick, Frank, Danks, and Leonard.

A course in clinics intended for those undergraduate students desiring clinical training in addition to that offered in the curriculum in Veterinary Medicine. Deposit, \$2.50.

COURSES IN MATERIA MEDICA**FOR UNDERGRADUATE CREDIT**

158. MATERIA MEDICA. 4(3-3); I. Dr. Leonard.

A detailed study of important drugs, their origins, properties, and classification; their physiological actions, clinical administration, and dosage; metrology, prescription writing, pharmaceutical processes, and pharmaceutical preparations; compounding of prescriptions. Deposit, \$3.

163. THERAPEUTICS. 3(3-0); II. Prerequisite: Surg. 158. Dr. Leonard.

History of therapeutics; healing methods; types of therapy, including mechanical, chemical, electrical, biological, dietetic, and thermal; general study of toxicology as frequently encountered in veterinary practice.

COURSES IN MEDICINE**FOR UNDERGRADUATE CREDIT**

175, 177. DISEASES OF LARGE ANIMALS I AND II. 5(5-0) each; II and I, respectively. Drs. Frick and Danks.

I: Different diagnostic methods employed for the detection of disease; noninfectious diseases of the digestive, circulatory, and respiratory organs of the larger animals.

II: Noninfectious diseases of the urinary organs, diseases of metabolism, of the nervous system, of the organs of locomotion, of the skin, and of the eye.

181. INFECTIOUS DISEASES OF LARGE ANIMALS. 5(5-0); II. Dr. Frick.

The distinctly infectious and contagious diseases of the large domestic animals.

186. DISEASES OF SMALL ANIMALS. 2(2-0); I. Dr. Frick.

Infectious and noninfectious canine and feline diseases; breeds of dogs, cats, and fur-bearing animals, erection of kennels, the breeding and care of puppies, care and feeding of dogs in general, and the hygienic measures pertaining thereto.

191. MEDICAL ECONOMICS AND LAW. 2(2-0); II. Drs. Dykstra and Frick.

The veterinarian's legal responsibilities; national and state livestock laws, quarantine regulations, fundamental and practical business principles, etc.

FOR GRADUATE CREDIT

310. RESEARCH IN MEDICINE. Credit to be arranged; I, II, and SS. Prerequisite: Surg. 158, 175, 177, and 181. Dr. Frick.

An attempted solution of some of the medical and parasitological problems confronting the practitioner of veterinary medicine. Offered especially for graduates in veterinary medicine.

The Division of College Extension

HARRY UMBERGER, *Dean and Director*

Extension work has developed from an informal beginning in which members of the College staff answered inquiries by mail and occasionally met with small groups at various places in the state. There was an exchange of information. The citizens received information derived from work done in laboratories and experiment fields. The investigators were able to have tested under ordinary conditions the results of their experimental work, and they learned which problems were of most immediate interest. In 1914 the federal government decided that the information on practical subjects in agriculture and home economics, as developed by the experiment stations and by the United States Department of Agriculture, and also by the experience of the best farmers and homemakers, should be made more readily available to everyone. In order that this information might be more fully and effectively diffused among the people of the several states, and its practical application encouraged, the United States congress passed the Smith-Lever act, which provides for "coöperative agricultural extension work between the agricultural colleges in the several states receiving the benefits of an act of congress approved July 2, 1862, and of acts supplementary thereto, and the United States Department of Agriculture." Under this act coöperation of the agricultural colleges and the United States Department of Agriculture is assured. Extension work has become a national as well as a state project, and its effectiveness has been greatly increased.

The Division of College Extension consists of six major departments, each with its own head and staff. Through this organization it is possible to reach directly more than 500,000 people in the state each year and to conduct some activity in every county.

Publications covering practical subjects in agriculture, home economics, and rural engineering are issued from time to time by the Division of College Extension. The regular publications of the Agricultural Experiment Station are used extensively. A series of publications in coöperation with the United States Department of Agriculture is receiving special attention. Extension publications are mailed regularly to a list composed of members of farm and home institutes, homemakers' clubs, extension schools, and farm bureaus; *i. e.*, to members of organizations coöperating closely with the College. Any citizen of the state, on request, may secure copies of individual publications.

Since February, 1924, radio has been used as a means of extending information from the College to those living in distant parts of the state. This service has consisted in the giving of instruction in many subjects, both by means of regular courses of lectures in specialized fields and by general discussions of subjects of timely interest to the people of the state.

Extension Schools

In Agriculture and Home Economics

L. C. WILLIAMS, in Charge

H. L. LOBENSTEIN,* Horticulture	L. M. SCHRUBEN, Farm Management
L. W. PATTON, Horticulture	I. N. CHAPMAN,† Fieldman, North Central, Farm Bureau-Farm and Home Mgmt. Assn.
C. G. ELLING, Animal Husbandry	G. B. RAILSBACK, Fieldman, North Central, Farm Bureau-Farm and Home Mgmt. Assn.
J. J. MOXLEY, Animal Husbandry	J. H. COOLIDGE, Fieldman, South Central, Farm Bureau-Farm and Home Mgmt. Assn.
J. W. LUMB, Veterinary Medicine	L. E. WILLOUGHBY, Crops
E. G. KELLY, Entomology	E. A. CLEAVINGER, Crops
M. A. SEATON, Poultry Husbandry	L. L. COMPTON, Crops
E. R. HALBROOK, Poultry Husbandry	———, Rural Organization and Farm Finance
E. H. LEKER, Plant Pathology	L. F. SMITH, Farm Forestry
J. W. LINN, Dairy Husbandry	W. G. AMSTEIN, Horticulture
D. M. SEATH, Dairy Husbandry	HENRY GILBERT, Landscape Gardening
V. M. RUCKER, Marketing	
J. W. MATHER, Marketing	
B. W. WRIGHT, Farm Management	

This department includes those members of the extension staff who conduct and supervise programs in agricultural education throughout the state. The programs are developed in coöperation with the residents of the counties through their designated leaders. The department also has charge of the program and arrangements for Farm and Home Week, annual state-wide farmers' meetings, and the scheduling of judges for county and local fairs.

FARM AND HOME INSTITUTES

A farm and home institute is an association of farmers and farm home-makers with regular officers, constitution, and by-laws. Some organizations hold six or more meetings during the year and no institute can obtain state aid unless, in addition to the annual meeting at which representatives of the College must be present, it also holds at least three local meetings. It is the plan of the College to send two specialists, one in agriculture and one in home economics, to the annual meetings to present certain well-defined lessons and to give the results of demonstration work for the county or locality. The specialists and their subjects are chosen because of known need or interest of a particular community or because of a plan to start or encourage certain definite lines of work.

EXTENSION SCHOOLS

Extension schools are meetings of one or two days' duration conducted for the purpose of giving practical instruction in agriculture, rural engineering, and home economics. Most of these schools are organized on the project basis, and they are an important feature in the yearly program of work conducted by each specialist. Results of demonstrations and experiments are given at these meetings and suggestions are made for their practical application under local conditions.

Extension schools are classified according to the subject matter presented. Each year schools are held in horticulture, animal husbandry, veterinary medicine, entomology, poultry husbandry, dairying, agronomy, marketing, farm management, plant pathology, rural organization, farm finance, and farm forestry. In addition to these specialized meetings, schools of a more general character are held, and these are designed to present the extension program best suited to the communities of the county. Home economics and 4-H club work have an important place on the program of these schools.

EXTENSION PROJECTS

The specialists of the division work in extension schools and institutes during the winter months only, and a portion of this time is devoted to co-operative demonstration work in agriculture and home economics. During

* On leave November 11, 1935, to June 30, 1936.

† On leave July 1, 1935, to June 30, 1936.

the remainder of the year, they conduct special extension programs in soil management and crop production, plant pathology, horticulture, animal husbandry, dairying, veterinary medicine, poultry husbandry, entomology, farm management, marketing, rural organization, farm finance, and farm forestry. This phase of the work of the extension specialists is being supplemented by coöperative demonstration work. In much of the coöperative work each specialist has from 10 to 100 or more coöperators in each county. These men and women work under the direction of the specialist and the county agent. They keep records of the work and demonstration meetings are held at their farms.

The extension specialist takes to the farm and farm home the results of the research work of the Agricultural Experiment Station and the United States Department of Agriculture in a practical, effective, and usable form. He brings back reports of the progress of demonstration work in the field. He seldom makes a trip without coming in contact with agricultural problems requiring the attention of research workers.

COUNTY AND LOCAL FAIRS

The agricultural specialists devote some time each year to judging livestock and agricultural products at county and local fairs. An excellent opportunity for lectures and demonstration work is furnished, and each specialist endeavors to make his judging work as instructive as possible.

FARM AND HOME WEEK

The purpose of Farm and Home Week is to interest the farmers of the state in methods of production and management that will increase farm profits, to demonstrate to farm women methods of home management that will add to the comfort and enjoyment of farm life, and to encourage farm folks in social organization that will enrich the social life of the rural community.

All meetings, lectures, and demonstrations during Farm and Home Week are free of charge. The United States Department of Agriculture, the Agricultural Experiment Station, the Extension Service, agricultural specialists, and leading farmers bring to those in attendance the latest results of investigations in agriculture, home economics, and rural engineering. Problems concerning crops and soils, dairying, beef cattle, horses, hogs, sheep, poultry, horticulture, community service, beekeeping, and diseases of animals are discussed by some of the leading agricultural authorities in America. In addition to these lectures and demonstrations there are other interesting features.

County Agent Work*

H. UMBERGER, Dean and Director
C. R. JACCARD, District Agent
F. O. BLECHA, District Agent
J. V. HEPLER, District Agent
A. F. TURNER, District Agent (Organization)

E. H. TEAGARDEN, S. W. District Agent
L. M. KNIGHT, E. District Agent
HARRY C. BAIRD, N. W. District Agent
M. L. ROBINSON, District Supervisor (Wheat)
OTIS B. GLOVER, District Supervisor (Corn-Hog)

The county agent constitutes a direct and continuous contact of the College and the United States Department of Agriculture with the rural population of the state. The program of county-agent work is as broad as the interests of rural life. It includes the farm as a business, the farm home, the farm youth, and the rural community. The program for the farm as a business involves those things that may be done by the individual farmer and those that require extensive coöperation among farmers. On the one hand it includes organization and management, and production problems such as soil management, erosion control, cropping systems, crop pests, adapted crop varieties, and

* To find an alphabetical list of county agricultural agents, see Index.

livestock management. On the other hand it includes coöperative financing, coöperative marketing of farm products, and agricultural adjustment procedure.

The first county agent in Kansas was employed by the Leavenworth county farm bureau, August 1, 1912. At first county agents were financed by membership dues, private subscription, and a small state appropriation. In 1914 Congress enacted the Smith-Lever law and in 1915 the Kansas legislature passed the farm-bureau law. These statutes remain the basis of county-agent work. Additional federal funds have been made available in recent years under several other statutes such as the Capper-Ketcham, Clark-McNary, and Bankhead-Jones acts.

On November 1, 1935, there were 99 county agents and 18 assistant county agents. The assistant county agents are assigned to counties to aid the county agent in the execution of his regular program or to assist with special activities.

Home Economics*

AMY KELLY,³ State Home Demonstration Leader, in Charge

DISTRICT HOME DEMONSTRATION AGENT LEADERS

ELLEN M. BATCHELOR
GEORGIANA H. SMURTHWAITE
MAUDE E. DEELY

SPECIALISTS IN HOME ECONOMICS

LORETTA McELMURRY,¹ Clothing and
Textiles
M. CHRISTINE WIGGINS, Clothing and
Textiles
GLYDE ANDERSON, Foods and Nutrition
HELEN BREWER, Foods and Nutrition

CONIE FOOTE,² Foods and Nutrition
RUTH J. PECK, Home Furnishings
W. PEARL MARTIN, Home Health and
Sanitation
BONNIE GOODMAN, Home Management

Extension work in Home Economics is carried on in counties through organized groups and through extension schools, particularly those of the more general type. Organized programs are pursued throughout the year in connection with county farm bureaus. Material furnished by the specialists and by home demonstration agents is used by local leaders in their respective communities.

Home demonstration work was made possible in August, 1917, when Congress provided funds for the employment of emergency home demonstration agents. The work was instituted under the auspices of city or county organizations, but after a short time the placing of home demonstration agents was deferred until the counties were properly organized for this specific purpose. Since August, 1918, the organization of an ideal farm bureau, providing membership for women as well as for men, has been required; and since July 1, 1921, a county desiring a home demonstration agent has had to provide a well-equipped office with adequate stenographic help, transportation facilities, and a county appropriation of not less than \$2,400 to the farm bureau for the salary and expenses of the agricultural agent and the home demonstration agent.

The program of work for the home demonstration agent is based on the interest and the needs of the communities in the county. It is evolved through community and committee meetings and includes the development of activities pertaining to the farm, the home, and the community. Such programs of work become a part of the state program. On November 1, 1935, twenty-seven counties had home demonstration agents.

* To find an alphabetical list of home demonstration agents, see Index.

1. Resigned November 30, 1935.

2. On indefinite leave July 1, 1934.

3. Resigned February 15, 1936.

Boys' and Girls' 4-H Club Work

M. H. CCE, State Club Leader
A. J. SCHOTH, Assistant State Club Leader
LORA HILYARD, Assistant State Club Leader
MABEL R. SMITH, Assistant State Club Leader
J. HAROLD JOHNSON, Assistant State Club Leader
BEN C. KOHRS, County Club Agent, Sedgwick County
CLAUDE L. KING, County Club Agent, Shawnee County
O. W. KERSHAW, County Club Agent, Washington County

The 4-H club work is conducted by the College in coöperation with the counties, the county farm bureaus, and the United States Department of Agriculture. Community 4-H clubs are open to all young people between the ages of ten and twenty years, inclusive. They work under the direction of the county agents with the help of local voluntary 4-H leaders. Local organizations also give important assistance. County 4-H councils assist the county agents in the supervision and promotion of the 4-H program. 4-H members receive visits from their county agents and from their local leaders; written material is prepared by specialists and sent out by the state club leader, to give members definite information and suggestions regarding farm and home practices recommended by the College.

The origin of the 4-H club work is obscure. Shortly after 1900, farmers' institutes, farm leaders, and educators, in various parts of the country, made efforts to bring about a more definite connection between real life and school life. They assisted boys and girls to conduct, at home, various educational demonstrations or contests, centering around improved agricultural practices.

It became evident that the educational development of the boys and girls was of greater importance than the spread of improved farm and home practices. Hence the 4-H club program was broadened to include not only projects of a farm and home nature, but also many activities such as health, music, conservation of wild life and natural resources, recreation, parliamentary practice, and art. The present 4-H club program is designed to develop wholesome citizenship and leadership among rural young people and to provide them with the opportunity to participate with their parents and friends in the adoption and spread of better farm and home practices. Coöperation with the group is promoted, leadership is encouraged, exhibitions and contests are conducted, accurate records and reports are required, and achievements are suitably recognized. Wholesome recreation is promoted and county and state-wide round-ups, camps, and conferences are arranged.

Rural Engineering

WALTER G. WARD, Extension Architect, in Charge
JOHN S. GLASS*, Extension Agricultural Engineer
EUGENE D. WARNER, Extension Architect
HAL F. EIER, Extension Agricultural Engineer
HAROLD F. STOVER, Extension Agricultural Engineer

The function of this department is to assist in the application of engineering principles to various phases of agriculture. In the beginning, in 1914, it dealt chiefly with drainage and irrigation. Other subjects have been added including the control of soil erosion, farm buildings, conveniences for the farm home, and farm machinery.

Annually thousands of direct inquiries on these subjects are answered by mail. Much of the work is conducted in coöperation with the county farm bureaus. More than two thirds of the counties in the state are coöperating with the department in demonstration work involving drainage, irrigation, or the control of soil erosion. Standardized plans for hundreds of farm buildings are furnished each year. One-day builders' schools are held in various

* Resigned December 26, 1935.

counties to supply information on the planning, construction, and maintenance of farm buildings. Advice is given on the selection, installation, and operation of systems of water supply, sewage disposal, lighting, and heating for the rural home. The choice, use, adjustment, and repair of farm machinery are discussed with distributors and farmers in one-day and two-day schools.

Home Study

GEORGE GEMMELL, Head of Department
BEATTY H. FLEENOR, Education
ADA BILLINGS, History and Government

JESSE M. SCHALL, English
FLOYD PATTISON, Industrial Subjects

The Department of Home Study is a member of the National University Extension Association comprising forty-eight leading universities in America with whom extension credits are interchangeable. The members of the department devote their entire time to the work of teaching by correspondence. They keep in close touch with the various departments of the College, and all credit courses which are offered by correspondence must first meet the requirements of the regular College departments handling the courses in residence.

There are many people in Kansas and elsewhere who cannot attend classes on the College campus, but who can use the facilities of the College to great advantage. The Department of Home Study is designed through correspondence courses to enable the College to go to those who cannot come to it. By utilizing them, odd hours of spare time may be made to count. The gross time required to complete correspondence courses is practically the same as would be necessary for the same courses in school. Correspondence courses may be started at any time. They wait when one is busy. They are instantly ready when one has time. In fact, they are "made to order" for the busy person.

FOR WHOM INTENDED

Though credit courses offered by the Department of Home Study are limited, it is the purpose of the department to add courses whenever a demand for them becomes evident. The following groups in particular should profit by the courses offered:

1. Those who have completed a common-school course but who are unable to attend high school.
2. High-school graduates unable to attend college.
3. Students who have fallen behind in their work and wish to use their spare time catching up.
4. Students whose attendance at high school or college has been interrupted.
5. The strong, aggressive student who does not wish to halt his progress for vacation and other interruptions.
6. High-school and grade classes in practical courses that need supplementing and enrichment.
7. Teachers who wish further training or who need help in planning and conducting their work.
8. Professional and business men who wish to keep growing along some line of interest, industrial or avocational.
9. Clubs and other organizations that wish to make systematic studies.
10. Men and women who wish effective help in meeting the demands of their vocations for technical and scientific knowledge and training.

HOW THE WORK IS CONDUCTED

In correspondence courses the assignment usually takes the form of assigned readings, studies, problems, and investigations, together with a list of questions and directions for a written report. The correspondence lesson is usually much longer than the common lesson in resident class work, eight such lessons being the equivalent of one semester hour of college credit. When necessary, the

lessons are supplemented by lectures prepared by the instructor containing helpful outlines and explanations, additional subject matter, and such special directions as seem desirable. The lessons are modified from time to time as suggested by experience and as new information becomes available.

As soon as an enrollment card and fee are received at the Department of Home Study, the first assignments are immediately sent out. As reports are received, additional assignments are mailed. The plan keeps work always at hand for the student and at the same time makes it possible for the instructor to keep in close touch with the student's progress and to offer, from time to time, such suggestions as seem desirable to guide the student in his work. As a rule the student should make careful study of the corrections, comments, and suggestions upon receiving a returned paper before going further with succeeding lessons.

The progress made by the student depends entirely upon his ability, preparedness, and application. As a general suggestion, it might be stated that an hour a day spent in systematic study should enable the average student to complete an assignment a week. Students may work more rapidly if their opportunities permit. Lessons will be received as rapidly as is consistent with good work, provided not more than eight assignments are sent in one week. Under no circumstances will hastily prepared manuscripts, showing superficial knowledge, be accepted.

The questions accompanying each assignment are intended to help the student to a better understanding of the subject. After careful study of the assignment, the student is required to write his manuscript, answering the questions carefully and concisely. The manuscript is then mailed to the Department of Home Study, where all lesson papers are read carefully, criticized, marked, and returned to the student with such comments, suggestions, advice, and additional references as may be deemed necessary. Each student is invited to ask questions, relate his personal experience, and in every way possible get into close contact with his instructors.

No effort is spared by the department to bring about the nearest possible approach to personal acquaintanceship between each instructor and his students. To this end the student is required to fill out and mail to the department with his first lesson a personal acquaintance blank giving full information about himself, his aims, ambitions, and previous experience and education as well as the conditions of his daily work that necessarily affect his responses to the lessons. This information enables the instructor to enter at once into cordial, sympathetic, and helpful relations with the student.

EXAMINATION

At the close of each course, before a grade is issued, a final examination is necessary. The final examination may be taken in the office of the Department of Home Study at the College, or other arrangements may be made by the student to take it locally under the city or county superintendent of schools or the principal of the local high school. In the latter case, the examination questions and instructions for conducting the examination are mailed from the department to the examiner, and the student's paper is sent in by him.

FEEES

For residents of Kansas there is an initial enrollment fee of \$10 for a course of three semester hours credit or less, with \$3 additional for each added hour of work; for nonresidents of the state an initial enrollment fee of \$15 for a course of three semester hours of credit or less and \$4 for each additional hour of work.

For courses of secondary school (high school) grade there is an initial enrollment fee for residents of the state of \$6 for the first half-unit course and \$5 for each additional half-unit course; for nonresidents of the state an initial enrollment fee of \$9 for the first half-unit course, with a fee of \$7 for each additional half-unit.

Each student is expected to pay postage on lessons, manuscripts, and communications sent in to the department. The office will furnish postage for the return of all such papers to student.

REGULATIONS

1. Enrollments for correspondence-study work will be received at any time during the year, and students may continue their work uninterruptedly throughout the entire year.

2. Correspondence students will be expected to complete any course for which they are enrolled within twelve months from date of enrollment.

3. Not more than two courses are advised by correspondence at any one time. It is recommended that a student carry but one subject at a time, particularly where only part of the time is given to the work.

4. Each subject listed under the various departments constitutes what is known as a correspondence "course."

5. Students enrolling for correspondence courses must meet the prerequisites the same as if undertaking the work in residence.

6. A student may not be enrolled for correspondence work while in attendance at any institution of learning without special permission from the dean or proper authorities in the institution of which he is a student.

7. No correspondence student shall be permitted to complete a three-hour course in less than three weeks; a two-hour course in less than two weeks; a one-hour course in less than one week.

8. Where there is evidence of any correspondence student copying any part of the lessons from the papers of another student who has previously taken the course, such student is to be automatically and permanently dropped from the course and a failing grade is to be sent to the registrar's office with notation of cause.

9. Credit for correspondence courses is determined by a final examination prepared by the Department of Home Study.

STUDY-CENTER EXTENSION CLASSES

Study-center classes conducted by regular instructors from the College may be organized if the demand is sufficient. Regulations concerning such classes are obtainable from the Department of Home Study.

HIGH-SCHOOL COURSES

(College Entrance Credit Work)

In offering the following work for high-school credit, there is no intention of competing with high schools of the state. It is not the purpose of those who have planned the work to present a full four-year high-school course. Students who have opportunity to attend local high school should by all means take advantage of the opportunity, for in such attendance they will have the benefits to be derived from association with fellow students as well as many other advantages which will be helpful to immature students of high-school age.

These courses are offered as an aid to those who may, by necessity, be temporarily out of high school, who may not find the work which they desire offered locally, or who wish to carry work for high-school credit during vacation periods. It is not to be expected that a student can progress as rapidly by correspondence-study methods as he can by devoting his full time to his work when attending high school. Any student who completes a half year of high-school work in a year by correspondence may feel that he has done exceedingly well.

The high-school courses will be especially advantageous to prospective college students who have entrance deficiencies and to public school teachers who may not have had the opportunity to do this type of work. No effort has been spared to make the work as nearly as possible parallel with the courses offered by the accredited high schools of the state. The same textbooks have

been used wherever feasible, and the credits issued by this department are recognized by the colleges and State Board of Education.

List of High-school Courses

Course No.		Number of assignments	Unit H. S. credit
AGRICULTURE			
PCA 1.	Elementary Agriculture I.....	20	1/2
PCA 2.	Elementary Agriculture II.....	20	1/2
DRAWING			
PCD 3.	Shop Mechanical Drawing I.....	20	1/2
PCD 4.	Shop Mechanical Drawing II.....	20	1/2
ENGLISH			
PCE 1C.	Grammar and Composition (first year).....	20	1/2
PCE 2L.	Literature (first year)	20	1/2
PCE 3C.	Composition (second year)	20	1/2
PCE 4L.	Literature (second year)	20	1/2
PCE 5C.	Composition (third year)	20	1/2
PCE 6L.	Literature (third year)	20	1/2
HISTORY AND CIVICS			
PCH 1.	Ancient History I.....	20	1/2
PCH 2.	Ancient History II.....	20	1/2
PCH 3.	Modern History I.....	20	1/2
PCH 4.	Modern History II.....	20	1/2
PCH 5.	American History I.....	20	1/2
PCH 6.	American History II.....	20	1/2
PCH 7.	Community Civics	20	1/2
PCH 8.	Constitution of United States.....	20	1/2
PCH 9.	World History I.....	20	1/2
PCH 10.	World History II.....	20	1/2
MATHEMATICS			
PCM 1.	Algebra I	20	1/2
PCM 2.	Algebra II	20	1/2
PCM 3.	Algebra III	20	1/2
PCM 4.	Plane Geometry I.....	20	1/2
PCM 5.	Plane Geometry II.....	20	1/2
PCM 6.	Solid Geometry	20	1/2
PCM 7.	Bookkeeping	20	1/2
SCIENCE			
PCS 1.	Physical Geography	20	1/2
PCS 2.	Botany	20	1/2
PCS 4.	Physiology	20	1/2
PCS 5.	General Science	20	1/2
PCC 1.	Commercial Geography	20	1/2
PCC 2.	Elementary Economics	20	1/2
PCC 3.	Elementary Sociology	20	1/2
PCC 4.	Elementary Psychology	20	1/2

COLLEGE COURSES

A number of college courses paralleling resident courses and carrying the same credit are offered through the Department of Home Study. These will be found especially advantageous for college students who desire to make up deficiencies or to gain certain credits during the vacation season; for teachers who wish to further their professional training; and for men and women who wish to promote their cultural, technical, or vocational interests. The prerequisites are the same as for corresponding courses in resident instruction.

The following course is available through resident enrollment for graduate and undergraduate credit. Graduates may be enrolled for from one to six hours of research or problem work *in absentia*, on the recommendation of a member of the graduate faculty and with the approval of the dean of the Division of Graduate Study.

Educ. 249. PROBLEMS IN EXTENSION EDUCATION. Credit to be arranged. Prerequisite: Econ. 151 or CS 3; Educ. 184 or CP 8, or EXT 5. Dr. Gemmell and Dr. Fleenor.

Problems in extension met by director, supervisor, county agricultural agent, county home demonstration agent, 4-H club leader, or specialist.

List of College Courses

DIVISION OF AGRICULTURE

<i>Course No.</i>		<i>AGRONOMY</i>	<i>Assignments</i>	<i>Semester hours of credit</i>
CA 3.	Farm Crops	16		2
<i>ANIMAL HUSBANDRY</i>				
CL 2.	History of Breeds.....	16		2
<i>HORTICULTURE</i>				
CH 1.	Elements of Horticulture.....	16		2
CH 2.	Vegetable Gardening	16		2
CH 3.	Floriculture	16		2
CH 5.	Landscape Gardening	8		1
CH 6.	Small Fruits	16		2
<i>POULTRY HUSBANDRY</i>				
CPP 1.	Farm Poultry Production.....	8		1

DIVISION OF ENGINEERING

<i>MACHINE DESIGN</i>				
CE 2.	Engineering Drawing	16		2
CE 6.	Machine Drawing I.....	16		2
CE 4.	Mechanism	24		3
CE 11.	Descriptive Geometry	16		2
<i>CIVIL ENGINEERING</i>				
CE 1.	Highway Engineering I.....	16		2
<i>SHOP PRACTICE</i>				
CE 7.	Metallurgy	16		2
<i>AGRICULTURAL ENGINEERING</i>				
CE 3.	Gas Engines and Tractors.....	16		2
<i>MECHANICAL ENGINEERING</i>				
CE 9.	Steam Turbines	16		2
CE 10.	Essentials of Steam and Gas Power Engineering.....	16		2

DIVISION OF GENERAL SCIENCE

<i>ECONOMICS AND SOCIOLOGY</i>				
CEc 1.	Economics	24		3
CS 2.	Rural Sociology	24		3
CS 3.	Sociology	24		3
CS 4.	Community Leadership	16		2
<i>EDUCATION (PROFESSIONAL)</i>				
CP 2.	Educational Psychology	24		3
CP 3.	Educational Sociology	24		3
CP 4.	History of Education.....	24		3
CP 5.	School Management	24		3
CP 6G.	Methods of Teaching in Elementary Graded Schools and Rural Schools	24		3
CP 6H.	Methods of Teaching in the High School.....	24		3
CP 7.	Education Administration	24		3
CP 8.	Psychology	25		3
CP 14.	Vocational Education	24		3
CP 17.	Introduction to Philosophy.....	24		3
<i>ENGLISH</i>				
CCE 1.	College Rhetoric I.....	24		3
CCE 2.	College Rhetoric II.....	24		3
CCE 3.	Commercial Correspondence	24		3
CCE 4.	The Short Story.....	24		3
CCE 6.	English Literature	24		3
CCE 7.	American Literature	24		3
<i>JOURNALISM</i>				
CCJ 1.	Agricultural Journalism	24		3

<i>Course No.</i>		<i>Assignments</i>	<i>Semester hours of credit</i>
GEOLOGY			
CG 1.	Geology	24	3
HISTORY AND CIVICS			
CHC 1.	Community Civics	16	2
CHC 2.	Modern Europe I.....	24	3
CHC 3.	Modern Europe II.....	24	3
CHC 4.	English History	24	3
CHC 5.	Medieval History	24	3
CHC 6.	Ancient Civilizations	24	3
MATHEMATICS			
CM 6.	Solid Geometry	16	3
CM 7.	Plane Trigonometry	25	3
CM 8.	College Algebra	25	3
CM 9.	College Algebra A.....	40	5

DIVISION OF COLLEGE EXTENSION

EXT 5.	Extension Education	24	3
<p>Prerequisite, Educ. 184 and junior standing. Dr. Fleenor. Origin and development of extension work, its aim and purposes, and its relation to other general educational activities; organization and administration of extension work under the Smith-Lever law and the part taken by colleges and the Department of Agriculture; psychological and sociological bases for and various methods employed in extension teaching; achievements and future problems of extension work.</p>			

Degrees Conferred

In the Year 1935

Seventy-second Annual Commencement

May 27, 1935

DEGREES CONFERRED

HONORARY DEGREES

DOCTOR OF SCIENCE

James Tertius Jardine, B. S., Utah Agricultural College, 1905; United States Department of Agriculture, Washington, D. C.

DOCTOR OF ENGINEERING

George Washington Wildin, B. S., Kansas State College, 1892; Pittsburgh, Pa.
Ernest Harrison Freeman, B. S., Kansas State College, 1895; B. S., Armour Institute of Technology, 1902; E. E., *ibid.*, 1906; Armour Institute of Technology, Chicago, Ill.

PROFESSIONAL DEGREES IN ENGINEERING

CIVIL ENGINEER

Clarence Edmund Harness, B. S., Kansas State College, 1931; Cimarron

FLOUR MILL ENGINEER

Royce Owen Pence, B. S., Kansas State College, 1924; Manhattan

Division of Graduate Study

MASTER OF SCIENCE

Sadegh Madjidi Ahi, B. A., Colorado Agricultural College, 1933; Teheran, Persia
Burton Lowell Baker, A. B., Kalamazoo College, 1933; Wheeler, Mich.
*August Irvin Balzer, B. S., Kansas State College, 1926; Inman
*Donald Houts Bowman, B. S., Kansas State College, 1933; Manhattan
*James Burgess Fitch, B. S., Purdue University, 1910; Manhattan
Clarence Fay Gladfelter, B. S., Kansas State College, 1924; Emporia
Phil Creager Haggman, B. S., Kansas State College, 1934; Scandia
Frederick William Hill, B. S., Kansas State College, 1934; Manhattan
James William Hunter, B. S., Kansas State College, 1933; Manhattan
*John Gleason Kennard, B. S., Utah Agricultural College, 1925; Manhattan
Herbert Henry Kirby, B. S., Kansas State College, 1933; Toronto
Alvin Ernest Lowe, B. S., Kansas State College, 1933; Argonia
Alice Butler Marsh, B. S., Oregon State College, 1933; Manhattan
Martha Luella O'Neill, B. S., Kansas State College, 1930; Winchester
Ivan Pratt, A. B., College of Emporia, 1932; Hope
Mohammed Hassan Radi, B. S., North Carolina State College, 1933; Cairo, Egypt
John Bissell Roberts, B. S., Kansas State College, 1933; Manhattan
Margaret Jeanne Tabor, A. B., Kalamazoo College, 1933; Manhattan
Leland Stanford Van Scoyoc, B. S., Kansas State College, 1926; Manhattan
Jessie Helene Winder, B. S., Kansas State College, 1925; Waldo
Burl Zimmerman, B. S., Kansas State College, 1934; Manhattan

Division of Agriculture

BACHELOR OF SCIENCE IN AGRICULTURE

Donald Maurice Atkins, Manhattan
James Kenneth Bigford, Manhattan
Lee Justin Brewer, Hartford
Everett Leslie Byers, Hepler
Richard Henry Campbell, Grenola
Hilbrand David Chilen, Miltonvale
Donald Risdon Cornelius, Wheaton
Robert James Danford, Hutchinson
Raymond Joseph Doll, Ellinwood
Edwin John Gantenbein, Elmo
Harold Ebert Grogger, Solomon
Louis Benton Hanson, Jamestown

Clifford Lorraine Harding, Wakefield
Irving Bennett Hawk, Effingham
Boyd Herbert Hope, Moundville, Mo.
George Homer Jameson, Garrison
*Taylor Lewis Jones, Garden City
Benjamin Christ Kohrs, Elmo
Wilbur Max Lehman, Wathena
Walter Morris Lewis, Larned
George Lester McColm, Emporia
Donald King McKenzie, Solomon
John David Miller, Manhattan
Charles Ernest Murphey, Leoti

* In absentia.

BACHELOR OF SCIENCE IN AGRICULTURE—*Concluded*

Herbert Truman Niles, Olivet
 Marion Burns Noland, Manhattan
 Verle Roosevelt Oline, Sterling
 Frank George Parsons, Manhattan
 John Roland Patton, Columbus
 Allison Glenn Pickett, Americus
 Floyd Volney Pinnick, Ulysses
 Melvin Palmer Rogers, Glasco
 George Albert Rogler, Matfield Green
 Carl Haury Rupp, Moundridge
 Lloyd Jay Sconce, Halstead
 Dean Doctor Scott, Bonner Springs
 Ralph Danforth Shipp, Agra
 Gerald Alvin Simpson, Milton

Harry Grant Sitler, Lake City
 Orin Grover Steele, Barnes
 Eugene Everett Sundgren, Falun
 Robert Ray Teagarden, La Cygne
 Charlie Bailey Team, Wichita
 Albert Adam Thornbrough, Lakin
 John Sherman Todd, Olathe
 Virgil Arvid Unruh, Pawnee Rock
 Melvin Leckerone Wilson, Manhattan
 William Alexander Wishart, Manhattan
 Donald Henry Woodman, Manhattan
 *Dorwin Clair Wright, Bronson
 Maurice Ivan Wyckoff, Luray
 William Raymond Yerkes, Jr., Hutchinson

BACHELOR OF SCIENCE IN MILLING INDUSTRY

*Eugene Patrick Farrell, St. Marys
 Warren Ferdinand Keller, Great Bend
 Leslie Waterman King, Wichita

Armand Harvey Rousseau, Seattle, Wash.
 Henry Herman Stark, Wellington
 J Forest Wolf, Manhattan

Division of Engineering

BACHELOR OF SCIENCE IN AGRICULTURAL ENGINEERING

Roy Doubt Crist, Brewster
 Kyle Engler, Burtron

Victor Hopeman, Independence
 Charles William Stewart, Hunter

BACHELOR OF SCIENCE IN ARCHITECTURE

Vera May Ellithorpe, Russell
 Ruth Elizabeth Langenwalter, Wichita

Howard Elliott Rivers, Hutchinson
 Casper Charles Winter, Dresden

BACHELOR OF SCIENCE IN ARCHITECTURAL ENGINEERING

Richard Carlton Brown, Hill City
 Dwight Ivan Gillidett, Plains
 Harold Crutchfield Hibbs, Osborne
 *Alton Sawyer Knechtel, Larned

George William Nesbitt, Manhattan
 *Frederick Joseph Sorenson, Kansas City
 Marvin Arthur Weihe, Bushton
 Leroy Albert Wilkinson, Manhattan

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

Rowland Wilburn Flournoy, Kansas City
 Ebbert Eugene Funk, Arkansas City
 Arthur Jacob Hochuli, Holton
 George Loomis Jobling, Caldwell
 Arthur Neil McCormick, Wichita

Francis Justus O'Reilly, Girard
 Alan Max Schaible, Fairview
 Frederic Raymond Senti, Cawker City
 Carl Norton Vickburg, Talmage

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Buford Dean Baker, Chanute
 Fred Jacob Benson, Grainfield
 Esto Ray Berkey, Manhattan
 Major Guy Bliss, Minneapolis
 Carl James Chappell, Republic
 Lamont Don DeCamp, Topeka
 Warren William DeLapp, Elk City
 William Lovejoy Dole, Almena
 Glen Farrell Egan, Altamont
 Voigt Raymond Fisher, Atchison
 John Warren Frazier, Manhattan
 Arthur Dwight Graham, Pittsburg
 Ronald George Grebner, Manhattan

Kenneth Byron Milliken, Manhattan
 Ansel Joseph Myers, Lyons
 Emerald Glenn Rader, Severy
 William Cyrus Rhodes, Neodesha
 William Hugh Roth, Ness City
 Merritt Roscoe Royer, Newton
 Martin Gerhardt Seibel, Ellis
 Eugene Schisler Sims, LeRoy
 Norman John Sollenberger, Manhattan
 Dean Edwin Swift, Olathe
 Francis Arthur Vaughn, Hartford
 John Victor Venard, Manhattan
 Millard Waldo Wilcox, Wichita

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Hugh Carson Adams, Sterling
 Louis Carlyle Aicher, Hays
 Clifford Lankford Alcorn, Carbondale
 Cecil Francis Arens, Topeka
 John Virgil Baptist, Uniontown
 Henry Daniel Bentrup, Deerfield
 Berwyn Yelton Brewer, Wichita
 Ralston Harold Clouse, Preston
 Charles Elmer Cole, Manhattan
 Wilbur Eugene Combs, Manhattan
 Chevalier Francis Crandell, Falls City, Neb.
 David Scott Crippen, Council Grove
 Dale Rush Curtis, Manhattan
 Wendell Philip Dubbs, Ransom
 Robert Lyle Evans, Sabetha

Glenn Dungey Farrar, Wichita
 Archie French, Augusta
 Richard Dale Gentry, Garden City
 Richard Howard Hamilton, Washington
 *Frederick William Hayer, Syracuse
 Robert Leroy Heinsohn, Newton
 Eldon Howard Hermes, Great Bend
 Thomas W. Holmes, Emporia
 Maurice Wilson Horrell, Baldwin City
 Junior H. Howard, Oberlin
 Russell Joseph Hurt, Manhattan
 Earle Lewis Kent, Manhattan
 John Godfred Kimen, Manhattan
 William Carroll Lacy, Everest
 Stanley Taylor Merrill, Abilene

* In absentia.

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING—*Concluded*

Marion Francis Miller, Manhattan
 Clifford Franklin Newell, Manhattan
 Leon Fred Nixon, Manhattan
 Glenn O. Olson, Opolis
 Melvin George Peterson, Marysville
 Benjamin David Pile, Ottawa
 Arthur Abraham Regier, Elbing

John Monroe Sears, Kanorado
 Howard Farnsworth Spainhour, Nickerson
 Anselm Ignatius Sramek, Atwood
 Virgil Leland Weaver, Garden City
 Claude Clayton Young, Utica
 Glenn Mayer Young, Kansas City

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Harvey Clayton Bates, Augusta
 Thomas Gilbert Beckwith, Hiawatha
 George Ralph Brindle, Fredonia
 Lloyd Richard Burdge, Parsons
 Arnold Joseph Churchill, Junction City
 Franklin Grimes Colladay, Hutchinson
 Marvin Hollis DeLapp, Cherokee
 John Joseph Donnelly, Manhattan
 *Vorras Alexander Elliott, McPherson
 John Leo Flentie, Centralia
 *James C. Foulds, Hutchinson

Ralph G. Hendrickson, Manhattan
 Rolland Theodore Hinkle, Carbondale
 George Wilson King, Manhattan
 William Look, Manhattan
 Ralph Edwin Mariner, Fredonia
 James Lawrence McIntire, Burlingame
 Norris Edward Miller, Kansas City
 James Frederick Ransom, Homewood
 Arthur George Rosenkrans, Dorsey, Neb.
 William Martin Turner, St. Marys

Division of General Science

BACHELOR OF SCIENCE

*Orval Jack Abel, Green
 John Henry Barhydt, Hutchinson
 Herbert Wayne Beeman, Hutchinson
 Paul Everett Blackwood, Talmo
 Wilma Lois Byers, Hepler
 Claude Cyril Cheney, Kanorado
 Vada Faye Crawford, Little River
 Ernest Dobrovolny, Manhattan
 Anna Marie Edwards, Athol
 *Gerald Franklin Ely, Spivey
 Evan Alexis Hart, Cedar Falls, Iowa
 Laura Lou Hopkins, Sabetha
 Dorothy Etna Jobling, Caldwell
 Alice Day Kimball, Manhattan
 Grace Sadie Mann, White City
 Edmund Peter Marx, Manhattan
 Myrna Amelia McClure, Manhattan
 Helen Prudence McCord, Topeka

Lloyd Everett McDaniel, Michigan Valley
 Crystal Elaine McNally, Iola
 Margaret Naida More, Glen Elder
 Clifton Walter Pangburn, Luray
 Willard Alden Parker, Clearwater
 Gardner Charles Sellers, Downs
 Roberta La Vone Shannon, Geneseo
 Edward Temple Sheldon, Topeka
 Richard Ray Simmons, Ashland
 Theodore Sommers, Leoti
 Irma Lyle Stanbery, Jewell
 Carolyn Mary Stark, Topeka
 Gwendolyn Louise Starkey, Hutchinson
 Elsie Mildred Stevens, Manhattan
 Hilmar Clinton Stuart, Nickerson
 Helen Louise Vickburg, Talmage
 Harold Wierenga, Cawker City
 Velma Ruth Wilkerson, Smith Center

BACHELOR OF SCIENCE IN COMMERCE

Henry Everett Anderson, Richland
 Lawrence Alfred Antenen, Bazine
 Herbert Lewis Beckett, Garden City
 Frederick Elmo Beeler, Jewell
 Fred Charles Bramlage, Junction City
 Charles Elbert Cheney, Abilene
 Pauline Elizabeth Compton, Manhattan
 Loren Wesley Elliott, Clay Center
 Lawrence Charles Froelich, Abilene
 Gerald Goodale Green, Norton
 Howard Willard Johnson, Sublette
 Henry Charles Kirk, Scott City
 Leslie Kummer Lancaster, Junction City

Catherine Beatrice Mitchell, Manhattan
 John Donald Porter, Mount Hope
 Laurence Allen Pratt, Manhattan
 Paul John Rohm, Topeka
 Harold Eugene Ross, Wanego
 Robert Homer Russell, Auburn
 John McPherson Rutherford, Manhattan
 Lawrence Ralph Schmutz, Chanute
 Homer Otis Taylor, Topeka
 Dwight Pell Teed, Weskan
 *John Herman Tietze, Kansas City
 Melvin Orville Ward, Egbert, Wyo.

BACHELOR OF SCIENCE IN INDUSTRIAL CHEMISTRY

Merle Alfred Dodge, Manhattan
 Henry Lee Huston, Fort Scott
 Howard Maxwell Kindsvater, Wichita
 Charles Cornelius Murphy, Clyde

James Byron Nash, Wichita
 Clayton Omar Obenland, Manhattan
 Donald Baker Parrish, Fort Scott
 *Arthur Duckworth Tindall, Manhattan

BACHELOR OF SCIENCE IN INDUSTRIAL JOURNALISM

Francis Daniel Baker, Manhattan
 Charlotte Lela Buchmann, Clay Center
 Max Lewis Burk, Manhattan
 Marjorie Willis Call, Manhattan
 Nelda Marion Carson, Morganville
 Richard George Fowler, Holton
 Mary Jane Kahl, Topeka
 Elenor Lee Kubin, McPherson

Thelma Nichols, Manhattan
 Marianna Ozment, Manhattan
 Paul Francis Ragland, Manhattan
 Marjorie Jean Shellenberger, Hutchinson
 Ruth Thomas, Baxter Springs
 Winifred Wolf, Ottawa
 Rachel Faye Worrel, Manhattan

* In absentia.

BACHELOR OF SCIENCE IN MUSIC EDUCATION

Bernice Eileen Covey, Miltonvale
 Julia Ellen Crow, Manhattan
 William David Fitch, Manhattan
 Margaret Anna Hempler, Almena
 Margaret Belle Ratts Hendrickson, Atlanta

Lucille Evangeline Herndon, Amy
 Margaret Gloria Higdon, South Haven
 Shirley Maxine Jacobs, Lenora
 Elizabeth Anne Shackelford, Cameron, Mo.
 Kenneth Boyd Thompson, Wichita

BACHELOR OF SCIENCE IN PHYSICAL EDUCATION

Verna Lucille Anderson, Topeka
 Richard Elliott Armstrong, Riley
 Joseph Franklin Creed, Manhattan
 Inez Vera King, Junction City
 Joe Kenneth McNay, Manhattan

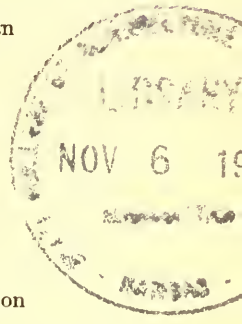
Clinton Gerald Roehman, White City
 Mary Lois Rynders, Wichita
 Arlene Frances Smith, Topeka
 Lois Deming Stingley, Manhattan
 George William Watson, Clifton

Division of Home Economics

BACHELOR OF SCIENCE IN HOME ECONOMICS

Blanche Rosalind Almén, McPherson
 Frances Elaine Bell, Marysville
 *Hazel Florence Bland, Garden City
 Grace Louise Booker, Clay Center
 Mary Lee Braerton, Denver, Colo.
 Mabel Rebecca Brasche, Volland
 Wilma DeNell Brewer, Riley
 Edith Marion Burt, Manhattan
 Ethel Irene Call, Mound Valley
 Mary Jane Frances Clark, Junction City
 Lenore Vinneal Converse, Harveyville
 Wilma Marion Cowdery, Lyons
 Marlene May Dappen, McPherson
 Alice Louise Droz, Humboldt
 Edith Fern Frankenbery, Altoona
 Marjorie Christine Fuhrman, Atchison
 Elsie Marie Fuls, Langdon
 Clara Bess Garrison, Lincolnville
 Rosema Louise Holman, Manhattan
 Geneva Johnson, Frankfort
 Helen Sylvia Johnson, Wichita
 Ruth Elizabeth Jorgenson, Manhattan
 Rhea Irene Keeler, Nickerson
 Althea Leonore Keller, Enterprise
 Kathryn Marie Knechtel, Larned
 Justina Susie Kroeker, Hutchinson
 Helen Katherine Latta, Holton
 Ruth Merriam Linscott, Holton

Lois Anne Lumb, Wakefield
 Edna Leona Mann, Quinter
 Geneva Louise Marble, Troy
 Kathryn Marquart, Hutchinson
 Arlene Marshall, Herington
 Frances Emma Moss, Lincoln
 *Margaret Ann Murphy, Wellington
 Jennie Joy Nelson, Holton
 Mollie Berthel Nix, Kansas City
 Maxine Josephine Osbourne, Manhattan
 Rachel Edith Roberts, Morrill
 Myra May Roth, Ness City
 *Mary Catherine Ryan, Manhattan
 Laura Ward Sample, Manhattan
 Elsie Fern Selby, Manhattan
 Rose Martha Skradski, Kansas City
 Elizabeth Smith, Kansas City
 Mary Ellen Springer, Manhattan
 Doris Jenelle Thompson, Marion
 Marian Ayres Todd, Leavenworth
 Pauline Vail, Plains
 Margaret Van Orsdol, Silver Lake
 Elizabeth Daniel Walbert, Columbus
 Mary Elisabeth Frances Wilkes, Leavenworth
 Eunice Carolyn Williams, Osage City
 Ruby Alice Wilson, Council Grove
 Ruth Wilson, Topeka



BACHELOR OF SCIENCE IN HOME ECONOMICS AND NURSING

Helen Evelyn Axelton, Manhattan

Division of Veterinary Medicine

DOCTOR OF VETERINARY MEDICINE

Stephen Grieve Asbill, Manhattan
 Otis Elmo Ballenger, Manhattan
 Monroe Balton, Wichita
 Jesse Clyde Brock, Sale City, Ga.
 Joseph Leo Cavanaugh, Esbon
 Arthur Henry Lawton Daman, Manhattan
 Willem Dekker-van Ghyl, Manhattan
 Lawrence Charles Donat, Manhattan
 Herbert Henry Fechner, Manhattan
 Oscar Frederick Fischer, Junction City
 Edward Frahm, Manhattan
 Hubert Raymond Hein, Washington
 Leonard Wilbur Hibbs, Manhattan
 Crosby Johnson Hook, Manhattan
 David Marion Howard, Manhattan
 Harold Jack Jewell, Manhattan
 Sanford Edwin Johnson, Manhattan
 Donald Clifford Kelley, Great Bend
 Samuel Kelsall, III, Lawrence
 George Miller Kerr, Manhattan
 Joseph Frank Knappenberger, Penaloza
 James Kral, Manhattan
 Elmer Ira Long, Manhattan
 Don Lee Mace, Manhattan
 Joseph David Manges, Courtland
 Glenn Melvin McFadden, Natoma

Edwin Louis Millenbruck, Herkimer
 Roy Forest Miller, Manhattan
 Wilson Marshal Osteen, Manhattan
 Wilbert Edwin Osterholtz, Manhattan
 Eusebio Antonio Pérez, Panama City, Panama
 Leonce Louis Picot, III, Manhattan
 William Henry Rockey, Manhattan
 Leonard Anthony Rosner, Bucyrus
 Paul Daniel Ross, Otterville, Mo.
 Kenneth Earl Sadler, Seneca
 Clarence Peter Schmidt, Manhattan
 John Clarence Smith, Manhattan
 Jacob Emmil Spring, Pittsburg
 Charles Dougherty Stafford, Manhattan
 Clarence Melvin Stay, Manhattan
 Frank Allen Story, Manhattan
 *Willis Alexander Thomson, Girard
 Clarence Campbell Vierling, Manhattan
 William Fernando Waddell, Manhattan
 Clement Earl Watson, Manhattan
 Lillis Raphael Wempe, Seneca
 Theodore Shields Williams, Kansas City
 William Welton Williamson, Manhattan
 Edwin Strauel Wiseman, Delphos
 Wilbur Harold Wiswell, Manhattan
 Samuel Frederic Zickerfoose, Rossville

* In absentia.

COMMISSIONS AWARDED

SECOND LIEUTENANT, OFFICERS' RESERVE CORPS

Lyman Emmett Abbott, Gretna	§Alvin Jess Mistler, Leavenworth
*†Orval Jack Abel, Green	Charles Cornelius Murphy, Clyde
Richard Elliott Armstrong, Riley	Marion Burns Noland, Manhattan
Stephen Grieve Asbill, Manhattan	Clifton Walter Pangburn, Luray
George Ralph Brindle, Fredonia	Frank George Parsons, Manhattan
†Edward Lewis Broghamer, Wilkes Barre, Pa.	Melvin George Peterson, Manhattan
*John Bruce Burrowes, Chetopa	Leonce Louis Picot, III, Manhattan
Wilbur Eugene Combs, Manhattan	Floyd Volney Pinnick, Ulysses
Roy Doubt Crist, Brewster	Leland John Propp, Marion
Arthur Henry Daman, Manhattan	William Henry Rockey, Jr., Manhattan
Evan Lloyd Davis, Topeka	Clinton Gerald Roehrman, White City
Vaughn Eugene DeGeer, Jr., Lake City	Melvin Palmer Rogers, Glasco
Lawrence Charles Donat, Manhattan	William Hugh Roth, Ness City
Oscar Frederick Fischer, Jr., Junction City	Earl Leo Ruff, Manhattan
John Leo Flentie, Centralia	Clarence Peter Schmidt, Manhattan
Archie French, Augusta	Frederic Raymond Senti, Cawker City
Dwight Ivan Gillidett, Plains	Ward Haynes Shurtz, Manhattan
Ronald George Grebner, Manhattan	Harry Grant Sitler, Lake City
Robert Leroy Heinsohn, Newton	Robert Drake Spencer, Leavenworth
Leonard Wilbur Hibbs, Manhattan	*Lawrence Eric Spong, Enterprise
Rolland Theodore Hinkle, Carbondale	Charles Dougherty Stafford, Manhattan
Arthur Jacob Hochuli, Holton	Oren Paul Stoner, Sabetha
Victor Hopeman, Independence	Dean Edwin Swift, Olathe
Howard Busby Hudiburg, Independence	Charlie Bailey Team, Wichita
†George Loomis Jobling, Caldwell	Albert Adam Thornbrough, Lakin
Donald Clifford Kelley, Great Bend	Wallace William Thurston, Elmdale
George Miller Kerr, Manhattan	William Martin Turner, St. Marys
Henry Adams Kilian, Chapman	John David Umberger, Manhattan
Leslie Waterman King, Wichita	Clarence Campbell Vierling, Manhattan
Henry Charles Kirk, Scott City	Robert Elston Wallerstedt, Manhattan
William Charles Kosinar, Manhattan	William Theodore Walters, Manhattan
Clark Fritz Kostner, Murdock	§Melvin Orville Ward, Egbert, Wyo.
**Otto Walter Ludloff, Honolulu, T. H.	James Howard Watson, Shawn'e
Don Lee Mace, Manhattan	Lillis Raphael Wempe, Seneca
James Daniel Mayden, Junction City	Winston Douglas Wetlaufer, Manhattan
Arthur Neil McCormick, Wichita	†Millard Waldo Wilcox, Wichita
Glenn Melvin McFadden, Natoma	Luke Avery Wilper, Harris
James Lawrence McIntire, Burlingame	Edwin Strauel Wiseman, Delphos
Tillman Henry McNary, Jr., Manhattan	Wilbur Harold Wiswell, Manhattan
Joe Kenneth McNay, Manhattan	*Dorwin Clair Wright, Bronson
‡William Henry Meissinger, Atwood	Claude Clayton Young, Utica
Edwin Louis Millenbruck, Herkimer	Leonard Albert Zerull, Ellis
Roy Forest Miller, Manhattan	Frederic Samuel Zickefoose, Rossville

These additional graduates in Veterinary Medicine were commissioned without completing the advanced course of the Reserve Officers' Training Corps because the Veterinary unit was discontinued May 27, 1935.

Joseph Leo Cavanaugh, Esbon	Elmer Ira Long, Manhattan
Edward August Frahm, Manhattan	Joseph David Manges, Courtland
Crosby Johnson Hook, Manhattan	Kenneth Earl Sadler, Seneca
Harold Jack Jewell, Manhattan	Jacob Emmil Spring, Pittsburg
Sanford Edwin Johnson, Manhattan	William Fernando Waddell, Manhattan
Joseph Frank Knappenberger, Penalosa	Clement Earl Watson, Manhattan
James Kral, Manhattan	William Welton Williamson, Manhattan

* In absentia. † Students commissioned January 26, 1935. ‡ Students commissioned in camp, July, 1934. ** Student commissioned at end of summer school, August 3, 1934. § Certificate in lieu of commission until the age of 21 is reached.



Eleventh Annual Summer School Commencement**July 26, 1935****DEGREES CONFERRED****Division of Graduate Study****MASTER OF SCIENCE**

Ross Harris Anderson, B. S., Kansas State College, 1930; Richland
 Silas Solomon Bergsma, B. S., Kansas State College, 1929; Howard
 Marguerite Virginia Chaffin, B. S., Kansas State College, 1931; Caldwell
 Roy Engle Clegg, B. S., Kansas State College, 1922; Altamont
 Dorothy Rosencrans Donnelly, B. S., Kansas State College, 1934; Manhattan
 Margaret Lansden Foster, B. S., Kansas State College, 1926; Manhattan
 Hazel Dell Howe, B. S., Kansas State College, 1921; Manhattan
 Walter Clare Hulburt, B. S., Kansas State College, 1934; Wichita
 Ruth Alice Kramer, B. S., Northwest Missouri State Teachers College, 1933; Maryville, Mo.
 Peter Rudolph Linscheid, A. B., Bethel College, 1925; Attica
 Norman John Mellies, B. S., Kansas State College, 1933; Ellinwood
 Clark Leroy Morford, B. S., Kansas State College, 1932; Olsburg
 Donald Dudley Murphy, B. S., Kansas State College, 1922; Gardner
 Winifred Ann Nachtrieb, B. S., Kansas State College, 1930; Atchison
 Alma Dale Newell, B. S., Kansas State College, 1916; Durham
 James Thomas Newton, B. S., Kansas State Teachers College, Pittsburg, 1930; Douglass
 Myra Jane Newton, B. S., State College of Washington, 1931; Chewelah, Wash.
 Ernest Lee Raines, B. S., Kansas State College, 1924; Mound City
 Hubert Maxwell Rivers, B. S., Kansas State College, 1934; Hutchinson
 Miriam Rogers, B. A., Coe College, 1934; Cedar Rapids, Iowa
 Lavell Robert Schruben, B. S., Kansas State College, 1932; Centralia
 Howard Dewight Smethers, B. S., Kansas State Teachers College, Emporia, 1927; Haddam
 Arch Thompson, B. S., Oklahoma Agricultural and Mechanical College, 1925; Blackwell, Okla.
 Forrest Lorenzo Walker, B. S., Kansas State Teachers College, Pittsburg, 1932; Manhattan
 Paul Frank Warner, B. S., Kansas State College, 1934; Manhattan
 John Hendrick Whitlock, D. V. M., Iowa State College, 1934; Manhattan

Division of Agriculture**BACHELOR OF SCIENCE IN AGRICULTURE**

Samuel Edward Alsop, Wakefield	Oliver Willard Kershaw, Garrison
*Ervin William Bevin, Manhattan	James Randle Ketchersid, Manhattan
Earl Clarence Borgelt, Zenda	Robert Emmett Phillips, Jr., Manhattan
Sidney Lorenz Franz, Soldier	Harold Parker Walker, Bucklin
Harry White Grass, III, La Crosse	

BACHELOR OF SCIENCE IN MILLING INDUSTRY

Max Elton McCluggage, Manhattan

Division of Engineering**BACHELOR OF SCIENCE IN ARCHITECTURE**

Ralph Emen Mitchell, Manhattan

BACHELOR OF SCIENCE IN ARCHITECTURAL ENGINEERING

Arthur Randolph James, Manhattan

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

Howard Busby Hudiburg, Independence	Herman Wilson Zabel, Westmoreland
-------------------------------------	-----------------------------------

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Donald Curtis, Kansas City	John David Umberger, Manhattan
John Henry Denham, Pittsburg	Lewis Alfred Wilson, Valley Center
*Ben Alfred Sellers, Lyons	

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Leonard Maurice Aubuchon, Emporia	Hugo Frederick Lucas, Manhattan
Stephen Delladio, Frontenac	Howard Walter Phelps, Manhattan
*David Clarence Hanson, Pittsburg	Louis Charles Schwanke, Alma

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Vern Emmett Stepp, Neodesha

* In absentia.

Division of General Science**BACHELOR OF SCIENCE**

William Everett Brown, Junction City	Ned William Kimball, Manhattan
Gerald Wayne Callahan, Coffeyville	James Daniel Mayden, Junction City
Ruth Elizabeth Crouch, Everest	Donald Wesley Miller, Hanover
Lawrence Aldon Darnell, Osborne	Gladys Esther Niles, Liberal
Alice Louise Denton, Manhattan	Lawrence Eric Spong, Enterprise
Hal Hollingsworth Doolittle, Manhattan	Elsie May Tempero, Clay Center
*La Vare June Fossnight, Ottawa	Wallace William Thurston, Elmdale
Edward Thomas Haslam, Council Grove	Roland Franklin Turner, Manhattan
Hazel Ruth Heikes, Wakefield	James Paul Vandergriff, Douglass
Myrtle Helena Johnson, Concordia	Paul Chapman Wilber, Belleville

BACHELOR OF SCIENCE IN COMMERCE

Morris Finkelstein, Syracuse, N. Y.	Leland John Propp, Marion
Carl Lawrence Kirk, Winfield	Carl William Schnell, Manhattan
Charles Ragland Lutz, Hutchinson	Charles Frederick Turner, Hartford
Sidney Bertrand North, Coffeyville	

BACHELOR OF SCIENCE IN INDUSTRIAL CHEMISTRY

Buell Wesley Beadle, Talmage	Guy Hussey Lemon, Manhattan
Garland Clarence Hoglund, Miller	

BACHELOR OF SCIENCE IN INDUSTRIAL JOURNALISM

Elsie Duesing, Morrill	John Boyd Underwood, Manhattan
Emma Anne Storer, Muncie	

BACHELOR OF SCIENCE IN MUSIC EDUCATION

Esther Almira McFillen, Cedar	Oral Leland Roberts, Ogden
Helen M. McGill, Moscow	Lois Laverne Schnoor, Manhattan

BACHELOR OF SCIENCE IN PHYSICAL EDUCATION

Oren Paul Stoner, Sabetha

Division of Home Economics**BACHELOR OF SCIENCE IN HOME ECONOMICS**

Geraldine Mabel Bender, Holton	Zelda Mary Kleven, Manhattan
Edna Marjorie Brubaker, Marysville	Ethel May Kurz, Coldwater
Hildred Ann Cooper, Lyons	Carrie Elizabeth Marshall, Westmoreland
Pauline Violet Crawford, Luray	Helen Ruth Meyer, Anthony
Ferne Lucille Dixon, Agra	Lela Ruth Oliver, Iola
Elizabeth Fairzina Elledge, Parsons	Elna Joyce Olson, Manhattan
Evelyn Pauline Ezell, Pratt	Hattie Elizabeth Reynolds, Gary, Ind.
Mary Frances Hurley, Paola	Margaret Jean Turner, Hartford
Mary Carolyn Jordan, Topeka	Esther Elizabeth Walter, Princeton

Division of Veterinary Medicine**DOCTOR OF VETERINARY MEDICINE**

John Englen Bertus Mouw, Manhattan	Alfred Everett White, Jr., Manhattan
Charles Frank Prechal, Manhattan	

* In absentia.

HONORS

PHI KAPPA PHI

1934-1935

Division of Graduate Study

Ivan Pratt

Margaret Jeanne Tabor

Division of Agriculture

Donald Risdon Cornelius
Charles Ernest Murphey
Robert Emmett Phillips, Jr.
Allison Glenn Pickett

George Albert Rogler
Ralph Danforth Shipp
Albert Adam Thornbrough
J Forest Wolf

Division of Engineering

John Virgil Baptist
Fred Jacob Benson
Carl James Chappell
Arnold Joseph Churchill
Wilbur Eugene Combs
Warren William DeLapp
William Lovejoy Dole
Wendell Dubbs

Victor Hopeman
Maurice Wilson Horrell
Junior H. Howard
Ruth Elizabeth Langenwaller
Howard Elliott Rivers
Alan Maxwell Schaible
Frederic Raymond Senti
Dean Edwin Swift

Division of General Science

Buell Wesley Beadle
Paul Everett Blackwood
Bernice Eileen Covey
Anna Marie Edwards
William David Fitch
Edward Thomas Haslam
Edmund Peter Marx
Lloyd Everett McDaniel
Donald Wesley Miller

Catherine Beatrice Mitchell
Donald Baker Parrish
John McPherson Rutherford
Roberta LaVone Shannon
Dwight Pell Teed
Helen Louise Vickburg
Harold Wierenga
Winifred Wolf

Division of Home Economics

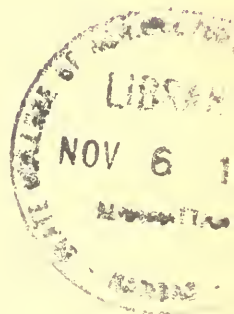
Wilma DeNell Brewer
Lenore Vinneal Converse
Ruth Elizabeth Jorgenson
Althea Leonore Keller

Doris Jenelle Thompson
Jean Margaret Turner
Elizabeth Daniel Walbert
Ruth Wilson

Division of Veterinary Medicine

Herbert Henry Fechner
Oscar Frederick Fischer
Donald Clifford Kelley

Joseph Frank Knappenberger
Edgar William Millenbruck



SENIOR HONORS**1935**

In each division of the College high honors are awarded at commencement to not more than three percent of the senior class having the highest standing in scholarship during their junior and senior years. Honors are also awarded to not more than an additional seven percent of the senior class.

Division of Agriculture**HIGH HONORS**

Allison Glenn Pickett

*Albert Adam Thornbrough

HONORS

*Donald Risdon Cornelius
Charles Ernest Murphey
Robert Emmett Phillips, Jr.

George Albert Rogler
J Forest Wolf

Division of Engineering**HIGH HONORS**

*Fred Jacob Benson
*Vorras Alexander Elliott
Howard Walter Phelps

*Arthur Abraham Regier
Frederic Raymond Senti

HONORS

Arnold Joseph Churchill
*Wilbur Eugene Combs
Maurice Wilson Horrell
*Junior H. Howard
*Ruth Elizabeth Langenwalter

*Howard Elliott Rivers
*Alan Max Schaible
*Dean Edwin Swift
Herman Wilson Zabel

Division of General Science**HIGH HONORS**

*Buell Wesley Beadle
*Paul Everett Blackwood

*Lloyd Everett McDaniel
John McPherson Rutherford

HONORS

*Bernice Eileen Covey
*Anna Marie Edwards
Edward Thomas Haslam
*Edmund Peter Marx
Donald Baker Parrish

Oral Leland Roberts
*Roberta LaVone Shannon
Helen Louise Vickburg
Harold Wierenga
Winifred Wolf

Division of Home Economics**HIGH HONORS**

Lenore Vinneal Converse
*Ruth Elizabeth Jorgenson

*Margaret Jean Turner

HONORS

*Althea Leonore Keller
Frances Emma Moss

Doris Jenelle Thompson
*Elizabeth Daniel Walbert

Division of Veterinary Medicine**HIGH HONORS**

*Oscar Frederick Fischer

Donald Clifford Kelley

HONORS

Lawrence Charles Donat
Herbert Henry Fechner

*Joseph Frank Knappenberger

* These persons were awarded sophomore honors at the end of their sophomore year.

SOPHOMORE HONORS**1935**

In each division of the College honors are awarded at commencement to not more than five percent of the sophomore class having the highest standing up to the close of the sophomore year.

Division of Agriculture

Clarence LaFollette Bell
Robert Tudor Latta
Horton Meyer Laude

Lyle Moyer Murphy
Oren Jared Reusser

Division of Engineering

Francis Wendell Beichley
Robert John Burns
Loren Dwight Grubb
George Henderson
William Wallace Litfin

Max Lyon
Hobart Graham Mariner
Max McCord
Perry Wendell

Division of General Science

Marie Marcella Fox
Robert Louis Griffith
Ella Gertrude Johnstone
Edward Tracy Jones
Katharine Frances Kilmer
Gladys Irene Poole

Elsie Elizabeth Prickett
Janet Annabel Samuel
Garnet Evadna Shehi
Sigrid Johanna Sjogren
Jean Brown Willoughby

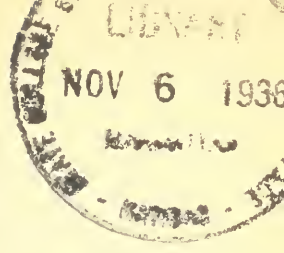
Division of Home Economics

Irene Eleanor Baldwin
Helen Virginia Hall
Sarah Josephine Lister

Pauline Eula Sherwood
Mildred Crook Stadel

Division of Veterinary Medicine

Loris Arthur Dehner



GENERAL INDEX

	PAGE
Absence and Tardiness.....	85
Accounting, Courses in.....	212
Accounting, Curriculum in Commerce with Special Training in.....	185
Administrative officers.....	10
Admission, Methods of.....	67
Admission, Requirements for.....	65
Advanced degrees.....	98
Agricultural Administration, Curriculum in.....	106, 110
Agricultural agents, Alphabetical list of.....	43
Agricultural agent work.....	303
Agricultural Economics, Courses in.....	114
Agricultural Engineering, Courses in.....	148
Agricultural Engineering, Curriculum in.....	136, 140
Agricultural Experiment Station.....	132
Agricultural societies.....	91
Agriculture, Curriculum in.....	105, 108
Agriculture, Division of.....	104
Agriculture, Electives in Curriculum in.....	109
Agriculture in the Summer School.....	108
Agronomy, Courses in.....	116
Aims and purposes of the College.....	57
American Chemical Society.....	94
Anatomy, Courses in.....	295
Animal Husbandry, Courses in.....	119
Animal Husbandry and Veterinary Medicine, Six-year Curriculum in.....	108, 291, 293
Applied Mechanics, Courses in.....	150
Applied Music, Curriculum in.....	175, 181
Aptitude tests for freshmen.....	83
Architectural Engineering, Curriculum in.....	136, 141
Architecture, Courses in.....	153
Architecture, Curriculum in.....	137, 142
Art, Courses in.....	277
Art, Curriculum in Home Economics and.....	270, 273
Assembly, General, of students and faculty.....	83
Assignment and registration schedule.....	9
Assignment to studies.....	83
Assignments, Changes in.....	84
Athletics.....	255
Auditing classes.....	84
Bacteriology, Courses in.....	194
Band, The College.....	94, 254
Bible study.....	89
Board and rooms.....	75

	PAGE
Board of Regents, The State	10
Botany and Plant Pathology, Courses in	197
Boys' and Girls' Club work	305
Branch Agricultural Experiment Stations	134
Buildings and grounds	59
Bureau of Research in Home Economics	289
Business directions	82
Calendar, The College	7
Certified Public Accountant, Certificate of	209
Chemical Engineering, Curriculum in	137, 143
Chemistry, Courses in	201
Chemistry, Industrial, Curriculum in	175, 178
Child Welfare and Euthenics, Courses in	280
Chorus, The College	254
Christian Associations, The	89
Civil Engineering, Courses in	156
Civil Engineering, Curriculum in	138, 144
Classes, Minimum size of	89
Classification of students	88
Clinics, Courses in	299
Clothing and Textiles, Courses in	282
Colby Branch Agricultural Experiment Station	135
College buildings, Descriptions of the	59
College calendar	7
College Extension, Division of	301
College Library, The	96
College Orchestra, The	94, 259
Commerce, Curriculum in	184
Commissions awarded in 1935	316
Conditions, How removed	87
Correspondence study	306
County agent work	303
County agricultural agents	43
Course—see, also, Curriculum, and Special courses.	
Course numbers	89
Credit courses, in Extension	309
Credits for extra work	88
Curricula in Music	175, 180, 181, 250, 251
Curriculum in Agricultural Administration	106, 110
Curriculum in Agricultural Engineering	136, 140
Curriculum in Agriculture	105, 108
Curriculum in Animal Husbandry and Veterinary Medicine	108, 291, 293
Curriculum in Applied Music	175, 181
Curriculum in Architectural Engineering	136, 141
Curriculum in Architecture	137, 142
Curriculum in Chemical Engineering	137, 143
Curriculum in Civil Engineering	138, 144
Curriculum in Commerce	176, 184

	PAGE
Curriculum in Commerce and Accounting.....	176, 185
Curriculum in Electrical Engineering.....	138, 145
Curriculum in General Science.....	174, 176
Curriculum in General Science and Veterinary Medicine, Six-year, 176, 291, 294	
Curriculum in Home Economics.....	269, 272
Curriculum in Home Economics and Art.....	270, 273
Curriculum in Home Economics, and Institutional Management and Dietetics.....	270, 274
Curriculum in Home Economics and Journalism.....	270, 275
Curriculum in Home Economics and Nursing.....	270, 275
Curriculum in Industrial Chemistry.....	175, 178
Curriculum in Industrial Journalism.....	175, 179
Curriculum in Landscape Architecture.....	138, 146
Curriculum in Landscape Gardening.....	107, 111
Curriculum in Mechanical Engineering.....	139, 147
Curriculum in Milling Industry.....	108, 111
Curriculum in Music Education.....	175, 180
Curriculum in Physical Education for Men.....	175, 182
Curriculum in Physical Education for Women.....	175, 183
Curriculum in Veterinary Medicine.....	290, 291
Curriculum in Veterinary Medicine and Animal Husbandry.....	108, 291, 293
Curriculum in Veterinary Medicine and General Science.....	176, 291, 294
Dairy Husbandry, Courses in.....	122
Deans, List of.....	10
Deficiencies, When made up.....	66
Degrees conferred by the College.....	70
Degrees, Professional, in Engineering and Architecture.....	101
Degrees, Recipients of, in 1935.....	312
Department of Agricultural Economics.....	113
Department of Agricultural Engineering.....	148
Department of Agronomy.....	116
Department of Anatomy and Physiology.....	294
Department of Animal Husbandry.....	118
Department of Applied Mechanics.....	150
Department of Architecture.....	152
Department of Art.....	277
Department of Bacteriology.....	194
Department of Botany and Plant Pathology.....	197
Department of Boys' and Girls' 4-H Club Work, in Extension.....	305
Department of Chemistry.....	201
Department of Child Welfare and Euthenics.....	280
Department of Civil Engineering.....	156
Department of Clothing and Textiles.....	281
Department of County Agent Work, in Extension.....	303
Department of Dairy Husbandry.....	122
Department of Economics and Sociology.....	209
Department of Education.....	213
Department of Electrical Engineering.....	159
Department of English.....	221

	PAGE
Department of Entomology	226
Department of Extension Schools, in Extension	302
Department of Food Economics and Nutrition	283
Department of Geology	229
Department of History and Government	231
Department of Home Economics, in Extension	304
Department of Home Study, in Extension	306
Department of Horticulture	125
Department of Household Economics	286
Department of Industrial Journalism and Printing	236
Department of Institutional Management	287
Department of Machine Design	164
Department of Mathematics	240
Department of Mechanical Engineering	166
Department of Military Science and Tactics	243
Department of Milling Industry	128
Department of Modern Languages	247
Department of Music	249
Department of Pathology	296
Department of Physical Education and Athletics	255
Department of Physics	260
Department of Poultry Husbandry	130
Department of Public Speaking	263
Department of Rural Engineering, in Extension	305
Department of Shop Practice	169
Department of Student Health	95
Department of Surgery and Medicine	298
Department of Zoölogy	266
Division of Agriculture	104
Division of College Extension	301
Division of Engineering	136
Division of General Science	174
Division of Graduate Study	97
Division of Home Economics	269
Division of Veterinary Medicine	290
Doctor of Philosophy degree, Requirements for	100
Domestic Art—see Clothing and Textiles	281
Domestic Science—see Food Economics, and Household Economics	283, 286
Dormitory (Van Zile Hall)	62
Drawing, Courses in	164, 277
Dressmaking—see Clothing and Textiles	281
Duties and privileges of students	72
Economics, Courses in	209
Education, Courses in	214
Electives, in Curriculum in Home Economics	276
Electives, in Division of General Science	186
Electrical Engineering, Courses in	160
Electrical Engineering, Curriculum in	138, 145
Employment bureau for students	90

	PAGE
Engineering, Curricula in	136, 140
Engineering, Division of	136
Engineering Experiment Station	172
Engineering in the Summer School	139
Engineering societies	92
English Language, Courses in	221
English Literature, Courses in	223
Entrance to College, Requirements for	65
Entomology, Courses in	226
Euthenics and Child Welfare, Courses in	280
Examinations	86
Expenses of students	75
Experiment Station, Agricultural	132
Experiment Station, Branches of the Agricultural	134
Experiment Station, Engineering	173
Expression—see Public Speaking	263
Extension Schools	302
Extension Service society	92
Extension—see College Extension	301
Extra work, Credits for	88
Faculty, Alphabetical list of	11
Faculty, Standing committees of the	56
Fairs, County and local	303
Farm and Home Week	303
Farm Crops, Courses in	116
Fees and tuition	72, 98, 255
Food Economics and Nutrition, Courses in	283
Fort Hays Branch Agricultural Experiment Station	134
French, Courses in	248
Garden City Branch Agricultural Experiment Station	135
General Agriculture, Courses in	125
General Engineering, Courses in	163
General Home Economics, Courses in	286
General information	72
General Science and Veterinary Medicine, Six-year Curriculum in	176, 291, 294
General Science, Curriculum in	174, 176
General Science, Division of	174
General Science society	92
Geology, Courses in	229
German, Courses in	248
Government, Courses in	234
Grades, Reports of	87
Grading, System of	86
Graduate assistantships	82, 102
Graduate Study, Division of	97
Graduation, Requirements for	70
Grounds and buildings	59
Health, Department of Student	95

	PAGE
Histology, Courses in.....	296
History and location of the College.....	57
History, Courses in.....	231
Home demonstration agents, Alphabetical list of.....	53
Home Demonstration agent work.....	304
Home Economics, Bureau of Research in.....	289
Home Economics, Curriculum in.....	269, 272
Home Economics, Division of.....	269
Home Economics Education, Courses in.....	285
Home Economics, Extension work in.....	304
Home Economics, General, Courses in.....	285
Home Economics in the Summer School.....	271
Home economics society.....	92
Home Study, Department of.....	306
Honorary and professional organizations.....	93
Honor societies.....	93
Honors awarded for scholarship.....	93
Honors, Recipients of, in 1935.....	320
Horticulture, Courses in.....	125
Household Economics, Courses in.....	286
Industrial Chemistry, Curriculum in.....	175, 178
Industrial Journalism and Printing, Courses in.....	236, 237
Industrial Journalism, Curriculum in.....	175, 179
Institutes and extension schools.....	302
Institutional Management, Courses in.....	288
Instruction and Administration, Officers of.....	11
Journalism—see Industrial Journalism.....	175, 236
Junior colleges accredited.....	68
Land, College.....	59
Landscape Architecture, Curriculum in.....	138, 146
Landscape Gardening, Curriculum in.....	107, 111
Late admission.....	69
Late assignment.....	69
Library Economics, Course in.....	240
Library, The College.....	96
Literary and scientific societies.....	90
Loan funds.....	77
Machine Design, Courses in.....	164
Master of Science degree, Requirements for.....	99
Materia Medica, Courses in.....	299
Mathematics, Courses in.....	240
Mechanical Engineering, Courses in.....	166
Mechanical Engineering, Curriculum in.....	139, 147
Medals and prizes.....	80
Medicine, Courses in.....	299
Men's Glee Club.....	254
Military Science and Tactics, Courses in.....	245
Milling Industry, Courses in.....	129
Milling Industry, Curriculum in.....	108, 111

	PAGE
Modern Languages, Courses in	248
Motor car parking regulations	82
Musical organizations	254
Music, Courses in	251
Music, Curricula in	250, 251
Newman Club, The	90
Numbering of courses	89
Nursing and Home Economics, Curriculum in	270, 275
Nutrition, Food Economics and, Courses in	283
Obstetrics, Courses in	299
Officers, Administrative	10
Officers of Administration, Instruction, and Research	11
Orchestra, The College	94, 254
Organizations, Honorary and Professional	93
Pathology, Courses in	297
Physical Education and Athletics, Courses in	256
Physical Education, Curricula in	175
Physical Education for men	256
Physical Education for women	258
Physics, Courses in	260
Physiology, Courses in	295
Point System, The	88
Post Office, The College	83
Poultry Husbandry, Courses in	130
Pre-Medical courses	177
Pre-Pharmaceutical courses	177
President of the College	10, 20
Printing, Courses in	236
Prizes and medals	80
Professional degrees in Engineering and Architecture	101
Publications of the College	82
Public Speaking, Courses in	263
Refund of fees	74
Regents, The State Board of	10
Registration and assignment schedule	9
Reports of grades	87
Research assistantships	102
Residence hall for women	62
Rooms and board	75
Rural Engineering, Extension work in	305
Scholarship deficiencies	84
Scholarships	81
Science Club	91
Scientific societies, Literary and	90
Self-support, Opportunities for	76
Seniors and graduate study	102
Shop Practice, Courses in	169
Sociology, Courses in	211
Soils, Courses in	118

	PAGE
Spanish, Courses in.....	249
Standing committees of the faculty.....	56
State Teacher's Certificate	107
Student Governing Association.....	89
Student Health, Department of.....	95
Student loan funds.....	77
Student organizations.....	89
Summer School.....	102, 108, 139, 220, 271, 317
Surgery, Courses in.....	298
Table of contents.....	3
Tardiness, Absence and.....	85
Teacher's Certificate, State	107
Tribune Branch Agricultural Experiment Station.....	135
Tuition and fees.....	72, 98, 255
Unit of high-school work defined.....	65
Van Zile Hall, residence hall for women.....	62
Veterinary Medicine, Courses in.....	299
Veterinary Medicine, Curriculum in.....	290, 291
Veterinary Medicine and Animal Husbandry, Curriculum in.....	291, 293
Veterinary Medicine and General Science, Curriculum in.....	176, 291, 294
Veterinary Medicine, Division of.....	290
Veterinary Medicine, Limited Enrollment in.....	291
Veterinary society.....	92
Vice-President of the College.....	10, 33
Vocational Agriculture, Certificates for teachers of.....	107
Women's Glee Clubs.....	254
Young Men's Christian Association.....	90
Young Women's Christian Association.....	90
Zoölogy, Courses in.....	266



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TABLE OF CONTENTS

	PAGE
Students Pursuing Graduate Work in Regular Session	5
Graduate Students	5
Senior Students	6
Special Students	6
Undergraduate Students in Regular Session	7
Seniors	7
Juniors	11
Sophomores	16
Freshmen	22
Special Students	33
Summer School Students	34
Nine-week Summer School	34
Graduate Students	34
Undergraduate Students	35
Four-week Summer School	41
Graduate Students	41
Undergraduate Students	41
Statistics	42
Record of Registration and Degrees Conferred, 1863-1936	43
College Registration, 1935-1936	44
Degrees Conferred in the Year 1935	45
Analysis of Registration, 1935-1936	46

LIST OF STUDENTS‡

Students Pursuing Graduate Work

In Regular Session

Graduate Students

- Hugh Carson Adams; Sterling
 Louis Carlyle Aicher; Hays
 *Gertrude Edna Allen; Emporia
 †Edwin Lee Andrick; Harper
 Jacob Antelyes; Manhattan
 Floyd Warnick Atkeson; Manhattan
 Irvin Milburn Atkins; Manhattan
 John Carr Ayers; Manhattan
 Margaret Dillon Bair; Minneola
 †Alvin Kornelius Banman;
 Mathiston, Miss.
 *†Clarence Orval Banta; Ottawa
 Dorothy Barfoot; Manhattan
 †Robert Claude Barnett; Osborne
 Buell Wesley Beadle; Talmage
 *Lawrence Becker; Logan
 Thomas Gilbert Beckwith; Hiawatha
 Erwin John Benne; Manhattan
 Henry Daniel Bentrup; Deerfield
 †Loren Richard Berner; Agenda
 Max Bickford; Enterprise
 Chester Bert Billings; Manhattan
 Elmer Carson Black; Utica
 Ralph Bogart; Manhattan
 *Corinne Elizabeth Bonner;
 Memphis, Tenn.
 †Hale H. Brown; Washington
 William Everett Brown; Junction City
 Marion John Caldwell; Manhattan
 †Roy Raymond Cameron; Havensville
 *†Oren Emery Campbell; Ellis
 *Helen Louise Church; Osage City
 Arnold Joseph Churchill; Junction City
 Pauline Elizabeth Compton; Manhattan
 Naomi Zimmerman Crawford; Manhattan
 Margaret Hodges Darden; Manhattan
 *Miriam Dellinger; Baldwin
 *Noblesse Armenta DeMoss; Manhattan
 *Arthur William Devor; McPherson
 Merle Alfred Dodge; Manhattan
 Carl Alfred Dorf; Manhattan
 Elsie Duesing; Morrill
 *Evelyn Dutton; Manhattan
 Beulah Ellis; Coldwater
 *Leonard Hubert Elwill; Manhattan
 *C. A. Holmes Eubanks; Manhattan
 *A. R. Evans; Manhattan
 Lewis Saxton Evans; Washington
 Louise Helen Everhardy; Manhattan
 †Vern Oren Farnsworth; Topeka
 Joseph George Feinberg; Manhattan
 Doris Hays Fenton; Manhattan
 Helen Fisher; Manhattan
 Rowland Wilburn Flournoy; Kansas City
 Vernon Daniel Foltz; Manhattan
 *Louis Johannes Fourie; Raleigh, N. C.
 Glenn Sylvester Fox; Rozel
 Marvin William Freeland; Effingham
 *Alva Everett Freeman; Manhattan
 *Marguerite Morrison Fulks; Manhattan
 *Joseph Lincoln Gale; Manhattan
 *Inez Belle Gardner; Hartford
 Annabel Alexander Garvey; Manhattan
 Emma Lynette Gatten; Manhattan
 *Hugh Gilbert Gauch; Manhattan
 Grace Geffert; Manhattan
 Virginia Louise Gibson; Potwin
 Virginia Noah Gibson; Manhattan
 Dwight Ivan Gillidett; Plains
 *David Gold; Manhattan
 Arthur Leonard Goodrich; Manhattan
 Hazel Louise Graves; Manhattan
 *George William Greenwood; Manhattan
 †Edward William Grigg; Chanute
 Hilda Rosine Grossmann; Manhattan
 Thomas Elliot Hall; Manhattan
 *Earl Dahl Hansing; Manhattan
 Florence Lavina Harold; Dresden
 Vida Agnes Harris; Manhattan
 *Marshal Benton Harrison; State College,
 N. Mex.
 †Earl Martin Hiestand; Elwood
 Rolland Theodore Hinkle; Carbondale
 Garland Clarence Hoglund; Miller
 Abram Eldred Hostetter; Manhattan
 *Helen Pansy Hostetter; Manhattan
 Junior H. Howard; Oberlin
 *†Sherman Hays Howard; Oberlin
 Lucile Whan Howells; Manhattan
 *William Luther Hoyle; Winfield
 †Percy Jennings Isaacson; Langford
 Florence Elizabeth James; Manhattan
 Hazle Marie James; Manhattan
 William Charles Janes; Manhattan
 †Elmer W. Jones; Pittsburg
 Ruthana Jones; Garden City
 Amy Kelly; Manhattan
 Earle Lewis Kent; Manhattan
 †John Humphrey Kerr; Miltonvale
 Eunice Leola Kingsley; Manhattan
 Joseph Frank Knappenberger; Penalosa
 *Christine Knight; Parkville, Mo.
 *Morgan Andrew Kreek; Manhattan
 Bernice Lydia Kunerth; Manhattan
 Lily Lee; Hongkong, China
 *Ora Mae Lee; Columbia, Mo.
 *Hugh Valentine Leitch; White City
 *Jeannette Irene Liljequist; Freeport, Ill.
 *Roger P. Link; Manhattan
 Alvin Ernest Lowe; Argonia
 Henry Wilbert Loy, Jr.; Manhattan
 Hugo Frederick Lucas; Manhattan
 Lloyd Everett McDaniel; Michigan Valley
 Hiram Temple McGehee; Manhattan
 Eva Myrtle McMillan; Manhattan
 Everett John McNay; Manhattan
 Charles Dean McNeal; Boyle
 Lehman Dedrick Madsen; Corbin
 Hubert Clyde Manis; Manhattan
 James Warren Mather; Grinnell
 †Walter Eldridge Mathewson; Topeka
 *Vivian Hope Melass;
 Johannesburg, South Africa
 John Orville Miller; Meriden

* Matriculated 1935-1936.

† Also pursuing graduate study.

GRADUATE STUDENTS—*Concluded*

- Leonard Fred Miller; Agra
†Victor Pinkerton Morey; Westmoreland
Helen Augusta Mundell; Nickerson
Harold Edwin Myers; Manhattan
*†James A. Newsome; Salina
*Alma Bryner Nichols; Waterville
Ruth Obenland; Manhattan
†George David Oberle; Carbondale
*Ruth Myrtle Pagett; Wichita
Eleanor Seibert Parrott; Manhattan
Frank George Parsons; Manhattan
Buel Roux Patterson; Manhattan
†Mart G. Pederson; Lubboch, Tex.
Frederick Adams Peery; Manhattan
Arthur Frederick Peine; Manhattan
†Wilbur Reginald Pfenninger; Salina
Robert Emmett Phillips, Jr.; Manhattan
Gerald Pickett; Manhattan
Benjamin David Pile; Ottawa
Wilfred Harold Pine; Lawrence
*W. C. Poleson; Wamego
Doris Estelle Prentice; Manhattan
†Harry Charles Quantic; Riley
*Beatrice Jemima Raddicks; Hutchinson
Mohammed Hassan Radi; Cairo, Egypt
*Willard Malcolm Reid; Manhattan
Thomas Russell Reitz; Manhattan
John Bissell Roberts; Manhattan
June Roberts; Manhattan
Mott Luther Robinson; Manhattan
*Cornelius Redwine Rogers; Lake City
Vance Mather Rucker; Manhattan
*Frank Roach Sampson; Manhattan
Carl Herman Sartorius; Garden City
Alan Max Schaible; Fairview
*Edna Marie Scheips; Manhattan
*Mae Schermerhorn; Gardner
Marlin Charles Schrader; Olivet
Luke Micheal Schruben; Manhattan
John Leon Sealey; Salina
Frederic Raymond Senti; Cawker City
*Sister Ethelburg Leuschen; Atchison
*Sister Marcella Siela; Atchison
Norman John Sollenberger; Manhattan
*Harold Monroe Spangler; Manhattan
*Grace Spoelstra; Prairie View
Theodore Christian Stebbins; White City
Charles Raymond Stumbo; Lawrence
Delos Clifton Taylor; Manhattan
Earl Hicks Teagarden; Manhattan
Wallace William Thurston; Elmdale
*Olaf Torstveit; Manhattan
Marguerite Velma Harper Umberger; Manhattan
Pauline Vail; Plains
*Carlos Fernando Vales; Merida, Mexico
*Harold Osmond Wales; Manhattan
Rees Conway Warren; Manhattan
James Wesley Wells; Winona
Adelaide Scott West; Manhattan
*Wai Sing Wong; Hunan, China
†Gene Neill Woodruff; Manhattan

Senior Students Pursuing Graduate Study

- Dorothy Alice Bacon; Sylvan Grove
Buell Wesley Beadle; Talmage
Frances Caldwell; El Dorado
Mildred Edna Chappell; Plains
Neil DeVault; Kansas City
George Kiel Faust; Parsons
Karl Frederick Finney; Salina
Chester Dale George; Manhattan
George Willis Gerber; Oneida
Martha Elizabeth Gordon; Waterville
Ruth Gresham; Manhattan
Sarah Anna Grimes; Manhattan
Robert Merriam Groesbeck; Manhattan
Howard James Haas; La Crosse
Elizabeth Rachel Knechtel; Larned
Mary Lucile McConathy; Manhattan
Vida Edith McDaniel; Edson
Howard Anthony Moreen; Salina
Charles Edgar Moorman; Manhattan
Elmer Lewis Munger; Manhattan
Royse Peak Murphy; Norton
Paul Harold Nelson; McPherson
Edward Willis Rupp; Moundridge
Charles Scott Skinner; Tyro
Wilmer Ray Smittle; Columbus
William Woodrow Templer; Moline
Ned Odell Thompson; Manhattan
Charles Philip Walters; Manhattan
Frank Isaac Zoglin; Manhattan

Special Students Pursuing Graduate Study

Helen Pansy Hostetter; Manhattan

* Matriculated 1935-1936.

† Also pursuing graduate study.

Undergraduate Students In Regular Session

The following lists include seniors, juniors, sophomores, freshmen, and special students in College. For students in the Summer Schools see lists following these.

Abbreviations here used denote curricula as follows: AA, agricultural administration; Ag, agriculture; AE, agricultural engineering; AH&V, animal husbandry and veterinary medicine; Ar, architecture; ArE, architectural engineering; C, commerce; C&A, commerce and accounting; CE, civil engineering; ChE, chemical engineering; EE, electrical engineering; GS, general science; GS&V, general science and veterinary medicine; HE, home economics; HE&A, home economics and art; HE&J, home economics and industrial journalism; HE&N, home economics and nursing; IE&D, institutional economics and dietetics; IC, industrial chemistry; IJ, industrial journalism; LA, landscape architecture; LG, landscape gardening; M, applied music; MuE, music education; ME, mechanical engineering; MI, milling industry; PE, physical education; VMP, preveterinary; VM, veterinary medicine.

SENIORS

- | | |
|--|---|
| <p>Lyman Emmett Abbott (PE); Gretna
Robert Francis Adams (CE); Wellington
Charles Laurence Allison (ChE); Newton
Henry Ben Allphin (CE); Dighton
*Dorothy Elaine Howard Alwin (MuE);
Manhattan
Doyle David Andrews (C); Salina
Jessie Yahn Andrews (GS); Manhattan
Georgia Amelia Appel (HE); Bushton
Lawrence Robert Arnett (C&A); Broughton
Gertrude Elizabeth Arnold (IJ); Newton
Francis Raymond Arnoldy (EE); Salina
Taiichi Asami (IC); Sapporo City, Japan
Lester Joseph Asher (ME); Cheyenne, Wyo.
Edward Leroy Askren, Jr. (GS);
Manhattan
Arthur Clyde Aushman (AA); Elmont
†Dorothy Alice Bacon (HE); Sylvan Grove
Charles Edgar Baker (MI); Kansas City
Donald Max Bammes (Ar); Manhattan
Kenneth Benson Banks (Ar); Gypsum
Max Monroe Barber (GS); Council Grove
Byron F. Barkley (EE); Wichita
Kemp Elmo Barley (CE); Burlington
Alice Loy Barrier (HE); Topeka
Drussilla Madge Beadle (MuE); Talmage
Bernard Frank Beaver (IC); Ottawa
Hazel Arlene Bebermeyer (IE&D);
Enterprise
Susanne Murry Beeson (HE); Wamego
Walter Mark Bellairs (CE); McPherson
Gladys Olive Bergmann (GS); Axtell
Francis Marie Bertsche (GS); Hutchinson
Matthew T. Betton (MuE); Bethel
Elmer Clarence Betz (Ag); Enterprise
Kathryn Daisy Black (PE); Council Grove
Mary Blackman (IJ); Manhattan
Robert Vincent Blanche (ChE); Manhattan
Vivian Marie Bloomfield (HE);
Arkansas City
Marje Lorraine Blythe (GS); White City
Arthur August Boeka (Ag); Colby
Albert Henry Boggs (CE); Emporia
Charles Randolph Boggs (Ag); Topeka
Leslie Jenks Bowman (ME); Lebo
Albert Henry Boyer (EE); Lawrence
Wave Lucille Boyer (HE); Kinsley
Glen Hubert Boyles (Ag); Manhattan</p> | <p>Mary Elizabeth Boys (GS); Linwood
*Robert Eston Breden (GS); Manhattan
Francis E. Brenner (EE); Waterville
O. Elizabeth Bristol (IE&D);
St. Joseph, Mo.
Gerald James Brown (AA); Circleville
Glenn Orrin Brown II (Ag);
Kansas City, Mo.
Eva Brownell (PE); Wichita
Marian Buck (IE&D); Abilene
Sherman Standford Burcher (EE); Kinsley
Lloyd Clair Burkes (ME); Nickerson
John Bruce Burrowes (ME); Chetopa
Grace Louise Burson (GS); Oakley
Ona Lee Burson (PE); Manhattan
Jean Durand Burt (HE); Manhattan
Frances M. Caldwell (GS); El Dorado
Ray W. Call (EE); Hoisington
Helen Chloe Carl (IJ); Kansas City
Ed C. Caswell (CE); Oakley
Anna Grace Caughron (HE); Manhattan
Helene LaVerne Cavin (IE&D);
Medicine Lodge
†Mildred Edna Chappell (GS); Plains
Charles Defense Chase (VM); Manhattan
Raymond Ernest Chitwood (EE);
Meriden
Ralph Durland Churchill (PE);
Junction City
Barbara Claassen (IJ); Newton
Lucile Clennin (HE); Tulia, Tex.
James Pratt Coffman (EE); Manhattan
Mary Josephine Coffman (GS);
Manhattan
Louisa Ellen Coldwell (HE);
Independence
Leonard T. Coles (GS); Erie
Robert Coles (C); Manhattan
Ethel Iris Collins (IE&D); Dwight
Geraldine Ruth Collins (MuE);
Manhattan
Thomas Rodney Collins (GS); Emporia
Ivan Bernard Conwell (GS); Manhattan
Robert William Cook (VM); Manhattan
Ruth Martha Cook (HE); Larned
Warden H. Cook (ChE); Eskridge
Louis H. Cool (Ag); Glasco
Mary Elizabeth Cooper (IJ); Manhattan</p> |
|--|---|

* Matriculated 1935-1936.

† Also pursuing graduate study.

SENIORS—Continued

- Russell P. Cope (VM); Manhattan
 Helen Pauline Copeland (C); Randolph
 Ruby Margaret Corr (HE); Clearwater
 DuFay H. Coryell (C); Junction City
 Clarence R. Crawford (AE); Luray
 Donna Belle Crawford (C); Little River
 Wade Overton Crawford (CE);
 Manhattan
 Wilbur Oliver Creighton (ArE); Denison
 Carol May Cunningham (HE&N);
 El Dorado
 Jane Alice Currier (IJ); Hutchinson
 Doris Marjorie Dalton (MuE); St. George
 Gene Danford (EE); Hutchinson
 Lyle S. Daugherty (GS); Dodge City
 Russell Thomas Daulton (Ag);
 Manhattan
 Caldwell Davis, Jr. (AA); Bronson
 Evan Lloyd Davis (Ar); Topeka
 Paul Alvin Davis (GS); Westmoreland
 Nancy Jane Campbell Davison (HE);
 Lakin
 Glenn Howard Dearing (Ag); Wellington
 Vaughn Eugene DeGeer Jr. (AE);
 Lake City
 Loris Arthur Dehner (VM); Concordia
 †Neil DeVault (IC); Kansas City
 John Raymond Dieken (Ag); Winfield
 Evelyn Elizabeth Diehlman (IE&D);
 Findley, Ohio
 Robert Mitchell Dill (AE); Winchester
 Dean Alfred Dillon (EE); Highland
 Virginia Dole (IE&D); Salina
 George Robert Donecker (ME);
 McCracken
 Calvin E. Dornberger (Ag); Talmage
 Marcella Helen Downie (GS);
 Garden City
 Homer Eugene Drier (Ar); Kansas City
 John William Drisko (ME); Kansas City
 Henry Frederick Dudte (AA); Newton
 Junia Louise Duffin (GS); Kingman
 David B. Dukelow (ChE); Hutchinson
 Alley Hugh Duncan (EE); Andover
 Albert Richard Duree (EE-1; C-2);
 Perry
 Mary Jane During (IE&D); Fort Scott
 Arthur Harold Eberhart (EE); Burlington
 Harold Francis Eddington (CE);
 Dodge City
 *Helen Lavina Edgerton (GS); Iola
 Elma Irene Edwards (IJ); Athol
 James Bernard Edwards (PE);
 Phillipsburg
 Richard Laurence Edwards (ME); Meade
 George Howard Eicholtz (ArE); Abilene
 Hal Field Eier (CE); Manhattan
 Sam Dixon Elliott (EE); Plains
 Arthur Frank Endacott (GS); Lawrence
 Kenneth Harold Engleman (CE);
 Arkansas City
 Delbert Eugene Eshbaugh (Ag);
 Manhattan
 Elbert Lee Eshbaugh (Ag); Manhattan
 Alfred Lincoln Evans (C); Barnard
 †Lewis Saxton Evans (Ag-1; Grad-2);
 Washington
 George Bondurant Ewald (ME);
 Manhattan
 William Ramsdell Farmer (MuE);
 Kansas City
 Joseph Abraham Farney (GS&V); Kiowa
 Frances Erma Farrell (HE); Manhattan
 †George Kiel Faust (CE); Parsons
 Dorothy Myrtle Fearey (IE&D); Anness
 Clifford Leland Feldt (C); Manhattan
 *Barbara Fink (GS); Kansas City, Mo.
 †Karl Frederick Finney (MI); Salina
 Thomas Jefferson Fletcher (C); Parsons
 Thelma Lorena Fleury (HE); Jamestown
 Belle Amanda Forney (HE&A); Goodland
 Mildred Viola Forrester (PE); Wamego
 Gayle Herbert Foster (GS); Emmett
 Hazel Mary Foust (C); Leona
 Annie Elizabeth Fraser (MuE);
 Manhattan
 Harry Frederick Freeman (ChE);
 Kansas City
 George Lemuel Fugitt (CE); Hoisington
 Alma Lucille Furman (GS); Clearwater
 Mark Ernest Gale (VM); Concordia
 Townsend Galley (ChE); Manhattan
 Gordon Lawson Gamble (EE); Coffeyville
 Donald Emerson Garr (EE); Wichita
 Fred Earl Garrison, Jr. (C); Parsons
 George William Garrison (Ag); Goodland
 Dale Martin Garvey (IJ); Waverly
 James Garnet Gaume (GS); Salina
 †Chester Dale George (GS); Manhattan
 *Harold Ernest George (MuE); Manhattan
 †George Willis Gerber (AA); Oneida
 Clyde Robert Getty (ChE); Winchester
 Maxine Gibbs (PE); Quinter
 Paul Gilpin (AA); Clay Center
 Elnora Marguerite Gilson (GS);
 Manhattan
 Mary Margaret Glass (HE&J);
 Manhattan
 †Martha Elizabeth Gordon (HE);
 Waterville
 Karl Leonard Goss (IJ); Dwight
 Robert Elmer Gouge (VM); Manhattan
 Mary Gladys Gould (IJ); Kansas City
 Celestine C. Graham (Ag); Stockton
 Margaret Elizabeth Green (HE); Pratt
 Gertrude Elizabeth Greenwood (HE);
 Bethel
 David Walter Gregory (Ag); Manhattan
 †Ruth Gresham (GS); Manhattan
 James Ernest Griffith (GS); Reece
 †Sarah Anna Grimes (IE&D); Manhattan
 †Robert Merriam Groesbeck (IJ);
 Manhattan
 Thomas Conrad Groody (GS); Manhattan
 Walter Raymond Gustafson (GS); Salina
 Gilbert Allison Guthrie (Ag); Walton
 †Howard James Haas (Ag); La Crosse
 Rosamond Pauline Haeberle (MuE);
 Clearwater
 Charles Adriance Hageman (AA);
 White Cloud
 Richard Simpson Haggman (IJ);
 Courtland
 Francis Mitchell Hall (Ag); Manhattan
 Howard Laird Hall (C&A); Manhattan
 John Lawrence Halliday (ME); Pittsburg
 Mary Louise Hampshire (HE); Manhattan
 Carl Hansen (ME); Strong City
 Homer Peter Hanson (PE); Riley
 Marjorie Caroline Hanson (GS);
 Morganville
 Marvin Arvid Hanson (ME); Newton
 Maurice Edward Hanson (ME); Newton
 Hyman Joseph Harkavy (VM-1;
 GS&V-2); Manhattan
 Laurence George Harmon (AG);
 Hutchinson
 Hal Charles Harned (GS); Manhattan
 Clare Barton Harris (GS); Pratt
 Joseph Jerome Harshaw (C&A);
 Manhattan
 Howard Lee Hartman (ChE); Hoisington
 Gerald Hassler (C); Enterprise
 George Deloy Haynes (C); Abilene
 Harvey Jerome Hensley (AA); Osborne
 Lloyd Wavne Herring (Ag); Tulia, Tex.

* Matriculated 1935-1936.

† Also pursuing graduate study.

SENIORS—Continued

- *Lloyd Howard Hessong (C); Fort Scott
John Clare Higginbotham (MI);
Herington
Paul Nelson Hines (Ag); Ashland
Walter Hines (GS); Manhattan
Thomas Clark Hinkle, Jr. (VM);
Carbondale
Dorr Judd Hinman (ME); Manhattan
Magdalene Wenger Hinman (HE);
Manhattan
Homer Orello Hoch (EE); Riley
Mildred Leone Hoch (HE); Emporia
Mildred Irene Hofmann (HE); Manhattan
Fern Maxine Hofmann (HE); Manhattan
Hilton Delos Hollembeak (Ag); Ingalls
Ralph LeRoy Hollis (ArE); Salina
Virginia Katherine Holman (HE&A);
Manhattan
Henry Julian Holuba (EE); St. George
Arliss Evelyn Honstead (HE); Waterville
George Theodore Hopkins (C);
Garden City
Anton Stephen Horn (Ag); Horton
LeRoy William Horne (IC); Alma
Lynn Arthur Horwege (IJ); Belleville
Edward Anderson Houser (CE); Udall
Eugene Everett Howe (IC); Stockdale
Morna Evalena Howe (HE&A); Stockdale
Marie Kathryn Hruby (GS); Manhattan
Charles Wilfred Hughes (IC); Pittsburg
Edythe Grace Huitt (MuE); Talmage
Aaron Trent Hunt (ME); Altamont
Wilbur Eugene Hunter (Ag); Howard
Fred Edward Huttie, Jr. (EE); Russell
*William Merrill Irwin (C); Parsons
Donald Fred Isaacson (Ag); Topeka
Leonard Barclay Izard (EE);
Carthage, Mo.
Dolores Marie Jehlik (IE&D); Cuba
Fred Alva Jenkins (GS); Osage City
Jean Lois Jenkins (IC); Wichita
Myrta Virginia Jennings (HE&J); Lebo
Charles Wesley Jobs, Jr. (ChE);
Pretty Prairie
Donna Theodosia Johnson (PE);
Manhattan
James Meredith Johnson (AE); Sylvia
Vinton Gustaf Johnson (GS); Manhattan
Lucile Johnitz (PE); Abilene
†Ruthana Jones (IJ-1; Grad-2);
Garden City
William Cope Jones (EE); Wichita
Frances Miner Julian (GS); Kansas City
DeVere Kay (IJ); Manhattan
Donalda Dee Keeney (IJ); Lucas
Elizabeth Dee Kelly (PE); Hutchinson
Elva Ralph Kennedy (VM); Chase
Nina Sherman Kent (HE); Grinnell
Marjory Aline Kiger (IJ); Washington
Henry Adams Kilian (EE); Chapman
Cornie Louise King (HE); Manhattan
Laurence Keeney King (EE); Fort Scott
Homer Dale Kirgis (GS); Cawker City
Howard Gale Kirgis (GS); Cawker City
Robert Winston Kirk (AA); Scott City
Roy Charles Kirkpatrick (EE);
Manhattan
Elmer Henry Kloepper (AE); Lancaster
Opal Clara Kathryn Schlickau Knappen-
berger (PE); Haven
†Elizabeth Rachel Knechtel (GS); Larned
Jack William Knittle (C); Salina
Martha Elizabeth Koestel (IE&D);
Partridge
Mildred Janet Kratochvil (HE);
Manhattan
Virgil Thornton Lake (AA); Lake City
Edwin Rector Lamb (AA); Manhattan
- Elizabeth Crouch Lamprecht (HE);
Manhattan
James Ellis Lander (PE); Coffeyville
Keith Obed Lassen (VM); Manhattan
Raymond Price Latimer (AA); Topeka
*Leona Thelma Lawson (HE); Penasola
Mary Ruth LeBow (MuE); Manhattan
Dwight Raymond Lee (CE); Salina
Joseph Dean Lerew (AA); Portis
Allen Valentine Lester (AA); Manhattan
Sydney Paul Levene (VM); Manhattan
Margaret Ruth Lewis (IE&D);
Arkansas City
Ralph Eldon Lewis (C&A); El Dorado
William John Lewis (ChE); Manhattan
Bernice Marie Light (HE); Yates Center
Eugene Michael Lill (CE); Mount Hope
Melvin August Lindahl (EE); Enterprise
Henry James Lindenstruth (VM);
Manhattan
Raymond Edwin Lippenberger (Ar);
Manhattan
Luella Mary Lisk (HE); Manhattan
Phillip Warner Ljungdahl (Ag); Menlo
Charles Earl Loetel (ChE); Kansas City
Marjorie Agnes Lomas (GS); Princeton
Leonard Mark Lovejoy (CE); Manhattan
Gilbert Gordon Lundgren (AA); Clyde
Ralph Fillmore McAtee (PE);
Council Grove
John Edwin McColm (Ag); Emporia
†Mary Lucile McConathy (HE);
Manhattan
†Vida Edith McDaniel (IE&D); Edson
Edward Nash McGrew (VM); Manhattan
Albert Edward McKay (Ag); Manhattan
Carl Emmitt McKee, Jr. (AE); Offerle
Mary Ann McKee (IE&D); Salina
Hester Mary McKenna (IJ); Kingman
Hazel Alida McKibben (HE); Grantville
Maxine Belle McKinley (GS); Manhattan
Margaret Elenora McKnown (IJ);
Manhattan
Kenneth W. McLeod (ArE); Hutchinson
Mary Roberta McMullen (HE&N);
Oberlin
Tillman Henry McNary, Jr. (ME);
Manhattan
Ione Clothier McNay (IJ); Manhattan
Don Avlin McNeal (IJ); Boyle
Nelle Ruth MacQueen (GS); Manhattan
†Lehman Dedrick Madsen (EE-1; Grad-
2); Corbin
Nevabelle Mall (PE); Manhattan
Wesley Hildreth Maranville (CE);
Langdon
Richard Frederick Marin (EE); Topeka
Laura Catherine Marsh (IE&D); Chanute
Nada Jo Marshall (GS); Grenola
Ruth Etta Marshall (GS); Leon
Rachel Martens (HE&A); Hutchison
Delite Martin (IJ); Lewis
Jose Patro Martinez (IJ); Manhattan
Virginia Maser (IJ); Parsons
Eric Eugene Matchette, Jr. (ME);
Manhattan
Thelma Oreana Mathes (HE); Leoti
Allen Edward Mayhew (CE); Belpre
Homer Emsley Mayo (ChE); Kansas City
Georgie Ellen Meece (IE&D); Hutchinson
Iola Silva Meier (HE); Abilene
Palmer Martin Mellgren (CE); Cleburne
Russell Loyd Mellies (IC); Wellington
Ray Curtis Messick (CE); Oakley
Edgar William Millenbruck (VM);
Herkimer
Betty Marguerite Miller (IJ); Salina
Charles William Miller (ChE); Turon

* Matriculated 1935-1936.

† Also pursuing graduate study.

SENIORS—Continued

- Jo Elizabeth Miller (HE); Manhattan
 Katharine Frances Kilmer Miller (IJ);
 Kirwin
 Kenneth William Miller (AA); Maplehill
 †Leonard Fred Miller (AA-1; Grad-2);
 Agra
 Alvin Jess Mistler (GS); Leavenworth
 William Davisson Mitchell (ME);
 Ness City
 John Henry Moehlman (EE); Manhattan
 Milton Hiram Mohn (IC); Ellinwood
 George Eugene Monroe (IJ); Lyons
 Louis Gary Montre (ME); Topeka
 Charles Calvin Moore (C); Manhattan
 John Ewing Moore (ME); Muscotah
 †Charles Edgar Mooreman (GS);
 Manhattan
 †Howard Anthony Moreen (Ag); Salina
 Emory Lavern Morgan (Ag); Ottawa
 Vivian Morgan (HE); Fort Scott
 Myrtle Mae Morris (IE&D); Manhattan
 Stanley Chattam Morris (IJ); Paxico
 Novella Berniece Morton (IJ); Hutchinson
 †Elmer Lewis Munger (CE); Manhattan
 Robert Dean Murphey (ChE);
 Manhattan
 Edward Aloysius Murphy (VM);
 Kansas City
 †Royse Peak Murphy (Ag); Norton
 Eltie Mae Musgrove (IE&D); Fort Riley
 Charles Walter Myers (Ag); Goff
 James Lowell Myler (Ag); Andover
 Obed Edmund Myrah (VM); Manhattan
 Madeline Janice Ferris Nelson (HE);
 Conway
 †Paul Harold Nelson (AA); McPherson
 Paul Alvin Neuschwanger (EE-1; MI-2);
 Bloomington
 Harold Redmond New (AE); Manhattan
 Robert Peasley Nicolson (GS);
 Manhattan
 Walter William Niemoller (Ag); Wakefield
 Bertha Elizabeth Nixon (HE);
 Manhattan
 Harvey Max Nixon (Ag); Manhattan
 John Bruce Nixon (C); Paradise
 Paul Talogi Nomura (VM); Manhattan
 Fred William Nussbaumer (CE); Lebanon
 Myra Camelia Ogg (HE&A); Ottawa
 Alvin Henry Otte (AA); Great Bend
 Eleanor Otto (GS); Manhattan
 Augustus Stanley Parr (Ag); Rossville
 Earl Walter Parsons (Ag); Manhattan
 Dan Partner (IJ); El Dorado
 Ellen Isabel Payne (GS); Manhattan
 *Dorothy Esther Peak (MuE); Densmore
 Charlotte Penny (IJ); Manhattan
 Kathryn Eileen Peterman (HE); Beattie
 Earl Melvin Peters (C&A); Manhattan
 Kenneth James Phelps (C); Manhattan
 Florence Emma Phillips (HE); Emporia
 *Ellis Dean Pike (GS); Goddard
 Elizabeth Alice Pittman (HE);
 Lewiston, Mont.
 Alvin George Ploger (Ag); Kinsley
 William Elby Polk (ME); Augusta
 Pauline Florence Pope (HE&A); Ottawa
 Gertrude Irene Porter (HE); Sterling
 Mary Porter (IE&D); Russell Springs
 Roland Sanford Powers (CE); Manhattan
 William Hardy Prentice (EE); Clay Center
 Lee Thomas Railsback (GS&V); Langdon
 Ival James Ramsbottom (LG); Munden
 Gopal Singh Rathore (VM);
 Jodhpur, India
 Louise Ratliff (IJ); Manhattan
 Glenn Joseph Rawlin (AE); Gypsum
 Harold Hugh Rea (IJ); Salina
 Ethel Bellis Rector (HE); Manhattan
 Edwin Essick Reed (ME); Kanapolis
 Elizabeth Reed (C); Holton
 Ruth Leona Regier (HE&N); Buhler
 David Alexander Reid (Ag); Manhattan
 Robert Lockhart Reid (ArE);
 Kansas City, Mo.
 Anna Katherine Renz (IE&D); Riley
 Howard Eugene Rhoads (CE);
 Arkansas City
 Lloyd Carr Riggs (IJ); Manhattan
 Sidney Alfred Robinson (C); Parsons
 Ruth Rockey (GS); Manhattan
 Ross Earl Rogers (AE); Glasco
 Arnold Samuel Rosenwald (VM);
 Manhattan
 Hy Henry Rothganger (AE); Kinsley
 Jessie Marguerite Rowland (HE);
 Clay Center
 James Warren Rowland (C&A);
 Clay Center
 Florence Ethel Rubart (GS); Milford
 Anna Marie Rueschhoff (HE); Grinnell
 Woodrow Wilson Rufener (AA);
 Strong City
 †Edward Willis Rupp (IJ); Moundridge
 Dougal Russell (PE); Manhattan
 Louise Rust (HE); Manhattan
 Horton Earl Ryan (VM); Manhattan
 Rosa Best Sage (GS); Manhattan
 Robert Newton Salkeld (CF); Lincoln
 Edwin Charley Sample (AG);
 Council Grove
 William Ned Samuel (LA); Manhattan
 Frank Joseph Santo (Ag); Manhattan
 Jay Jewell Sarasohn (GS&V); Manhattan
 Charles John Schierlmann (EE); Liberty
 Lyle Leon Schlaefli (CE); Cawker City
 Caroline Louise Schoettker (IE&D);
 Springfield, Ill.
 John Leonard Scott (AA); White City
 Wayne Sears Scott (IJ); Topeka
 Betsy Ruth Sesler (GS); Wamego
 Helen Bernice Shackelford (IE&D);
 Cameron, Mo.
 John B. Shaffer (Ag); Meriden
 Royal Franklin Shaner (ME); Topeka
 Nathan Benjamin Shapiro (Ag);
 Manhattan
 Bonita Maurine Sharp (IE&D); Newton
 Frank Jessup Shideler (IJ); Girard
 Daniel Aloysius Shiel, Jr. (CE); Pittsburg
 Martha Frances Shields (IJ); Hoxie
 Wayne David Shier (AA); Gypsum
 Karl Gardner Shoemaker (AA); Pomona
 Mary Lovicy Shreve (GS); Augusta
 Lebert Russell Shultz (Ag); Fall River
 Ward Haynes Shurtz (CF); Manhattan
 Althea Lenora Siddens (HE); Blaine
 Virgil Edwin Siddens (Ar); Manhattan
 Virginia Ann Sidlinger (IJ); Hutchinson
 Floyd Lavern Siegrist (A^o); Hutchinson
 Walter Henry Simpson (GS); Manhattan
 Corinne Sinclair (C); Jetmore
 Alice Arvilla Singley (HE); Plains
 Sister Clement Marie Heidrick (M);
 Concordia
 Harold Milton Skaggs, Jr. (C);
 Dodge City
 Laura Jo Skillin (PE); Frankfort
 †Charles Scott Skinner (CE); Tyro
 Loren Courtland Skinner (ChE); Tyro
 Tom Franklin Skinner, Jr. (ME);
 Fort Scott
 Elizabeth Annetta Sloop (HE);
 Nortonville
 Cecil Oro Smith (EE); Coffeyville
 Lloyd Smith, Jr. (C); Kansas City

* Matriculated 1935-1936.

† Also pursuing graduate study.

SENIORS—*Concluded*

- Sylvia Faye Smith (HE); Maplehill
 †Wilmer Ray Smittle (Ag); Columbus
 Lola Helens Somers (IE&D); Canton
 Frederick Wilbur Songer (GS); Olathe
 Kenneth Marion Sparrow (EE); Newton
 LaVerne Herbert Spears (C); Rossville
 Cecil Otto Spencer (MI); Manhattan
 Robert Drake Spencer (GS); Leavenworth
 Annie Margaret Spiker (HE); Manhattan
 Vernon Splitter (Ag); Lorraine
 †Theodore Christian Stebbins (Ag-1; Grad-2); White City
 Vincent Albert Steimel (IC); Iola
 Ruth Elizabeth Stener (MuE); Courtland
 William Frederick Stewart (GS); Kansas City, Mo.
 Geoffrey Donald Stoltz (CE); El Dorado
 Thomas Benjamin Stone (CE); Leavenworth
 Corinna Marguerite Stoops (GS); Bellaire
 James Dean Stout (LA); Independence
 Frank Burnette Stratford (C); El Dorado
 Jonas Maurice Street (CE); Yates Center
 †Charles Raymond Stumbo (GS-1; Grad-2); Lawrence
 Jean Peyton Sullivan (IJ); Manhattan
 Edna Lucy Swank (GS); Hill City
 Samuel Andrew Swoyer (EE); Wilmot
 Ferne Ethelyn Tannahill (HE); Manhattan
 Frances Maxine Tannahill (HE); Manhattan
 Philip Jesse Tatman (CE); Manhattan
 Dorothy Rebecca Taylor (HE); Downs
 Dorothy Teichgraber (C); Marquette
 Arthur Louis Tellejohn (VM); Kansas City
 †William Woodrow Templer (GS); Moline
 Lewis Ivan Thomas (AA); Garden City
 Charles Teare Thompson (ME); Cheney
 Elvin Arthur Thompson (EE); Goff
 James Otis Thompson (AA); Manhattan
 †Ned Odell Thompson (AA); Manhattan
 George Wayne Thornbrough (C); Lakin
 Lloyd Thomas Thorp (CE); Longford
 Leona Zoe Tibbetts (HE); Westmoreland
 Coreine Tincher (GS); Hutchinson
 Florence Lorraine Todd (IE&D); Gridley
 George Eugene Toothaker (CE); Manhattan
 Ross Edwin Torkelson (ME); Everest
 James Monroe Troutt III (EE); Fort Riley
 Florence Gladys Turner (PE); Menlo
 Trena Evelyn Turner (HE&A); Manhattan
 Marvin John Twiehaus (VM); Manhattan
 Grace Kolck Umberger (MuE); Manhattan
 Margaret Ruth Urquhart (HE); Wamego
 John Sumner Van Aken (IC); Lyons
 Mervin Earl Vantuyl (EE); Peabody
 Charles Henry Vinckier (CE); Kansas City
 Emil John Von Lehe (EE); Clifton
 Waldo Theodore Wadley (ArE); Garden City
 Dorothy Alice Walker (GS); Evanston, Ill.
 Edwin Leslie Walker (AE); Junction City
 Edward LeRoy Waller (ArE); Wellington
 Robert Elston Wallerstedt (EE); Manhattan
 †Charles Philip Walters (GS); Manhattan
 William Theodore Walters (CE); Manhattan
 Vona Beatrice Wandling (IE&D); Sharon Springs
 Maxwell Perrine Wann (AA); Hays
 Joseph Duane Ward (Ar); Peabody
 William Victor Warren (ME); Sterling
 Walter Herman Warstler (ME); Columbus
 Dorothy Washington (HE); Manhattan
 Forest Otto Waters (EE); Fort Scott
 Aubrey Weatherholt (ME); Augusta
 Eleanor Marie Weller (MuE); Abilene
 Leon Elbert Wenger (Ag); Powhattan
 John Leslie West (VM); Manhattan
 Marshall Roland West (Ag); Blue Mound
 Willard Malcolm West (IJ); Concordia
 Gladys May Westerman (PE); Hutchinson
 Winston Douglas Wetlaufer (PE); Manhattan
 Mabel Marie Wetzig (IE&D); Junction City
 Ida May Weygandt (HE); Manhattan
 Thomas Charles Wherry (EE); Sabetha
 Clara Ellen White (HE); Kingsdown
 Marguerite Louise Whitten (HE); Wakarusa
 Maxwell Wible (ArE); Wichita
 Albert Ross Wilcox (ChE); Dodge City
 Barbara Ann Peters Wilcox (GS); Manhattan
 Howard Ivo Wildman (AA); Manhattan
 Eleanor May Wilkinson (IE&D); Humboldt, Neb.
 Arthur Owen Williams (C); Belleville
 Albert Bentley Wilson (Ag); Manhattan
 Elmer Benjamin Winner (AA); Topeka
 Harley Alvin Witt (IJ); Partridge
 Walter John Wohlfarth (CE); Easton
 Wilma Ray Womer (PE); Topeka
 John D. Woodman (IJ); Manhattan
 Abbie Downey Wright (HE&A); Manhattan
 Esther Marie Wright (Ar); Manhattan
 Velda Pauline Wunder (PE); Valley Falls
 James Wallace York (EE); Vinland
 Dudley Etheridge Young (Ag); Manhattan
 Wayne Winkleman Young (C); Alexander
 Eunice Pearl Youngquist (IE&D); Topeka
 Lester Allen Zerbe (Ag); Salina
 Leonard Albert Zerull (MI); Ellis
 Joseph Zitnik (Ag); Scammon
 Emanuel Zoglin (Ag); Manhattan
 †Frank Isaac Zoglin (ArE); Manhattan

JUNIORS

- Gerald Ellsworth Abbey (C); El Dorado
 *Elizabeth Olive Able (GS); Kansas City
 Alonzo Robert Adams (C); Leavenworth
 Frances Aicher (HE&J); Hays
 Francis Allison (VM); Olathe
 Lawrence Sylvester Alwin (AA); Morrowville
 *Clyde Robert Anderson (CE); Kansas City
 Earl Preston Anderson (Ag); Manhattan
 Edna Anna Anderson (HE&A); Courtland
 George Anton (ChE); Manhattan
 Sara Jane Antrim (PE); Topeka
 Virginia Ruth Appleton (IJ); Manhattan
 Ralph W. Armstrong (CE); Manhattan
 Ralph Wayne Arnold (AA); Manhattan
 Leo Carlton Ayers (PE); Manhattan
 Jack Edward Baker (VM); Manhattan
 Margaret Louise Ballard (HE&A); Topeka
 *Clarence Arthur Balwanz (ME); El Dorado
 John Henry Bateman (CE); Emporia
 Doris Olive Bathurst (MuE); Abilene

* Matriculated 1935-1936.

† Also pursuing graduate study.

JUNIORS—Continued

- Guy William Bayles (VM); Manhattan
 Roy Edward Beach (ChE); Abilene
 Glorene Olive Beck (HE); Ottawa
 Charles William Beer (Ag); Larned
 *Monford Martin Beeson (C); Garden City
 *Rosalie Florence Beeson (C); Garden City
 Wendell Beichley (EE); Chase
 Russell Lee Belflower (EE); Dodge City
 Clarence LaFollette Bell (Ag); McDonald
 George Rowan Bell (ME); New Cambria
 Loren Claude Bell (GS); McDonald
 Laurence Marion Bell (ME); Selden
 William Woodrow Bell (EE-1; GS-2);
 Marysville
 Eunice Allene Belt (GS); Burr Oak
 Glenn Edwin Benedict (Ar); Manhattan
 Lyle Eugene Bennett (CE); Burr Oak
 *Doris Helen Berner (MuE); Wamego
 Mary Emily Berryman (C); Fredonia
 Max A. Besler (IJ); Manhattan
 Carl Henry Beyer (AA); Manhattan
 Lucile Elizabeth Bilderback (HE);
 Nortonville
 *David Ford Biven (EE); Kansas City
 Leslie Marion Blake (GS); Glasco
 Margery Allison Blake (IJ); Manhattan
 Paul Lang Blakslee (ME); Manhattan
 Houston Blair Bliss (LG); Manhattan
 Alvin Herbert Block (C&A); Bavaria
 Helen Marv Blythe (HE&A); White City
 Chalmers Morton Boles (CE); Turon
 Harold Andrew Borgelt (Ag); Zenda
 Kenneth Carson Bottenberg (IC); Wetmore
 Walter Enos Boyer (AE); Kinsley
 Elon Bramble Boyers (Ag); Anthony
 Doris Boyle (IE&D); Spivey
 Sidney Oral Brady (ChE); Manhattan
 *Wilbur Golden Brainerd (ArE-1; MI-2);
 Whitewater
 Gean Augusta Brandenburg (HE); Manhattan
 *Frances Mae Braun (IJ); Kansas City
 Kenneth Oliver Brecheisen (PE); Garden City
 Charles Francis Bredahl (AA); Fairview
 Ruthford Eugene Brodie (ME); Glen Elder
 Floyd Payne Brown (ME); Wichita
 Helen Renee Brown (HE); Kansas City, Mo.
 Marlin Mack Brown (GS); Council Grove
 Ord Kent Brown (AE); Edmond
 Robert V. Brown (EE); Manhattan
 Ellen Bernice Brownlee (HE); Sylvia
 Gerald Wayne Brubaker (IJ); Manhattan
 *Max Theodore Bruner (CE); Burns
 Margaret Louise Bryan (PE); Newton
 Virginia Marie Bryan (PE); Topeka
 Clark Wayne Burch (VM); Manhattan
 Allen Warwick Burns (PE); Kansas City
 Oran Frank Burns (LG); Manhattan
 Mary Eliza Burt (HE); Manhattan
 Thomas Bateman Bushby (PE); Belleville
 James Clayton Buster (Ag); Larned
 Ben Butler (VM); Manhattan
 Adaline Elinor Byrd (GS); El Dorado
 Lyman Charles Calahan (Ag); Abilene
 Robert Hoover Calahan (Ag); Abilene
 *Jasper Calcara (Ag); Kanopolis
 *Roy William Caldwell (EE); Kansas City
 Walter Monroe Carleton (AE); Coldwater
 *Arthur Adam Case (PE); Nickerson
 *Richard Alford Case (PE); Nickerson
 *Virginia Aline Case (PE); Nickerson
 Robert Steele Cassell (GS); Salina
 Ceora Katherine Caven (IE&D); Le Roy
 Howard Vance Cheney (Ag); Grainfield
 *Ralph Oliver Chilcoat (CE); Wichita
 *Castella Childers (GS); Garnett
 *Dan Lee Childress, Jr. (AH&V);
 Eastland, Tex.
 Floyd Harvey Clark (EE); Florence
 Wilbur Dell Clark (ChE); Iola
 Dorothy Kathleen Coldwell (HE);
 Independence
 Ralph Elias Cole (C); Alton
 Fredrich Monroe Coleman (Ag); Sylvia
 Don W. Collins (CE); Junction City
 Horace Reynolds Collins (VM); Manhattan
 Tate Benton Collins, Jr. (EE); Fort Riley
 Clarence Edwin Cook (Ag); Effingham
 Geraldine Cook (HE); Russell
 Omer Lincoln Cook (AA); Larned
 Frank Harvey Cooley (AA); Goff
 Martin Luther Cooley, Jr. (ME);
 Tulsa, Okla.
 Robert Marshall Coon (EE); Anthony
 *Kenneth Clinton Cooper (CE); Nickerson
 Ronald Paul Cooper (C); Wichita
 Kathryn Laura Correll (GS); Manhattan
 Maurice Russell Coulson (C); Wichita
 Elizabeth Cowie (HE); Kansas City, Mo.
 Mary Warrington Cox (C); Alexandria, Va.
 Robert Edwin Cress (C); Manhattan
 Gus Adolph Crone (EE); Wichita
 Richard Joseph Cronin (ME); McCune
 Maurice Crouch (VM); Kansas City
 Roger McKee Crow (CE); Topeka
 Allen Payne Crowley (IC); Council Grove
 *Russell Louis Culp (CE); Kansas City
 Dale Alfred Dahlgren (C&A); Enterprise
 Frank Douglas Dale (AE); Coldwater
 Philip Burdett Dale (IC); Topeka
 *Eleanor Dales (HE); Eureka
 Ivernina Rosetta Danielson (IJ); Manhattan
 Mary Danner (IE&D); Springfield, Ill.
 *Bernice Arlene Dappen (IE&D); McPherson
 Margaret Sarah Daum (C); Nortonville
 Nelson Earl Davidson (EE); Yates Center
 Herb Smith Davies (Ag); Winchester
 Ivor Harold Davies (Ag); Lebo
 *Frances Louise Davis (HE); Fort Scott
 *Harry Rexal Davis (Ag); St. John
 *Mary Alice Davis (GS); Madison
 Phena Davis (GS); Madison
 Paul McConnell Dean (Ar); Manhattan
 Myron Samuel Dendurent (ChE); Goodland
 Charlotte Denton (IJ); Manhattan
 Wayne Vorine Dexter (IJ); Waterville
 *Deda Harriett DeYoung (HE); Prairie View
 Darrell Dean Dicken (Ag); Winfield
 *Marion Maxwell Dickerson (AA); Parsons
 William Hyde Dietrich (AH&V); Minneola
 *Charlotte Gail Diver (HE); Chanute
 Mary Clare Dixon (C); Junction City
 John Ralph Dobbin (CE); Viola
 James Phillips Dodge (C&A); Manhattan
 *Rachael Eleanor Duesing (IJ); Morrill
 *Ruth Laura Duesing (IJ); Morrill
 James Stokely Dukelow (ME); Hutchinson
 John Russell Dukelow (Ag); Hutchinson
 Velma Jane Dull (IJ); Clifton
 *Helen Lucile Dunbar (HE); Arkansas City
 Roy Allison Dunham (IJ); Jewell
 Janet Dunn (HE); Oxford
 *Lucille Elizabeth Dunn (HE&A-1; GS-2);
 Manhattan
 Lloyd Samuel Eberhart (C); Topeka
 Edwin Dale Ebright (CE); Lyons
 Charles Joel Edelen (ME); Manhattan
 Florence Elizabeth Edwards (GS);
 Manhattan
 Pauline Elizabeth Eiler (GS); Oberlin
 Maurice LaVerne Elder (PE); Manhattan
 Carl Mudge Elling (Ag); Manhattan
 Rosalie Ellis (HE); Hiawatha
 Raymond W. Ely (CE); Ashland
 Ellurena Pauline Emery (HE); Kansas City
 Walter Titus Emery, Jr. (C); Manhattan

* Matriculated 1935-1936.

† Also pursuing graduate study.

JUNIORS—Continued

- Harold Thomas Engleman (EE); Manhattan
 John Loy Engler (CE); Chapman
 *Helen Marie Ericson (PE); Lindsborg
 *Mildred Louise Ewing (IE&D); Olathe
 Fred Leroy Fair (Ag); Alden
 Paul Kenneth Fanning (AE); Melvern
 Forrest Raymond Fansher (Ag); Hutchinson
 Walter Wallace Fechner (VM); Alta Vista
 Reinhold Paul Fensch (Ar); Lincoln
 *Harvey Irvin Fisher (GS); Manhattan
 Jacob Dale Fisher (IC); Bennington
 Leslie Elizabeth Fitz (HE); Wilmette, Ill.
 Jack Kinloch Fleming (C); Manhattan
 Donald Eugene Flenthrope (AA); Wamego
 Dudley King Flint (ME); Girard
 *Georgia Le Flook (HE); Canton
 Ralph Leon Flournoy (CE); Kansas City
 *Jack Leonard Flynn (ME); Independence
 James Leonard Foster (IC); Emmett
 *Muriel Aileen Fowler (HE&J); Holton
 *Mabel Lenore Foy (PE); Hutchinson
 *Hazel Thelma Frager (HE); Wamego
 Roy Henry Freeland (Ag); Effingham
 Mary Rebecca French (GS); Manhattan
 Roy Fred Fritz (IJ); Kansas City
 Maynard Melvon Furney (ME); Manhattan
 Fritz Lucado Furtick (LG); Salina
 Richard Fredrick Garinger (EE);
 Harveyville
 Sarah Garrison (IE&D); Parsons
 Gilbert Lee Gaumer (ArE); Gypsum
 John Franz Gaumer (EE); Wamego
 Everett Nelson George (GS); Welda
 Mildred Jolitz George (GS); Manhattan
 Merrill Douglass Geraghty (GS); Selden
 Hugh Cecil Getty (ChE); Winchester
 Fern Marine Geyer (IE&D); Topeka
 William Phillip Glunt (AA); Garrison
 *Harvey E. Goertz (Ag); Hillsboro
 *Helen Virginia Goff (HE); Arkansas City
 *Mary Margaret Golden (HE); Furley
 Stanley Edward Goodwin (ArE); Hiawatha
 William Victor Gough (ME); Leavenworth
 *Sadie Alma Graham (MuE); Republic
 Pauline Avis Gravenstein (GS); Riley
 James Graves (ME); Independence
 Donald Clair Green (CE); Independence
 Mary Helen Gregory (C); Hugoton
 Robert Lewis Griffith (IC); Bogue
 Frank Richard Groves (C); Atchison
 Loren Dwight Grubb (ChE); Phillipsburg
 *Chester Martin Gull (ChE-1; IC-2);
 El Dorado
 Maurice Lee Gunn (C); Great Bend
 Grace Mary Gustafson (HE&A); Marysville
 Henry D'Jalma Haley (GS); Sabetha
 Helen Virginia Hall (HE); Sterling
 Lawrence Isador Haller (EE); Alma
 Jeanette Estelle Halstead (HE); Manhattan
 Charles Paul Hamlin (ME); Kansas City
 Dorothy Lucile Hammond (GS);
 Great Bend
 Kenneth Clyde Hancock (ChE); Salina
 Pearl Hugh Hand (VM); Manhattan
 Jacqueline Hanly (HE&A); Manhattan
 John Franklin Hanson (PE); Concordia
 *Harris Warren Hantman (GS&V);
 Manhattan
 Charles F. Hardmon (ChE); Anthony
 *John Wendell Harrell (EE); Wichita
 Henry Everett Harriman (VM); Manhattan
 Harold Hall Harris (EE); Grinnell
 Kenneth Warden Harris (IC);
 Kansas City, Mo.
 Robert LeRoy Harris (IC); Topeka
 Willabeth E. Harris (IJ); Neosho Falls
 Earl H. Harrison (VM); Lawrence
 John Russel Harrison (EE); Sterling
 George Thomas Hart (IJ); Phillipsburg
 Helen Maxine Hart (HE); Blue Rapids
 George William Hartter (IC); Sabetha
 Leland Taylor Harvey (C); Council Grove
 Robert Henry Harvey (AA); Manhattan
 Leroy Anson Haselwood (GS); Glasco
 *Mary Ann Haskard (IJ); Hutchinson
 Ray Vincent Hauck (GS); Miltonvale
 George William Hawks (PE); Holton
 *Robert Murray Hawley (C); Manhattan
 Owen Andrew Hawver (EE); Stafford
 Barney Allen Hays (PE); Manhattan
 David Armond Hays (IJ); Manhattan
 George Anthony Hellmer (AE); Olpe
 John Gunion Helm (ChE-1; IJ-2);
 Simpson
 William Douglas Helm (EE); Simpson
 John Graham Hemphill (VM); Chanute
 George Clifford Henderson (ChE);
 Herington
 *Winifred Henney (IJ); Hutchinson
 Dwight Kirk Henry (AA); Lecompton
 Elbert Chauncey Henry (Ag); Belleville
 E. Ferne Henry (HE); Salina
 Paul Wilson Hensligh (Ag); Winchester
 Lester Lee Hermon (ME); Bazine
 Walter Herrman (AA); Offerle
 Virginia Herst (HE); Argonia
 Kenneth Verle Hill (Ag); Bloom
 Orville Omer Hodson (Ag); Argonia
 *Norma Frances Hofess (MuE); Partridge
 Elinor Harriet Hogan (IJ);
 Kansas City, Mo.
 Rolla Buskirk Holland (Ag); Iola
 Guy Burger Homman (GS); Solomon
 *John Charles Horak (ChE); Wakeeney
 *Dwight Constant Hornberger (CE);
 Wichita
 Laurence Calvin Horton (Ar); Wichita
 Mary Alice Howard (HE); Manhattan
 Ruth Ellen Howe (IJ); Emporia
 *Fung Kuan Huang (AH&V);
 Tung-Shun, Canton, China
 Harry Burt Hubbard (VM); Manhattan
 Clarence Preston Hubbs (ME); Manhattan
 *Lela Ethel Huber (GS); Manhattan
 Robert Bruce Huey (Ar); Sterling
 *Meredith Fowler Humphrey (IC);
 Fort Scott
 Geraldine Wanda Jones Hurd (HE);
 Junction City
 Vincent Rockford Hurst (ChE); Ozawkie
 *Robert Evans Huschle (ChE-1; MI-2);
 Manhattan
 *Olive Marie Hutchins (HE); Sterling
 Edwin Charles Hyatt (IC); Wichita
 Esther Elizabeth Hyatt (IE&D); Wichita
 Irvin Irwin (VM); Wilsey
 John Paulette Irwin (CE); Topeka
 Marion Irwin (AA); Manhattan
 *Raymond Whitfield Isle (Ag);
 Independence
 Robert Bright Jaccard (Ag); Manhattan
 Ula Jaedicke (C); Hanover
 Richard Jarrett (Ar); Manhattan
 *Robert Milton Jay (MI);
 Kansas City, Mo.
 Ellen Louise Jenkins (GS); Manhattan
 Roscoe Everett Jenkins (Ag); Selden
 Robert Sidney Jensen (C); Leavenworth
 James Robert Jesson (GS); Manhattan
 Ernest DeWayne Jessup (IJ); Wichita
 Charles Albert Johnson (GS); Emporia
 Charles Fred Johnson (C); Kansas City
 Chester Herman Johnson (AE); Garrison
 Kenneth Emil Johnson (C); Newton
 Lorraine Edward Johnson (C); Talmo
 Mildred Evelyn Johnson (HE); Hartford

JUNIORS—Continued

- Ella Gertrude Johnstone (MuE); Wamego
Edward Tracy Jones (GS&V); Manhattan
*William Robert Jones (CE); Wichita
Frank Wilson Jordan (AH&V); Beloit
Eunice Ruth Justis (GS); Washington
William Gottlieb Kaeser (GS); Manhattan
Mac Kappleman (ME); Athol
Helen Anna Karns (GS-1; HE-2);
Bucklin
Robert Carr Kassner (EE); Detroit
*William Mosier Kelley (C); El Dorado
*Dora Gertrude Kenady (IE&D);
Nevada, Mo.
*Francis Maxwell Kennedy (GS); Lawrence
Charles Harry Kent (AE); Wakefield
Samuel Wallace Kerr (AA); Americus
James Randle Ketchersid (VM);
Manhattan
William Thomas Kilian (CE); Detroit
Michael John Kilroy (ME);
Kansas City Mo.
Peter Arthur Kimen (ChE); Manhattan
Marjorie Kittell (PE); Topeka
Irwin K. Klassen (AA); Whitewater
John Milton Klierer (ME); Arlington
Dwight David Klinger (AA); Ashland
Velma M. Koontz (C); Jetmore
*Clifford Ray Krabbenhoft (CE); Emporia
Seth William Kuykendall (EE-1; IJ-2);
Pratt
*John Lewis Kyser (CE); Grenola
Leon J. Lacroix (VM); Manhattan
*Alvis Irey Lake (Ag); Palco
*Mary Corrine Lancaster (PE); Parsons
Aaron Joseph Lane (CE); Manhattan
Delmer Thiele Lang (ME);
Falls City, Neb.
George Kendrick Lang (VM); Manhattan
*Marjorie Maude Langham (HE&A);
Hoisington
Robert Tudor Latta (Ag); Holton
Horton Meyer Laude (Ag); Manhattan
*Annette Trott Lawrence (PE);
Junction City
Clyde Raymond Lay (IC); Sycamore
*Chung Keum Lee (EE); Seoul, Korea
Geraldine Lennen (MuE); Lyons
*John Frederick Levin (EE); Atchison
Milton Lewis (C); Bavaria
Harold Woodrow Lindahl (MI); Enterprise
Henry William Lins (IJ); Beloit
William Wallace Litfin (EE); Great Bend
Donald Kenneth Long (Ag); Neodesha
Sam Long (ChE); Abilene
Orville Franklin Longerbeam (ArE);
Herington
Evelyn E. Longren (GS); Leonardville
Ray Ford Lowry (GS); Hoisington
Charles M. Loyd (Ag); Valley Center
James William Lutz (IJ); Sharon Springs
*Edith Elizabeth Lyness (MuE); Walnut
Margaret Lynn (HE); Centralia
Lyman Max Lyon (CE); Sabetha
*Marjorie Sellers McCall (IE&D);
Chevy Chase, Md.
Edith Louise McCaslin (HE); Osborne
*Clyde McCauley, Jr. (EE); Arkansas City
Jack Robinson McClung (C); Topeka
Marjorie Mabel McColloch (GS);
Manhattan
Mary Jane McComb (LG); Wichita
Max McCord (CE); Manhattan
Hal McCoy (ChE); Manhattan
William George McDanel (IJ); Manhattan
*Loren McDaniel (CE); Hutchinson
Paula McDaniel (HE); Topeka
Frederick Lee McDonald (GS); Horton
Norris J. McGaw (MuE); Topeka
James Alfred McMurty (AA);
Clarendon, Tex.
*James Murphy McNally (MI);
New Richmond, Wis.
*Cecil Louis McNeal (EE);
Kansas City, Mo.
*Floyd Ralph McNicol (EE); Wichita
Wilbur Lawrence Maddy (EE); Ransom
Russell Martin Madison (VM);
Manhattan
Frederick B. Majors (C&A); Elmo
Arthur Emil Malacky (CE); Peabody
Hobart Graham Mariner (CE);
Fredonia
*Francis Leo Marschallinger (ME);
Pittsburg
Wilson Samuel Marsh (Ag); Chanute
Wilma Lee Matherly (IJ);
Kansas City, Mo.
*Sara Lee Alice Mastin (IE&D); Girard
Donald Laurence Maxwell (Ag); Menlo
William Albert Maxwell (C); Manhattan
Edward Martin Mertel (C); Salina
Phelena Deane Merten (IE&D);
Morganville
Lyle Clifton Mertz (MI); Manhattan
Dolores Ann Meyer (GS); Frankfort
*Edith Wilma Meyer (HE); Basehor
Howard Otto Meyer (Ag); Basehor
*Marcella Meyer (GS); Lillis
*Paul Wesley Meyer (GS); Manhattan
Burris Edward Miles (Ag); Cunningham
*Elva Marie Miller (IE&D); Kansas City
Iris Miller (IJ); Lyons
Jack Alfred Miller (Ag); El Dorado
Charles Augustus Mitchel (VM);
Manhattan
Loyal Kay Mock (ME); Osborne
Floyd Edward Monroe (VM); Manhattan
Paul Jarvoe Montgomery (CE); Topeka
William Lorenzo Moore (Ag);
Bridgeton, N. J.
Darrell Morey (Ag); Manhattan
Alvin Hanson Morgan (EE); Manhattan
Frances Metta Morgan (PE); Manhattan
Ilene Anna Morgan (HE); Manhattan
Levi George Morgan (ChE); Richfield
*Mary Katheleene Morrison (HE); Iola
Wilson Muhlheim (CE); Ellis
*Imogene Murphy (HE); Kansas City
Lyle Moyer Murphy (Ag); Manhattan
Kemper Murray (C); Beloit
*Earl Harry Myers (EE); Manhattan
*Homer Samuel Myers (GS-1; MI-2);
Salina
Blanche Lillyane Nattier (HE&A);
Fredonia
Marjie Esther Nesmith (HE); Salina
*Ruth Eleanor Newell (GS); Junction City
Herman Elbey Nicholas (EE); Johnson
*Marian Elsie Nichols (IE&D);
Enosburg Falls, Vt.
Clarence Nielsen (ME); Vesper
*Irving Russel Niles (Ag); Lebo
*Fred Warren Nixon (EE); Manhattan
*William Alexander Nixon (GS); Lewis
John Locke Noble (CE); Manhattan
Marian Olene Norby (GS); Cullison
Betsy Ann Norelius (IE&D);
Springfield, Ill.
Mildred Lucile North (HE); Coffeyville
*Cleta Charlene Null (HE);
Ravenwood, Mo.
Aldene Nussbaumer (HE); Lebanon
Lorin Edward Oberhelman (EE);
Silver Lake
Georgia Louisa O'Dell (IJ); Abilene
*Irene Wiehelmina Oelke (C); Hoyt

JUNIORS—Continued

- *Helen Madeline Offutt (GS); Kansas City
Carol Leola Olsen (HE); Horton
Earl Willard Olson (EE); Collyer
Richard Eugene Omohundro (VM);
Wellington
- *Stephen Grover O'Rourke, Jr. (IJ);
St. Marys
Carl Meredith Osborne (EE);
Council Grove
James Carlile Osten (ChE); Herington
Lorena Freda Otte (HE&A) Great Bend
Gustaf Clark Overley (Ag); Belle Plaine
Wilbur Charles Page (ME); Hesston
Dorothy Eunice Palmquist (HE);
Concordia
- *Elizabeth May Parrish (HE&J); Fort Scott
Earl Foster Parsons (AA); Manhattan
- *Arthur Eli Patterson (C&A); Kansas City
- *Charles Alfred Patterson Jr. (AA);
Kansas City
James William Patton (Ag); Hiawatha
Walter Eugene Peery (EE); Manhattan
Charles William Pence (Ag); Elmont
Oril Everden Pennington (AA); Manhattan
- *Eugene Esmond Perkins (C); Independence
Vincent Lorin Peters (PE); Ness City
Edwin Hugo Peterson (ME); St. Marys
Kenneth Osler Pettijohn (Ar); Larned
Ruth Evelyn Petty (HE); Altamont
- *Jane Phelan (C); Kansas City, Mo.
Carolyn Marian Phillips (HE); Salina
Ronald D. Pickett (EE); Manhattan
Veda Birdine Pickett (GS); Morrill
Edward Wilson Pitman (AA); Scott City
Gladys Irene Poole (GS);
Kansas City, Mo.
Clare Robert Porter (Ag); Stafford
Thomas Mitchell Potter (Ag); Peabody
Gilbert Powers (ChE); Casper, Wyo.
Elsie Elizabeth Prickett (GS); Wamego
George Carlson Rankin (C); Gardner
Ralph Thornton Rankin (IC); Manhattan
Willard Glidden Ransom Jr. (AE);
Homewood
- *Ellen Pauline Rawlings (C); Hutchinson
Alvin Rector (EE); Lincoln
Harold Elmo Redfield (AE); Bucklin
Maxine Virginia Redman (PE); Manhattan
- *Max Drown Reeves (ChE); Columbus
Eldon Edwin Reichle (GS); Riley
Esther Catherine Relihan (GS);
Smith Center
- *Jane Frances Remington (IJ); Hutchinson
Jack Chilcott Remmele (GS); Manhattan
Oren Jared Reusser (Ag); Wellington
Joe Buel Reynolds (Ar); Chetopa
- *Helen Irene Rhoads (GS); Falls City, Neb.
John William Richards (Ag); Madison
Wesley Wayne Richardson (C); Erie
Ora Lea Riepe (HE); Dighton
- *Homer Gaynell Riley (ChE); Hutchinson
Arthur Lynn Robinson (Ag); Manhattan
Charles Edwin Robinson (VM);
Manhattan
Harry Robert Robinson (ChE); Hoxie
Roy Albion Robinson (EE); Larned
Claude Floyd Ross (ME); Dover
Vernal George Lee Roth (Ag); Emporia
Harold Albert Rothgeb (AE); Hays
- *Peggy LaVergne Rothweiler (GS);
Ransom
- *Forrest Hamer Roulund (EE); Melvern
Ada Marie Ruff (GS); Manhattan
Paul Wesley Rust (AA); Junction City
- *Willard James Sainer (Ag); Bison
Carl Fred Samp (ME); McCune
Janet Anabel Samuel (GS); Manhattan
Ray Fred Sanders (PE); Manhattan
- Harold James Scanlan (Ag); Abilene
- *Arthur Thomas Schade (C); Manhattan
Arthur Eugene Schafer (AA); Jewell
John George Scheu (GS); Manhattan
Merwin Ellenwood Schoonover (EE);
Topeka
- *Alfred Gustav Schroeder (AA); Newton
Karl William Schroeder (EE-1) (GS-2);
Hillsboro
Olive Elizabeth Schroeder (LG); Lorraine
- *Mildred Louise Schwartzkopf (C); Bison
Elmer Ellison Scott (EE); Kansas City
- *Marjorie Marie Scott (HE); Altoona
Deane Robert Seaton (Ag); Abilene
- *Ervin Walter Segebrecht (IC); Kansas City
Robert Martin Segor (Ar); Oshkosh, Wis.
Allan Eugene Settle (IJ); Strong City
Marvin Leroy Shafer (ME); Kansas City
Mary Lee Shannon (IE&D); Geneseo
- *Eileen Hope Shaw (MuE); Macksville
- *Thomas Richard Shaw (EE); Kansas City
Garnet Evadna Shehi (IJ); Topeka
William Orville Shepard (GS);
Independence
Willard J. Sherar (PE); Latham
Eula Pauline Sherwood (HE); Grenola
Eileen Shields (C&A); Hoxie
Lois Frances Simpson (HE); Dresden
Sigrid Johanna Sjogren (GS); Concordia
Robert Fred Sloan (Ag); Leavenworth
- *William Addison Small (IC); Argonia
Clarence William Smith (CE); Clay Center
- *Lois Eileen Smith (IJ); Garden City
Robert Moody Smith (C); Manhattan
- *Virginia Gertrude Smith (GS); Topeka
Burl Jackson Snow (EE); Topeka
Charles Raymond Socolofsky (PE);
Tampa
Corinne Solt (IE&D); Manhattan
Lloyd Dayton Somers (GS); Canton
Glenna Louise Sowers (GS); Manhattan
Obadiah Joseph Spencer (Ag);
Leavenworth
- *Herbert August Sperling (C); Inman
Melvin Lloyd Spitze (C); Kinsley
Lawrence Eric Spong (VM); Enterprise
Earl Louis Stadel (AE); Ogden
George Jacob Staehler (CE); Manhattan
- *Eleanor Stahlman (HE); Potwin
Maurice Havelyn Stauffer (Ag); Hymer
Alfred Marcus Steele (ME); Leavenworth
Gordon Steele (ChE); Columbus
Arthur Stephen (C&A); Bethel
Clark Bernard Stephenson (AA); Sedan
Vernon McKee Stevens (GS); Abilene
Everett Wilson Stewart (C); Talmage
Harley Allen Stewart (AA); Eskridge
- *James Curtis Strong (Ag); Moran
Keeta Elizabeth Strong (HE); Hoisington
Earl Sutton (CE); Abilene
Lewis Sweat (GS); Cedar
Floyd Arthur Tannahill (GS); Phillipsburg
Howard Lee Taylor (MuE); Norton
Victor Preston Terrell (Ar); Syracuse
- *Frances Jo Thomas (IE&D);
Harrisonville, Mo.
Wilton Bradley Thomas (AA); Clay Center
Vera Thompson (HE); Harveyville
Wilbur Griggs Thorpe (Ar); Manhattan
- *Mary Caroline Thurston (GS); Elmdale
Eleanor Tibbetts (GS); Westmoreland
Charles Clarence Tillotson (ChE); Sublette
Wayne Tjaden (Ag); Wichita
Gertrude Tobias (IJ); Lyons
John Wayne Tonkin (LA); Colony
James Madsen Towner (CE); Manhattan
Oda Mae Tracy (C); Salina
Lois Lucille Travis (HE); Goddard

JUNIORS—Concluded

- Helen Alice Trekell (HE); Belle Plain
Kenneth Wible Tudor (ME); Holton
Irwin John Twiehaus (VM); Manhattan
*Edith Mary Ukena (HE); Leona
Velda Umbach (HE&A); Spearville
Keith Bernard Underwood (Ar); Gypsum
Ross Gingham Vandever (ME); Fredonia
*Goldie VanDiest (GS); Prairie View
Willard Merrill VanSant (VM);
Manhattan
Howard Wright Vick (ME); Wellsville
Juan Rambae Vidad (IC); Manhattan
Pearl Marie Vinzant (MuE); Wakefield
*Emily Janet Vrooman (IJ); Independence
*Simon Rossen Wagler (EE); Hutchinson
*Irvin Wendell Wagner (AA); Cherryvale
Carrol LeRoy Wahl (Ag); Wheaton
*Kenneth Fred Wainner (GS); Hutchinson
William Henry Walker (AE);
Junction City
Arlene Wallace (IE&D); Hill City
Nadine Marguerite Wallace (HE); Manhattan
James Thomas Wallingford (C); Kansas City
Ralph Dale Warner (AA); Arlington
William Barnes Warner (AE); Manhattan
Frederick Gail Warren (Ag); Beverly
Kenneth McKinley Warren (PE); Delphos
Ivan John Wassberg (C); Topeka
*Arthur Eugene Watson (EE); Hutchinson
James Howard Watson (VM); Shawnee
Rex Eugene Watts (Ag); Havensville
Clarence Hale Weaver (GS); Clay Center
Merle Alfred Webb (AA); Meriden
*LaVerne R. Weekly (HE&J); Girard
Charles Poe Weeks (CE); Wichita
Junior Weir (EE); Stafford
Perry F. Wendell (Ar); Topeka
Hilory John Wentz (ME); Ames
*Frieda Elizabeth Werts (C); Republic
*Charles Jesse West (IC); Fort Scott
Marion Chalmer West (Ag); Blue Mound
Milo Elton West (CE); El Dorado
*Robert Dean West (EE); Coffeyville
James Richard Westmacott (CE); Chase
Wallis Christian Wetlaufer (EE); Manhattan
Joseph Leo Wetta (MI); Colwich
*Gerald Wexler (IJ); Manhattan
Riley Russell Whearty (PE); Rossville
William Lawrence Wheelock (ME);
Pleasanton
Thaddeus Hug White (GS); Manhattan
*Laura Belle Whiteside (C); Fort Scott
*Dorothy May Whitney (GS); Hutchinson
Wayne Clark Whitney (Ag); St. George
Donald Edward Wick (ME); Hunter
Carson Wiedeman (EE); Caldwell
William Henry Wiggins (Ag); Eureka
William Orra Wikoff (AA); Modoc
John Bennett Wilcox (Ag); Manhattan
Edson Young Wilder (ArE); Newton
James Wesley Williams (AA); Dodge City
Rachel Thelma Williams (HE); Meriden
David George Willich (EE); Hamlin
Velma Wilsey (C); Washington
Charles Peairs Wilson (Ag); Anness
*Laurence Eugene Wilson, Jr. (C);
Kansas City
Marie Alphonsine Wilson (HE); Manhattan
Paul Henry Wilson (AA); Washington
*Virginia Lee Wilson (IJ); Hutchinson
Ben N. Winchester (VM); Kinsley
Winifred Winship (IJ); Phillipsburg
Charles Winters (ChE); Kansas City
Laurence Leroy Wisdom (C); Colby
Joseph Lewis Wissman (EE); Parsons
Helen Rudbeck Wolberg (GS); Manhattan
*Theresa Bernice Wood (HE); Manhattan
Everett Wilson Woodward (C&A); Salina
*George Henry Works (Ag); Humboldt
Albert Alfred Worrel (C); Kansas City
*Frances Corinne Wright (C); Manhattan
Margaret Fulton Wyant (GS); Topeka
*Millard F. Yantzi (IC); Kansas City
Adelyne Faye Young (IJ); Bloom
*Helen Gwendolyn Young (C); Longford
*Iona Jessamine Young (IJ); Morganville
Fred Zutavern (MI); Great Bend

SOPHOMORES

- Margaret Elizabeth Abbott (HE);
Manhattan
Walter Abmeyer (Ag); Grantville
*Julia McNeill Absher (HE&A-1; IJ-2);
Fort Riley
Lillian Emma Adams (HE); Leavenworth
*Neil LaValle Adams (EE); Sun City
Blanche Corinne Aicher (PE-1; HE&A-2);
Mankato
*Woodrow L. Ainsworth (PE); Garden City
John Bernard Alfors (EE); Denton
Bartlett V. Allen (GS); Galena
Edward Allen (CE); Michigan Valley
Esther Verneada Allen (IE&D); Wellington
Richard Park Allen (ChE); Chanute
William Redmond Allen (Ag); Cummings
Annette Alsop (GS); Manhattan
*Dorothy Anne Alspaugh (PE); Wichita
*Wilbur Leo Alvey (Ag); Kansas City
Earl Walter Amthauer (ChE); Junction City
Chester Willard Anderson (CE); McPherson
Neils Kay Anderson (EE); Leavenworth
Robert John Anderson (MI); Lyons
Jay Donald Andrews (Ag); Bloom
John Alden Angold (EE); Bethel
George Wendell Armstrong (MI);
Osborn, Ohio
Perry Charles Arnold (CE); Winfield
*William Gerald Auer (CE); El Dorado
Doris Levon Augustus (HE&N); Waterville
Ernest Raymond Ausherman (AA); Elmont
*Marion Robert Austermille (Ag);
Hutchinson
Georgiana Martha Avery (HE); Coldwater
Dewey Axtell (Ag); Harris
Howard Frederick Babb (CE);
Junction City
Nora Alice Babb (HE); Broughton
Marvin Philip Baecker (GS); Riley
Edward Orville Ball (GS); Manhattan
*Bruce Warren Barker (Ag); Burns
*Ted Collings Barnes (CE); Chillicothe, Mo.
*John Wilson Baska (CE); Kansas City
Dale Renier Bathurst (AA); Abilene
Violet Mae Bauer (HE); Clay Center
Forrest Overton Beardmore (AE); Mankato
Dorman Carroll Becker (Ag); Durham
Robert Gale Beckwith (LA); Hiawatha
Donald Wilson Beeler (PE); Mankato
Roy Swan Belcher (ME); Topeka
Dorothy Jane Bell (GS); Manhattan
*Joseph Frank Benda (ChE); Garfield, N. J.
Charles Wilmot Benkelman (CE);
McDonald
William Edmond Bentley (MI); Manhattan
Florence Elaine Bergmann (HE); Axtell
Darwin Berry (PE); Manhattan

* Matriculated 1935-1936.

SOPHOMORES—Continued

- Ruth Evelyn Betz (HE); Enterprise
 Vincent Clinton Bevenue (VM);
 Kansas City
 Frank Gearhart Bieberly (AA);
 Dodge City
 *Gerald Iden Biggs (ChE); Potwin
 Gloria Bingesser (IJ); Waconda Springs
 Ernest Lee Bird (AH&V); Protection
 Leonard William Bird (AA); Hill City
 Mary Lou Black (IE&D); Independence
 Delber Lloyd Blackwell (CE); Rozel
 Dorothy Grace Blaesi (HE); Abilene
 Francis Leroy Blaesi (AA); Abilene
 *Charles Graham Blakely (EE); Topeka
 Sanford David Blattner (CE); Rozel
 Herbert Warner Blevins (C&A);
 Clay Center
 *Everett George Blood (GS); Garnett
 Arthur Randolph Blythe (VM); White City
 Zeurita Elaine Bonar (HE); Washington
 *Eleanor Rosalee Boucher (HE); Minneola
 James Forrest Bourk (EE);
 Boise City, Okla.
 Grafton Diddle Bowers (VM); Manhattan
 Jane Boyd (HE); Concordia
 Raymond Thomas Bradley (ME);
 Belle Plaine
 Elliot Wilson Brady (ME); Manhattan
 John Robson Brainard, Jr. (Ag);
 Carlyle
 Blaine Barton Brandenburg (AA); Rilev
 Norman Garver Branson (EE); Belleville
 *John Emerson Brazee (IC); Iola
 Ralph Edward Breeden (CE); Latham
 John Augustus Brewer (EE); Concordia
 Howard Crum Briery (CE); Hoxie
 Clarence Neil Brigham (ME); Topeka
 Martha Esther Brill (HE&N);
 Westmoreland
 *Ciriaco de la Cruz Briones (AA);
 Kansas City
 D. Russell Brooks (ME); Independence
 Frank Louis Brooks, Jr. (AA); Scott City
 *Leona Emma Bross (GS); E'mo
 David Wilson Brower (ChE); Junction City
 Gordon Wonnacott Brown (EE);
 Manhattan
 *Isabel Marie Brown (C); Howard
 *Elvin Stanton Brunfield (ChE); Jetmore
 Edward Arnold Buchmann (IJ);
 Clay Center
 Nelson Lewis Buck (ME); Manhattan
 Mildred May Buckwalter (IJ); Manhattan
 Russell Conwill Buehler (CE); Seneca
 *Ruth Geraldine Burcham (IE&D);
 Kansas City
 Raymond Louis Burger (IJ); Kansas City
 Charles Floyd Burkett (ChE); Elkhart
 Gilbert Harold Burnett (ChE); McPherson
 *Franklin Harold Burr (VM-1; AH&V2);
 Manhattan
 Stephanna Burson (HE); Manhattan
 Beth Alice Byers (HE); Jewell
 Elizabeth Achten Campbell (IJ); Wetmore
 Hugh Burkett Campbell (VM); El Dorado
 Irvin Leroy Cantrall (C); Olathe
 Augustus Caesar Cardarelli (PE);
 Manhattan
 Ellen Mae Cardarelli (GS); Manhattan
 Rena Madeline Carleton (C); Coldwater
 *Glenn Alvin Carlson (EE); Manhattan
 Leland Virgil Carlson (C); Topeka
 Wayne Rodeen Carlson (CE); Topeka
 Barbara Rairden Carr (IJ); Manhattan
 Charles Tulloch Carter (ME); Topeka
 Francis Adam Caspar (VM); Alida
 Donald Lewis Cassidy (VM); Manhattan
 Merwyn Pierce Chapman (VM); Fredonia
 Donald Evans Charles (Ag); Republic
 *Earl Stephen Chicken (Ag); Hutchinson
 *Hyle Keith Claffin (ME); Manhattan
 Elizabeth Jane Clark (HE); Colby
 Letha Mae Clark (IE&D); Paxico
 *Robert George Clendenin (IJ); Kansas City
 Iona Marie Clennin (HE); Tulia, Tex.
 Howard Whittier Cleveland (PE);
 Muscotah
 Clarence Bruce Clevenger (CE);
 Kingsdown
 Gladys Mae Coffey (IJ); Junction City
 Margaret Emma Coffman (IJ); Overbrook
 John Hayes Collett (ChE); Pratt
 Helen Katherine Collier (C); Hiawatha
 Vance W. Collins (CE); Manhattan
 Ned Dennis Conrow (Ag); Manhattan
 Kenneth Conwell (ChE); Manhattan
 Merwin Blake Cook (AE); Monument
 Harold Keim Cooper (VM); Manhattan
 Marjorie Ellen Cooper (C); Stafford
 *William Hammond Cost, Jr. (C); Salina
 Arthur Howard Costain, Jr. (ChE);
 Fort Riley
 Barbara Ellen Costin (IE&D); Wichita
 Robert George Cotten (VM); Kansas City
 George Edward Cottrell (VM); Manhattan
 William Vernon Couch (EE); Olathe
 Deane Hadley Cousins (C); Talmo
 *Frank Andrew Cowell (EE); Hutchinson
 Earl Cox (Ar); Downs
 Reyman Richard Cozad (CE);
 Leavenworth
 Darrel William Craik (Ag); Washington
 Edwin Morris Crawford (VM); Manhattan
 Fred Morton Crawford (AE); Madison
 John Carl Crawley (Pe); Elkhart
 Fred Butcher Crist (ChE); Brewster
 *Walter Francis Cronin (EE); McCune
 Charles Burton Crook (Ag); Ogden
 Marion Arlene Cross (HE&N); Wilson
 Palmer Howard Crow (C&A); Manhattan
 Pauline Bernice Curtis (HE); Manhattan
 Verda Mae Dale (HE); Coldwater
 Verner Ephraim Danielson (Ag); Lindsborg
 Robert Vernon Darby (IJ); Morrowville
 Howard Warner Davenport (ME);
 Manhattan
 Eugene Price Davies (Ag); Winchester
 Chester McLean Davis (ME); Holton
 Dale Virginius Davis (CE); Dodge City
 Marjorie Davis (IJ); Topeka
 Elmer A. Dawdy (Ag); Washington
 Clifton Dawson (AA); Norcatur
 Charlyene Deck (HE); Circleville
 Charles William Decker (C); Enterprise
 Margaret Louise Decker (HE&A);
 Burr Oak
 Edward Alphonse DeClerck (GS);
 Manhattan
 Johnie Patton Denton (VM); Anthony
 Harold George Deters (ChE);
 Cawker City
 John Benjamin Dickens (Ag); Manhattan
 Clarence Wendell Dickhut (Ag);
 Scott City
 John Dunham Dietrich (AE);
 Kansas City, Mo.
 *Henry Earl Diffenderfer (IJ); Sabetha
 Dorothy Alice Diggs (HE); Emporia
 James Paul Dillingham (C&A); Alma
 *William Roy Dillingham, Jr. (C); Salina
 Esther Marie Dilsaver (HE); Athol
 *Warren Perry Dittmore (Ag); Severance
 *Howard Eugene Divine (AA); Garden City
 *Vincent Wendell Doll (C&A); McPherson
 Vernon Lloyd Doran (AA); Macksville

* Matriculated 1935-1936.

SOPHOMORES—Continued

- Murray Dean Dougan (IC); Emporia
Robert Gilchrist Douglass (PE); Walton
Wilma Mary Draper (HE); Westmoreland
Yale Druley (VM); Muncie
Blanche Pauline Drysdale (HE&J); Severy
Don Duckwall (C); Abilene
*Clifford E. Duncan (PE); St. Francis
Dale Leroy Duncan (PE); St. Francis
*Forrest Lemoin Duncan (Ag); Penalosa
Lawrence Jack Duncan (ArE); Wichita
Marshall Wayne Dutton (AA); Harlan
*Augustus Milton Duvall (ME); Topeka
Newton A. Eaton (ME); Chanute
*Grover William Eddy (PE); Havensville
Paul Arnold Ehrsam (C); Enterprise
*Lawrence Loderich Elder (C&A); Hutchinson
Roland Baker Elling (Ag); Manhattan
Howard Surber Elliott (AE-1; AA-2);
Manhattan
Louise Scott Ellis (C); Topeka
Ray LaVern Ellis (PE); Wichita
Theodore Franklin Emerson (EE); Wellington
*Merton Vincent Emmert (AA); Blue Rapids
*Sara Reed Emrich (GS); Tyrnza, Ark.
Donald Leroy Engle (M); Manhattan
George Thaine Engle (C); Abilene
Evert Eric Ericson (CE); Clyde
Albert Ross Ewing (EE); Great Bend
Lester Lloyd Fankhouser (C); Haviland
Merle LeRoy Farris (VM); Ottawa
*Thelma Loreen Faulkender (GS); Holton
*Velma May Felker (IE&D); Hoyt
Lee Shriver Fent (GS); Newton
Robert Clayton Ferris (AA); Conway
*Laurence Eugene Fields (Ag); McPherson
Thelma Louise Fieser (HE&N); Norwich
Mary Elizabeth Fink (HE); Osborne
Charles Allan Fisher (IJ); Wellington
Kenneth Adrian Fisher (Ag); Newton
Harry M. Flagler (C); Manhattan
*June Fleming (IJ); Council Grove
Walter Edo Folkerts (ME); Timken
*Eleanor Foncannon (C); Ashland
Lon E. Foote (VM); Manhattan
*Max Eugene Foote (CE); Ottawa
*Mary Jane Foulston (C); Wichita
Thelma Gene Fox (HE); Anthony
Charles William Frank (CE); Turon
Ruth Genevieve Freed (IJ); Scandia
Madaline Vivian Freeman (IE&D);
Kansas City
Marguerite Freeman (IJ); Augusta
Robert Roy Freeman (ChE); Manhattan
Sylvester Thaine Freeman (IJ); Severy
Wayne Henry Freeman (Ag); Kirwin
Caroline Ruth French (GS); Lyndon
N. Genevieve French (HE); Emlenton, Pa.
*William Richard French (C); Partridge
Berta Mae Frickey (GS); Oberlin
Robert Wilfred Froelich (C); Abilene
Dwight Dalbey Fulkerson (ME);
Manhattan
Floyd Wilson Fulton (ME); Manhattan
Paul Orndoff Gabler (EE); Salina
Dale Franklin Gamber (C); Culver
*John William Gamby (C&A); Everest
*Howard Castle Gardner (EE); Garden City
Verna Belle Garey (C); St. George
Nelta Evelyn George (MuE); Welda
Beulah Blaser Germann (IE&D); Fairview
Sallie Burnette Gilbreath (IE&D);
Hereford, Tex.
*Ethel Marie Gilliford (HE&N); Garrison
Evelyn Marie Gingrich (GS);
Superior, Neb.
Robert Newton Gist (ME); Manhattan
Evan Dalton Godfrey (C); Manhattan
*Albert John Goetz (C); Dodge City
Laura Jane Goodall (HE&N); Coats
John Frederick Granstedt (Ar); Courtland
Harlan L. Graves (ME); Greenburg
Marjorie Mary Gray (GS); Morganville
*Gertrude Bernice Green (IE&D); Iola
Margaret Clarissa Greene (IJ); Beverly
James Hall Gregg (ME); Salina
Merwin Jack Gregg (VM); Caney
*Robert Hammett Griffin (EE);
Chillico, Okla.
C. Lyndon Griffith (EE); Elkhart
Rosethel Grimes (PE); Manhattan
Russell Hermon Gripp (Ag); Wakefield
Eugenia Louise Grob (IE&D); Randolph
Hilbert August Grote (Ag); Manhattan
Mary Elizabeth Guthrie (M); Manhattan
Waneta Beulah Guthrie (HE); Fort Scott
*Betty Jeanne Guyot (C); Douglass
Beatrice Gertrude Habiger (HE-1; C-2);
Bushton
Roy Albert Hacker (IJ); Pratt
Herbert Hackett (ME); McCracken
Richard Hageman (IC); Hollenberg
*Marjorie Ilene Haines (C); Hutchinson
Kenneth M. Hale (EE); Wichita
John Steward Haley (VM); Delphos
John Fenwick Hall (CE); Junction City
Frank Frederick Hamilton (CE); Norton
*Paul Leo Hammann (EE); Independence
*Margaret Evalyn Hammels (IE&D);
Phoenix, Ariz.
Clarke Daniel Hanson (GS); Jamestown
Thelma Alta Harman (IE&D);
Indianapolis, Ind.
*Ray Merle Harmon, Jr. (ArE); Wichita
Alfred Eugene Harris (AA); Grinnell
Bryant Glenn Harris (EE); Topeka
Carl Robert Harris (ChE); Sharon
Donald Stover Harris (ME);
Lakewood, Ohio
Warner Harris (C); Burrton
*Arlene Lyndall Harrison (GS); Norton
George Bertrand Harrop (C); Manhattan
Ralph Jay Hathaway (Ag); Chase
Lenore Hatter (C); Abilene
Frances M. Heaton (HE&A); Partridge
Robert M. Heaton (C&A); Norton
Betty Jean Hedges (C); Kansas City, Mo.
Mary Violet Heeter (IJ); Kansas City
*John George Heidrick (CE); Beloit
Daniel Philip Heigele (AE); Wilsey
Charles Matthew Heizer (ArE); Hamilton
Ernest Paul Helm (IJ); Chanute
Laurence Henry Helms (EE); Alma
William Andrew Hemphill (Ag); Chanute
Hilda Frieda Hempler (PE); Alma
Harold Vincent Henderson (CE); Eskridge
William Hugh Hervey (VM); Belle Plaine
Vann Hess (ArE); Manhattan
*Audrey Fern Hewitt (HE); Pleasanton
Paul Myron Hicks (EE); Norcatur
John Worth Hines (Ar); Manhattan
*Margaret Ruth Hiskett (IE&D); Isabel
Arthur Wayne Hjort (C); Manhattan
Paul William Hodler (MI); Beloit
*George Wesley Hofsess (EE); Partridge
*Edwin Burns Holland (ArE); Liberal
Beth Merle Hollis (PE); Manhattan
James Leonard Hollis (EE); Holton
Marjorie Eliner Holman (IJ); Manhattan
Jean Clare Holmes (HE); Topeka
Norma J. Holshouser (HE); Dwight
John Joseph Holstein (ChE); Casper, Wyo.
Thelma Frances Holuba (IJ); Manhattan
Marion Elias Holverson (Gs); Maplehill
*Clyde Donald Hoover (CE); Macksville

* Matriculated 1935-1936.

SOPHOMORES—Continued

- Charles Fred Horne (IC); Alma Lehnus Lloyd Horst (CE); Holyrood Katherine Mae Hoss (HE); Wallace Gilbert Edwin Hotchkiss (IC); Manhattan Richard Eugene Hotchkiss (MI); Manhattan
Harold Kenneth Howell (CE); Quinter Leora B. Hubbell (IC); Fredonia
*Paul Emlyn Huff (C); Salina
Dorothy Louise Hughes (HE&A); Manhattan
Lorraine Hulpieu (GS); Dodge City
Frank Carrol Hund (CE); Leavenworth
*Dallus T. Hunter (ME); Newton
Lena Marie Hurst (HE); Clearwater
Elberta Maxine Huse (C); Manhattan
George McCloud Hutcherson (C&A); Manhattan
Thomas Conrad Hutcherson (ME); Manhattan
John Harvey Hyde (Ag); Augusta
Frank Henry Immroth (EE); Great Bend
Mary Gretchen Isern (IJ); Alden
*Milford Felix Itz (ME); Osage City
Howard Nelson Jackson (CE); Greenleaf
James Thomas Jackson (GS); Manhattan
Orval Paul Jackson (AE); New Albany
Warren Cowan Jackson (ME); Manhattan
David Jacobson (VM); Manhattan
Orval George Jacoby (C&A); Clyde
*Esther Elizabeth Jenkins (HE); Jewell
Bruce Emmett Johnson (IJ); Manhattan
*Glenn Wesley Johnson (CE); Hamilton
James Elbert Johnson (Ag); Winfield
M. Maxine Johnson (GS); Manhattan
*Shirley Aileen Johnson (GS); Winfield
Robert Compton Johnston (ME); Manhattan
Gordon Dale Jolitz (MuE); Abilene
Helen McCune Jones (IE&D); Herington
Aimison Jonnard (ChE); Manhattan
Lee Jordan (Ag); Claflin
Mary Christine Jorgenson (HE); Manhattan
*Dorothy Judy (IJ); Kansas City
Donald Alonzo Justice (ME); Dodge City
Robert Francis Kane (IJ); Toneka
Alma Belle Karns (HE); Bucklin
Bruce Howard Kauffman (C); McPherson
Winton August Kaup (IJ); Manhattan
*Arthur Bruce Keckley (CE); Alma
Harold Bechrer Keller (C); Enterprise
Mary Margaret Keller (HE); Clyde
*Robert Verne Kellogg (C); Wichita
Anita Mae Kensler (HE&N); Manhattan
Raymond Carroll Kent (EE); Manhattan
*Homer Wilbur Kerley (C); Lawrence
Emile Frederick Kientz (Ag-1; PE-2); Manhattan
Fred Vincent Kilian (AA); Detroit
Marion Ainsworth Kilian (C); Holyrood
Richard Franklin King (AA); Manhattan
William Edward Kinkade (C&A); Junction City
*Robert Kitch (Ag); Winfield
Edward William Klimek (PE); Manhattan
Florence Elizabeth Kling (C&A); Holton
*Dorothea Klinger (HE-1; C-2); Ashland
Delpha Alberta Klint (HE); Clifton
Roy C. Knappenberger (GS); Penalosa
Harry Alvin Knauff (GS); Mahaska
Helen Margaret Koestel (HE); Partridge
Eleanor Catherine Kohake (GS); Seneca
Milton Clarence Kohrs (Ag); Elmo
*Jack Haynes Koster (MI); Salina
Edward Emil Kregar (Ag); Offerle
Anthony Francis Krueger (C); Gardner
Louise Maxine Krummel (HE); Rice
*Dorothy Maxine Kubin (IE&D); McPherson
Boyda Jo Lacy (HE); Everest
Gerald August Lake (ChE); Manhattan
Jack Edgar Lane (GS); St. George
William James Langworthy, Jr. (CE); Leavenworth
*William Eugene Larson (IC); Wichita
Mary Elizabeth Laskie (IE&D); Bucyrus
Virginia Kathryn Laskie (IE&D); Bucyrus
Alvin George Law (Ag); Hill City
*Jack Morris Lawson (Ar); Wichita
*Rhoda Evelyn Lebow (GS); Salina
*Elizabeth Christine Lechner (MuE); Salina
Janice Roberta Lehman (GS-1; HE&N-2); Manhattan
Kenneth Raymond Leonard (AA); Manhattan
*James Trevor Lewis (ArE); Emporia
Paul Allen Lichty (EE); Sabetha
Elmer Edward Light (C); Yates Center
*George Austin Light (MI); Liberal
Freda Lind (IJ); Manhattan
Ned W. Link (ME); Pratt
Violet Eleanor Linville (HE); Chase
*Walter Newton Linville (Ar); Independence
Fay B. Ljungdahl (HE); Menlo
Louis Morris Long (Ar); Parsons
Ralph Alvin Long (C); Kansas City
Russel Keith Long (C); Manhattan
*Juanita Joan Looney (IJ); Winfield
*Eleanor Louise Lovan (HE); Salina
Ernest Leland Love (VM); Manhattan
John Wilson Loy (ChE); Chanute
Ruth Maxine Lund (HE); Green
Robert James McCall (AE); Wakeeney
Rodney Keith McCammon (Ag); Esbon
Cecil Earl McClaren (CE); Mullinville
J. Raymond McClure (PE); Kismet
Edmund Burke McCormick (VM); Manhattan
*Mildred Frances McCormick (HE&J); Wichita
Virginia McCormick (GS); Topeka
*Gilbert Lafayette McCullough (Ag); Marion
Henry McDaniel (MI); Michigan Valley
Ian Currie McDonald (VM); Manhattan
Jay Wayne McFadden (CE); Mullinville
Howard Nathan McFillen (AE); Cedar
Allan William McGhee (IJ); Centralia
Helen McGuire (HE); Burlington
Vergil Miller McIntosh (GS); Manhattan
Wayne Wesley McIntosh (GS); Manhattan
Helen Ruth McKenzie (GS); Solomon
*Thomas William McKinney (C); Manhattan
Robert Wilson McLeod (CE); Smith Center
Raymond Leroy McMahon (VM); Logan
Louis Barber McManis (EE); Kingman
Mary Lucille McNamee (HE); Walnut
Betty Lee McTaggart (IJ); Belleville
Mary Doris McVey (HE); Hill City
*Anne Louise Mabott (GS); Fort Leavenworth
Harris Leo Mackey, Jr. (CE); Caldwell
Chester Lyle Macredie (ChE); Wichita
Herman Paul Madsen (ME); Corbin
*Thomas Elwood Mahoney (C&A); Atchison
George Badsky Maichel (VM); Overbrook
Lester Walter Maresch (ME); Nekoma
Vernon Frank Maresch (AE-1; AA-2); Nekoma
Edward Joseph Markwood (C&A); Dubuque, Iowa
Abby Lindsey Marlatt (IE&D); Manhattan
*Harold Roy Martin (ME); Salina

* Matriculated 1935-1936.

SOPHOMORES—Continued

- Roy Scott Martin (ChE); Pratt
 Anna Jean Marx (IE&D); Ellis
 Robert Earl Mason (MI);
 Fall River, Mass.
 Clayton Matney (ME); Larned
 Milton Paul Matthaei (GS); Axtell
 Minnie Isabel Matthias (HE); Atchison
 Claudia Maxine Maxwell (GS); Horton
 Grace Kathryn Mayden (IE&D);
 Manhattan
 William Allen Mayfield (EE); Soldier
 Delos Gorden Mayhew (GS); Trousdale
 Louis Fullington Meek (EE); Idana
 *Donald Mark Meranda (ChE-1; IJ-2);
 Manhattan
 *Ellen Louise Mercer (M); Dwight
 Fred Howard Merrick (CE); Wichita
 Vincent William Merrifield (AA); Agra
 Fred Meyer, Jr. (AE); Jewell
 Ivard Dean Meyer (CE); Bison
 Weldene Jo Middlekauff (C); Topeka
 Carl Miller (EE); Manhattan
 *Edward Allen Miller (Ag); Hays
 *Elizabeth Ann Miller (GS); Highland
 Olive Agnese Miller (HE&J); Mahaska
 Wayne Ishmael Miller (ChE); Kansas City
 Helen Lawson Millican (IJ); Topeka
 Arthur Arnold Mills (PE); Russell
 *William James Minor (Ag); Kansas City
 Lloyd Burdette Mobiley (VM);
 Kansas City
 *Harry Earl Molzen (AA); Newton
 *Tom Allen Montgomery (PE); Hill City
 Edward Fox Moody (Ag); Greeley
 Maurice Moody (IJ); Mound City
 Francis John Moore (AH&V); Ashland
 John Richard Moore (Ag); Alliance, Ohio
 Mary Jane Moore (C); Junction City
 *William Coan Moore (EE);
 Trinidad, Colo.
 Ralph Bradford Moorman (Ag); Nickerson
 Lloyd Murle Mordy (MuE); Grenola
 Carl William Morgan (CE); Phillipsburg
 Charles Boyd Morgan (IJ); Ottawa
 Olga Adelle Morgenson (IJ); Vesper
 Alfred Less Morris (AA); New Albany
 Vern Vencil Morris (EE); Jetmore
 Harry Clifford Morton (EE); Winfield
 Lottie Elizabeth Mott (Ag);
 Poplar Bluff, Mo.
 Bertha Muriel Moulden (C); Tribune
 Wilbur Henry Mowder (VM); Sabetha
 Charles Ambrose Mulhern (C&A); Selden
 Mildred Lucille Mindell (HE); Nickerson
 Elbert Lindon Mundhenke (AE); Lewis
 Fred Harold Muret (Ag); Winfield
 Lester Duane Murphy (AA); Sublette
 *Mary Murphy (IJ); Clyde
 Esther Mae Musil (IE&D); Blue Rapids
 Howard Cecil Myers (Ag); Abilene
 Hugh Garry Myers (Ag); Milo
 Willis Roy Myers (C&A); Abilene
 Bernard Carlton Nash (C); Lakin
 Celeste Wilhelmenia Nelson (HE); Topeka
 Richard Albert Nelson (EE); Manhattan
 *Theron Andrew Newell (IJ); Junction City
 Dorothy Leona Nichol (HE); Concordia
 Naomi Abigail Nichols (HE&A-1;
 MuE-2); Council Grove
 Clara Wilhelmina Niemoller (C);
 Wakefield
 Elizabeth Lee Noel (PE); Glasco
 Dorothy Nelle Noel (HE&N); Syracuse
 Dean Nonamaker (EE); Osborne
 Charlotte Clair Norlin (GS); McCracken
 Kenneth Sidney Norton (GS); Oberlin
 H. Allen Nottorf (Ag); Abilene
 Robert Fred Nuttleman (Ag); Great Bend
 Eugene Lee O'Brien (MuE); Burr Oak
 Leona Ochsner (PE); Tribune
 Joseph Frederick O'Connor (C); Chapman
 David Deyoe Olive (C&A); Leavenworth
 Vito Thomas Oliver (VM); Manhattan
 *William Lorraine Olive (EE); Iola
 Annette Olson (GS); Manhattan
 Charles Herman Olson (Ag); Dwight
 Floyd Russell Olson (Ag); Minneola
 Raymond Winzenried Olson (VM-1; MI-2);
 Atchison
 Ford Anthony Opdycke (Ag); Russell
 Harry Otto (C); Manhattan
 Boyd Wilford Owen (EE); Caldwell
 Joenetta Orlena Owens (HE&A);
 Manhattan
 *David Page Jr. (MI); Topeka
 *Cruise Palmer (IJ); Kansas City
 *Warren Della Palmer (ME); Arkansas City
 *Mary Cathryn Paris (PE); Leavenworth
 Elton Vernon Parsons (VM); Emporia
 Josephine Lorraine Parsons (IJ); Wamego
 Rollin Chester Parsons (Ag); Manhattan
 Martin Oren Pattison (CE); Manhattan
 Jay Henry Payne (AE); Delphos
 Chester Winfred Peoples (Ag); Manhattan
 *Charles Belden Percival (C); Kansas City
 *Arlene Marie Perkins (HE); Kansas City
 Harold Allen Perkins (Ag); Kansas City
 John Paul Perrier, Jr. (GS); Olpe
 Jack Curtis Perry (CE); Manhattan
 William Raymond Petersen (IJ);
 Manhattan
 John Donald Peterson (IC); Enterprise
 Mildred Florence Peterson (HE); Kingman
 Velma Irene Peterson (C); Waterville
 Forrest Wayne Petty (C&A); Clay Center
 Boyd Dudley Phillips (Ag); Sedgwick
 *Cecil Vernon Phillips (EE); Marion
 Russell Eugene Phillips (EE); Wichita
 James Meriden Phinney (EE); Russell
 John Robb Pickett (Ag); Galena
 *Howard Daniel Pierce (IJ); Kansas City
 James Maxwell Pierce (CE); Burden
 Staley Leon Pitts (GS-1) (Ag-2);
 Willard
 Charles Morris Platt (ChE-1) (IJ-2);
 Manhattan
 Maurice Frank Plotkin (LA); Manhattan
 Warren Andrew Plowman (GS); Jewell
 Viola Ruth Plush (GS); Penalosa
 Hyman Pogorelsky (VM); Manhattan
 Lester Winner Pollom (C); Topeka
 Waldo Weaver Poovey (Ag); Oxford
 Carrie Dorine Porter (HE&N); Belleville
 Minnie Gladys Pratt (HE); Hope
 *Charles Lester Pratz (C); Hutchinson
 Joseph Curtis Prentice (PE); Manhattan
 William Phillips Price (GS); Little River
 Wilma Kathryn Price (M); Manhattan
 *William Morrow Proudfit (GS); Powhattan
 Hugh Patrick Quinn (C); Salina
 Earl Albert Ragland (EE); Herington
 Kenneth Edwin Rall (C); Wichita
 Charles Bernard Randall (VM); Bethel
 Verlin Willis Randall (MI); Haddam
 Weldon Wilday Reager (CE); Augusta
 David Vernon Rector (GS-1) (Ag-2);
 Topeka
 Ward Dallas Redman (VM); Manhattan
 Evelyn Eliza Redwine (HE); Lake City
 Leondice J. Redwine (ME); Lake City
 Addison Doyle Reed (Ag); Lawrence
 Clyde C. Reed (Ag); Kanopolis
 John Gilbert Reel (C); Topeka
 *Joseph Waker Reeves (ME); Burlington
 Donald Dorman Reid (CE); Manhattan
 James Edward Reilly (CE); Leavenworth

* Matriculated 1935-1936.

SOPHOMORES—Continued

- Anna Reimer (IE&D); Buhler
 Frank Lauren Reppert (ME); Manhattan
 *Eldon Eugene Retzer (ChE); Wamego
 John William Reynolds (AA); Winfield
 John Jacob Rhodes (C); Topeka
 Cleo Carl Rice (AA); Manhattan
 Melvin Earl Rice (EE); Topeka
 Virginia Louise Richardson (IJ); Topeka
 Juanita Louise Riley (HE); Tescott
 Robert Edward Rion, Jr. (C&A); Wetmore
 Elsie Lucile Rising (GS); Wetmore
 Charles Pearson Roberts (ChE); Manhattan
 *Edwin Twiss Robinson (ME); Osawatomie
 Max Fenton Rogers (CE); Glasco
 Myron Maxford Rooks (IJ); Manhattan
 Robert Lee Root (CE); Marquette
 George Harvey Roots (C); Manhattan
 Louise Mina Ross (HE); Wamego
 Worth Follett Ross (C); Manhattan
 Opal Bernice Ruddick (GS); Manhattan
 John Bernhardt Rufener (AA); Strong City
 Joseph Donald Ruggio (GS); Manhattan
 Edward Allen Russell (IJ); Manhattan
 Helen Louise Russell (IJ); Manhattan
 Lois Roberta Rust (HE); Manhattan
 *Edwin Rudolph Salzer (EE);
 Kansas City, Mo.
 *Rosanna Sandberg (IJ); Hutchinson
 James Sanders, Jr. (C); Kingman
 Carl Robert Sandstrom (C&A); Herington
 *Mary Gertrude Sardou (HE); Topeka
 Andy John Sargent (VM); Salina
 Julia Rebecca Sawtell (HE); Topeka
 Ralph Antone Scalapino (C&A); Everest
 Leroy Edward Schafer (Ag); Valley Center
 Jean Elizabeth Schofield Schaible
 (GS-1; HE&A-2); Fairview
 Kathryn Patrica Scheier (PE); Everest
 Clyde Schmedeman (C); Manhattan
 Vida Mae Schmidler (HE); Barnes
 *Frank Lee Schneider (ChE); Wichita
 *Louis Howard Scholl (MI); Kansas City, Mo.
 Maurice A. Schooley (VM); Morganville
 Edna Margaret Schroeder (HE); Lorraine
 Edwin Lenard Schuetz (Ag); Mercier
 Walter Scott Schultz (ME); Augusta
 Edwin Whitaker Schumacher
 (IC-1; ME-2); Jewell
 *Glenn Richard Schwalm (EE); Fort Scott
 Albert Von Schwartz (VM); Manhattan
 *Elmer William Schwartz (ArE); Hoisington
 Lois Mary Scott (HE); Manhattan
 Marion Dodford Scott (Ag); Manhattan
 Beth MaJean Searles (IJ); Wetmore
 James Newell Seaton (GS); Manhattan
 Mildred Marie Shaffer (GS); Simpson
 Lloyd Leonard Shank (GS); Bazine
 Edwin Joseph Shellenberger (EE); Ransom
 Dean Shepherd (ME); White City
 Richard Dickinson Sherman (GS);
 Manhattan
 Wava Jane Shoemaker (HE); Centralia
 Dorothy May Shrack (IJ); Pratt
 Hubert Dale Shroff (IJ); Concordia
 *Phillis Marian Shuler (C&A); Hutchinson
 *Woodrow Bryan Sigley (ME); Canton
 William Vincent Silver (C); Clay Center
 Charles Leon Simmons (ME); Strong City
 Gerald Edward Simms (IC); Republic
 Carl Simpson (Ag); Milton
 Fred William Sims (C); Manhattan
 Frances Ellen Singleton (GS); Tribune
 Clarence McPherson Skaggs (C);
 Dodge City
 Warren Lang Skinner (VM); Beverly
 Ethel Sklar (Ar); Manhattan
 William Leonard Slater (Ar); Manhattan
 *John Clark Slentz (ME); Chase
 Elsie Belle Sloan (HE); Dalhart, Tex.
 Alicé Pearl Sloop (HE&A); Nortonville
 *Gwendolyn Maxine Small (MuE);
 Neodesha
 Arthur Allan Smedley (Ar); Manhattan
 Eleanor Elizabeth Smith (HE);
 Shreveport, La.
 Francis Edwin Smith (C); Stockton
 Loren Walter Smith (AE); Manhattan
 Roy Ivan Smith (C); Lincoln
 William Daniel Smith (VM); Fredonia
 Don Arnold Snyder (ChE); Elkhart
 Raymond R. Sollenberger (CE);
 Manhattan
 Eleanor Tressia Souder (HE&N);
 Dodge City
 Kay Vern Spear (CE); Leoti
 Paul Eugene Spears (C&A); Mulvane
 *Martha Louise Speed (HE&A); Parsons
 Whitcomb Glenn Spear (PE); Manhattan
 Robert Jacob Spiegel (CE); Topeka
 *Charles Cecil Spore (LG); Halstead
 Max Raymond Springer (AE); Manhattan
 Dorothy Dawn Stagg (HE); Manhattan
 *Thomas Churchill Stansbery (GS); Parsons
 Beverly Earl Steadman (ME);
 Junction City
 Robert J. Steele (Ag); Barnes
 Carl Fred Steinhauer (VM);
 Mountain Lake, Minn.
 William D. Steinle (CE); Russell
 Jack Amos Stephens (PE); Wichita
 *Mary Marjorie Stephenson (C&A);
 Little River
 Joseph Sterling (VM); Brooklyn, N. Y.
 *Mary Ethel Stewart (HE); Oak Mills
 Mary Luella Stewart (HE); Topeka
 Alice Mary Stockwell (HE&J); Manhattan
 Richard Shelley Storer (ChE); Herington
 Arthur Emerson Stoskopf (ME);
 Hoisington
 Elmore Gregory Stout (Ag);
 Cottonwood Falls
 William Robert Strieby (C);
 Council Grove
 Frank Bernard Stuckey (Ag); Leavenworth
 Phyllis Margaret Studer (GS); Atwood
 *John Dennis Sulton (Ar);
 Orangeburg, S. C.
 *Ruth Louise Sutter (GS); Wichita
 Buford Delmont Tackett (EE); Topeka
 Robert Edward Tate (IJ); Downs
 *John Lawrence Taylor (IC); Kansas City
 Katherine Elizabeth Taylor (IE&D);
 Osborne
 Lila Elaine Taylor (IE&D); Enterprise
 Virginia Teichgraber (HE&J); Marquette
 Gilbert LeRoy Terman (Ag); Manhattan
 *Herman Ralph Thole (ChE); Stafford
 Dudley Percy Thomas (ME); Marysville
 William Edward Thomas (Ar); Marysville
 Bert Bristow Thompson (VM-1; PE-2);
 Miltonvale
 David Ambrose Thompson (IJ); Cheney
 Geraldine Rose Thompson (HE); Kinsley
 Joe Earl Thompson (CE); Almaena
 Emerson Myron Thwing (ME);
 Manhattan
 *Wilma Maurice Tonn (IE&D); Haven
 Richard Earl Totten (EE); Clifton
 Wayne Dillon Trial (GS); Colby
 William Paul Trenkle (C); Manhattan
 Raymond Charles Trentman (AA);
 Manhattan
 Robert Long Trower (PE); Downs

SOPHOMORES—*Concluded*

- Harry Elmer Trubey (EE); Ellsworth
 Archie Tucker (EE); Topeka
 Clifford Wesley Turner (VM); Amy
 Max Kenneth Tysor (CE); Anthony
 Elinor Lucile Uhl (GS); Smith Center
 Harold Preston Ulrickson (EE); Kanopolis
 Pauline Ernestine Umberger (HE&A);
 Manhattan
 Clarence Fred Veach (EE); Salina
 Clark Alvin Waage (EE); Manhattan
 Mary Ann Wall (GS); Mahaska
 Samuel Paul Wallingford (MI); Ashland
 Clara Maurine Walters (IC); Manhattan
 Harold Walters (IC); Wetmore
 Keith Walton (EE); Peck
 LaRue Wilmer Wangerin (AE); Kensington
 Raymond Woodrow Wann (VM);
 Manhattan
 Leland C. Ward (Ar); Manhattan
 Theresa Mae Ward (HE); Langdon
 Carl Saylor Warner (AA); Whiting
 *Dorothy Agnes Warner (HE&N); Goodland
 Jean Washburn (Ar); Manhattan
 Evan Watts (CE); Havensville
 Leonard Eugene Weckerling (CE);
 Manhattan
 *Charles Sumner Welch (ME); Wichita
 Homer Theodore Wells (ChE); Marysville
 Otto Earnest Wenger (Ag); Basehor
 Willis Raymond Wenrich (Ag); Oxford
 D. C. Wesche (CE); Manhattan
 Francis Linton Wesley (CE); Parsons
 William Roger West (IC); Manhattan
 Joe Arthur Weybrew (Ag); Wamego
 Elton Clive Whan (C); Manhattan
 Donald Eugene Wheeler (IJ); Seneca
 Florence Josephine Wheeler (Ar); Jewell
 John Robert Wheelock (ME);
 Cusihuiriachic, Mexico
 Richard Herold Wherry (IJ); Sabetha
 *Winifred Lois Whipple (PE); Omaha, Neb.
 Loren Edgar Whippis (AA) Belleville
 *Edith Mary White (GS); Kingsdown
 Edwin LeRoy White (PE); Scandia
 Lucy Eliza Whiteman (IE&D); Sedgwick
 Sarah Elizabeth Whyman (HE);
 Dodge City
 Berle Wickham (LA); Norcatur
 Lois Edna Widner (IJ); Manhattan
 Floyd Eugene Wiley (ChE); Junction City
 Edgar Howard Wilkerson (ME); Syracuse
 Wilma Grace Wilkins (HE); Milford
 Thaine Daniels Williams (CE);
 Pawnee Rock
 Dolores Elaine Williamson (HE&N);
 Little River
 *John Herron Williamson (EE); Topeka
 Marguerite Williamson (HE); Little River
 Noble Willis (EE); Kirwin
 Solon Luther Willsey (GS); Anthony
 *Eleine Wilson (HE); Towanda
 *Evelyn Ruth Wilson (IE&D); Towanda
 *Juanita Dawn Wilson (C); Wilson
 *Margaret Alleyne Wilson (HE);
 Valley Center
 Victoria Helen Jennie Wilson (HE);
 Alta Vista
 Norman Dunning Wilttrout (C); Logan
 Richard Gordon Wiltse (Ag); Altoona
 Joyce Louise Wingrave (IJ); Yates Center
 Virginia Iyone Winkler (HE); Randolph
 Harold León Winter (CE); Dover
 Helen Elizabeth Winter (C); Washington
 Ronald Cameron Wishart (ME);
 Manhattan
 Herald George Wixom (VM); Manhattan
 Harry Albert Woodbury (C); Abilene
 Beulah Marie Woodcock (IE&D);
 Manhattan
 *Gordon Harold Woodrow (Ag);
 Sharon Springs
 Edith Mabelle Woods (HE); Kensington
 Gerald David Woody (C); Beverly
 William Wilbur Wright (ChE);
 Kansas City
 Ruby Corrine Wunder (HE&A);
 Valley Falls
 Jack Frederic Wynne (EE); Salina
 Irl Clarence Yeo (EE); Ellsworth
 *Mander Xenophon Yonts (EE);
 Puncheon, Ky.
 James Leroy Young (Ag); Cheney
 John Henry Young (EE); Centralia
 Laura May Young (HE); Cheney
 Federico Sizon Zamora (AH&V);
 Manhattan
 James Elias Ziegler (VM); Junction City
 Mildred Edna Zimmerman (HE); Newton
 *Iva Maxine Zook (PE); Wichita

FRESHMEN

- John Elden Abbott (VM); Manhattan
 *Raymond Lee Abel (IJ); Manhattan
 *Willis Dean Abrahams (Ag); Wayne
 *Rebecca Berniece Adams (IE&D);
 Clay Center
 *Robert George Adriance (IJ); Seneca
 *George Wilson Aicher (Ag); Hays
 *Doctolero Santiago Alejo (Ag); Beloit
 *Elizabeth Ennis Allbee (IE&D); Salina
 *Arthur Forrest Allen (Ag);
 Allamuchy, N. J.
 *Benjamin Wilmot Allen (VM);
 Laurens, Ia.
 *Philip Tingley Allen (IJ); Circleville
 Sylvia Lorene Allen (HE); Manhattan
 *Charles Oscar Allenson (GS); Riley
 *Jean Allison (IJ); Bartlesville, Okla.
 *Veryl Dale Alquist (GS); Clay Center
 *Marion Calvert Alson (VM); Carthage, Mo.
 *William George Alsop (Ag); Wakefield
 James Henry Altland (EE-1; IJ-2);
 Wichita
 *Alfred Eugene Anderson (EE-1; Ag-2);
 Courtland
 *Hilding August Anderson (GS); Cleburne
 *Karl Manfred Anderson (AE); Walnut
 *Keith Alfred Anderson (ArE); Clyde
 Leroy Alexander Anderson (CE); Detroit
 *Grace Haroldene Angstead (GS);
 Manhattan
 *Alta Margaret Ansdell (HE); Jamestown
 *Wayne Appenhorst (VMP); Kensington
 *Martha Helen Appel (GS); Bushton
 *Victor Pierson Archer (LG); Berryton
 *Dorothy Alice Armstrong (HE); Lecompton
 *John David Armstrong (CE); Paola
 *Gordon Arnett (CE); Anthony
 *Richard Alden Arnett (CE); Anthony
 *Edna May Arnold (Ag); Wichita
 Leon Lewis Ashton (ME); Salina
 Neville Levon Astel (VM); Manhattan
 *Louis Clyde Ate (Ag); Wellington
 *Earl William Atkins (EE-1; C-2); Topeka
 *Jane Alleyne Auld (IJ); Pasadena, Cal.

* Matriculated 1935-1936.

FRESHMEN—Continued

- *Lilian Lucille Auston (HE&A); Alexander
 *Ruth Avery (HE); Concordia
 *John Sherman Axford (C); Manhattan
 *Robert Oris Baber (MI); Abilene
 *Albert David Backer (VM);
 Brooklyn, N. Y.
 *Elsie Marie Bahner (HE); Silver Lake
 *Harold Leroy Bair (AA); Ruleton
 *Georgene Elizabeth Baird (M); Formoso
 *Betty Jane Baker (C); Manhattan
 *Corinne Frances Baker (HE);
 Malta Bend, Mo.
 *Ellwood Tyler Baker (Ag); Abilene
 *Vivian Lilah Baker (HE); Morganville
 *Richard Clair Banbury (PE); Wichita
 *Lawrence Newton Barker (Ag); Louisburg
 *Mary Elizabeth Barnett (GS);
 Fort Leavenworth
 *Dwight L. Barngrover (PE); McPherson
 *Dale Franklin Barrett (Ag); Belleville
 *Willard Marshall Barry (Ag); Manhattan
 *Elizabeth Katherine Barstow (IE&D);
 Larned
 *Harry Bartlett (CE); Topeka
 *Marion Katheryn Barton (IJ); Kansas City
 *Charles Francis Basye (GS-1; ME-2);
 Coats
 *Charles Richard Bates (GS); Sterling, Colo.
 *Margaret Anne Baughman (HE); Goodland
 *Esther Alba Baxter (HE&J); Manhattan
 *Eleanor Adalaid Bayles (HE&A);
 Manhattan
 *Ross Beach (EE); Hays
 *Iris Vivian Beal (HE); Colwich
 *Ted Mason Beard (VMP); Topeka
 *Victor Bernard Beat (VMP); Cleveland
 *Coyla Idene Beatty (GS); Manhattan
 *Emil William Beckman (CE); Phillipsburg
 *Harold Emery Bedwell (VMP); Easton
 *Dorothy Ellen Beebe (HE-1; IJ-2);
 Kansas City
 *Guy Raymond Beer (ME); Larned
 *Wayne Eugene Beer (Ag); Larned
 *Glenn Lester Beichlev (ME); Minneapolis
 *Stella Lucille Beil (HE); Bavaria
 *Elizabeth Fern Beisecker (IE&D); Topeka
 *LeRoy Eugene Belcher (ME); Holton
 *Anna Lora Bell (C); Silver Lake
 *Frank Vernon Bell (PE); New Cambria
 *Garnetta Lavia Bell (HE&A); Haven
 *Iverson Charles Bell (VMP); Kansas City
 *Marion Albert Bell (GS); McDonald
 *Clarence Kinsey Bennett (VM); Wichita
 *George Henry Benson (ME); Grainfield
 *Blaine Cooper Bentley (Ag); Manhattan
 *Maud Alice Bentley (HE&N); Quinter
 *Leonard William Beranek (GS);
 LaCrosse, Wis.
 *William Ellsworth Berger (GS); Manhattan
 *Ordo Frank Berges (CE); Onaga
 *Eileen Marie Bergsten (Ar); Randolph
 *Donald Deane Berkey (C&A); Rossville
 *Israel Berkowitz (VM); Brooklyn, N. Y.
 *Stanley Fraats Berner, Jr. (MuE); Wamego
 *Helen Louise Berridge (HE); Fostoria
 *Raymond E. Bert (ME); Neodesha
 *Marjorie Esther Bertholf (HE); Spivey
 *Arthur William Besthorn (MI); Holyrood
 *Sue Edna Betton (MuE); Bethel
 *Anna Elizabeth Betts (HE); Topeka
 *Dorothy Isabelle Beyer (HE&N);
 Manhattan
 *Edward Kirk Bigge (AE); Stockton
 *Charles Alden Black (ME); Manhattan
 *Edwin Walker Blair (CE); Soldier
 *Frank LeRoy Blakely (C&A);
 Waterbury, Conn.
 *Carroll Gould Blanden (EE); Greeley
 *Jack Blanke (MI); Atchison
 *William Frank Blaufuss (Ag); Olpe
 *Ralph Willard Blazier (VM); Junction City
 *Jesse Edward Bogan (EE);
 Kansas City, Mo.
 *Howard Herbert Bohin (VMP); Manhattan
 *Chester Lloyd Boles (CE); Turon
 *Herbert Paul Bolks (VM); Hull, Iowa
 *Ted Eugene Bond (GS); Topeka
 *Joe Michael Bonfield (MI); Elmo
 *Gertrude Lorraine Bonjour (C); Onaga
 *Jesse George Boomer, Jr. (EE);
 Kansas City
 *Glenn Ivan Booth (Ag); Paradise
 *Lloyd Thomas Booth (Ag); Osage City
 *Frank Bott (Ag); Zion, Ill.
 *William Dale Bowerman (VMP);
 Oklahoma City, Okla.
 *Finis Othello Boyce (VMP); Wamego
 *James Philip Boyce (VMP); Wamego
 *Philip Craig Boyce (VM); Wamego
 *Phyllis Irene Boyle (HE&N); Manhattan
 *Andrew Jack Bozarth, Jr. (Ag); Liberal
 *Dean Eugene Braden (ChE); Junction City
 *Dean Thompson Bradley (VMP);
 Belle Plaine
 *Emil DeVere Brage (EE); Topeka
 *Jesse Francis Brainard (PE); Selden
 *Mary Dean Brainard (MuE); Carlyle
 *Nathan Austin Bramlett (EE); Silver Lake
 *John William Brandenburg (AE); Manhattan
 *Grace Breeden (MuE); Manhattan
 *Merle Dutton Breeding (VM); Herkimer
 *Vernon Lee Brensing (CE); Mullinville
 *Ray DeLore Brent (Ag); Altton
 *Dorothy Elizabeth Brewer (IE&D); Winfield
 *Robert Harry Bridwell (VM); Manhattan
 *James Lester Brierley (VMP);
 Metuchen, N. J.
 *Wade Oberlin Brinker (VM); Manhattan
 *Ray Brinkmeyer (ME); Hill City
 *Lois Helen Britt (HE&A); Salina
 *Randall J. Brookens (GS); Topeka
 *Henry Chrisco Brooks (CE); Topeka
 *Paul Louis Brose (EE); Marion
 *Margaret Mary Bross (HE); Elmo
 *Gilman White Brotherton (Ag); Topeka
 *Cleva Belle Brown (HE); Denison
 *Elizabeth Grace Brown (HE); Manhattan
 *Harold Eugene Brown (CE); Salina
 *James Milton Brown (VMP);
 Los Angeles, Cal.
 *Paul William Brown (PE); Manhattan
 *Richard Leslie Brown (Ag); Hugoton
 *Robert Clinton Brown, Jr. (GS); Iola
 *William Francis Brown (C&A); Manhattan
 *Sidney Goodell Browne (EE); Burdett
 *James Leon Brubaker (CE); Sawyer
 *Oral Brunk (PE); Norcatur
 *Thomas Rudolph Brunner (GS); Wamego
 *Shirley Bernice Brunson (HE&N);
 Kansas City, Mo.
 *Ethelyn Lorene Buchanan (HE); Pratt
 *Harry Copley Buchholtz (EE); Olathe
 *Charles Adelbert Buck (ChE); Anthony
 *Harriet Eileen Buck (HE); Derby
 *Wallace Allen Buck (Ag); Derby
 *Pauline Clare Budde (HE); Albert
 *Frederick Louis Buente (VMP);
 Armstrong, Ind.
 *Robert Harlan Bull (PE); Marysville
 *John Earl Bullock (CE); Glasco
 *Maurice Milner Bulmer (EE-1; C&A-2);
 Michigan Valley
 *Howard Ernest Bumsted (ChE); Clay Center
 *Rex Marciel Bunch (EE-1; Ag-2);
 Fredonia

FRESHMEN—Continued

- *Anthony Michael Burdo (VMP);
Manhattan
Ben Salvatore Burdo (VM); Manhattan
*Virgil Alfred Burtat (GS); Peabody
*Edwin Moore Burnett (ChE); Fort Riley
*Ross W. Burnett (GS); Council Grove
*Annabell Esther Burns (HE&A);
Manhattan
*Walter Eugene Burrell (ME); Emporia
*Marvin William Burris (CE); Alma
*Elmer Theodore Burson (Ag); Monument
*Linus Homer Burton (LG); Belle Plaine
Dean B. Burtfield (EE); Haviland
*Duane Chester Bush (C); Copeland
*Thomas Oeland Bush (C); Salina
*Martha Marie Caldwell (HE); El Dorado
*James Lavoe Campbell (MI); Elkhart
*Leonard Walter Canfield (ME); Miltonvale
*Aileen L. Carlile (IJ); Jamestown
*George Arthur Carlin (VMP);
Milwaukee, Wis.
*Ena Jeanette Carlisle (HE); Burrton
*Bula May Carlson (HE); Manhattan
Billie Milton Carnes (VMP);
Henryetta, Okla.
*John Milton Carpenter (IJ); Colby
*Carol Nell Case (HE); Cherryvale
*Max Harwood Casebeer (GS); Manhattan
Raymond Lawerance Casey (AE); Corning
*Norwood Harry Casselberry (VM);
Savanna, Ill.
*Paul Wendell Cassell (GS); Salina
*Juan Loza Castillo (PE); Spearville
*Lynn Dale Chaffee (GS); Talmage
*Mary Maxine Challender (HE&J);
Sedgwick
*Harriet Emline Chamberlain (IJ);
Kansas City
H. Francis Chapman (C); Manhattan
*Hila Marie Chapman (HE); Asherville
Louis Dixon Chedester (VM); Manhattan
Dale Cherry (VM); Manhattan
*Ned Chestnutt (EE); Logan
*Harry Earl Chiles (VMP); Topeka
Ralph Woodrow Christensen (C);
Clay Center
*Edward Henry Christopher (Ag); Bucklin
*John York Christy (AA); Meriden
*Marybelle Churchill (HE&J); Topeka
*Allen Roland Clark (VMP); Miltonvale
*Carl Charles Clark (VMP);
Kansas City, Mo.
*Charles Edward Clark, Jr. (IJ); Rosedale
Forrest William Clark (VM); Jewell
*Franklin D. Clark (Ag); Onaga
*Lloyd Aaron Clark (PE); Manhattan
*Owen Earl Clark (IC); Hoisington
*Robert Hugh Clark (VMP); Manhattan
*Thaine Alvin Clark (GS); Concordia
*Veath Clark (PE); Barnard
*William Kenneth Clarke (EE);
Blue Mound
*William Eugene Clothier (GS); Paxico
*Helen Beth Coats (HE&A); Topeka
Porter Coble (VMP); Manhattan
*Alton Monroe Coddington (VM);
Alexander
*Robert Benson Coder (EE); Manhattan
*William Jackson Coffman (GS); Manhattan
Julius Cohen (VMP); Yonkers, N. Y.
Lawrence Donaldson Colburn (C);
Manhattan
*Alice Rosalind Coldren (HE&J); Oberlin
*Carol Eugene Coleman (VMP-1; Ag-2);
Sylvia
*Robert Scheble Colladay (EE); Hutchinson
*Robert Lee Colland (C); Leavenworth
Wayne Devere Collins (VM); Marysville
*Donald Marshall Connet (Ar); Manhattan
Harry Jacob Conrad (VM); Kansas City
*Earl Jesse Cook (Ag); Parker
*Florence Elizabeth Cook (HE); Lyons
*Norma Ilene Cook (HE); Ash Valley
Reva Marie Cook (HE&A); Ash Valley
*George Arthur Cookinham (C); Topeka
*Paul Leonard Cool (Ag); Manhattan
*James Fenimore Cooper (IC); Manhattan
*Jesse Ralph Cooper (Ag); Preston
Pauline Edith Cooper (HE&A); Manhattan
*Jack L. Cope (VMP); Hastings, Neb.
Roland Willard Cordts (C&A); Wamego
*Amy Laurie Correll (IJ); Fort Riley
*Forrest Harold Corser (EE); Topeka
*Elizabeth Belle Couchman (HE&N);
Anthony
Donald Owen Coulson (GS); Talmage
*Carl Coulter (ME); Leon
*Geneva Marie Counter (HE-1; IJ-2);
Oberlin
*Edwin Courtney (Ag); Danville
Jimmie Richard Cowan (VM); Wichita
*Maynard Gerald Cox (C&A); Colony
*Ralph Robert Cox (VMP); Omaha, Neb.
*Eudora Geneve Craig (HE); Attica
*James Jacob Cram (ME); St. Francis
*Howard Allen Crawford (C); Stafford
*Delbert Clare Creighton (MI); Denison
*David Franklin Crews (ChE); Manhattan
*Merle Heath Crist (GS); Downs
*Barbara Jane Cross (MuE); Jacksonville,
Tex.
*Geraldine Lucille Cross (GS); Wilson
*Chester Lee Crotts (CE); Turon
*Everett John Cupps (ME); Haven
*Clark Darwin Currie (EE); Topeka
Philip Henry Curry (VM); Kansas City
*Emerson Lyle Cyphers (Ag-1; VMP-2);
Fairview
*Glenn Stephen Dahlgren (VMP);
Enterprise
Eugene Francis Damer (VM);
Webb City, Mo.
*Eunice Maebert Danielson (HE);
Lindsborg
*Maxine Evelyn Danielson (HE); Manhattan
*Clara Julia Dannenberg (IJ); Hiawatha
*Thomas King Darrah (Ag); Marquette
*Gladys Mae Dart (HE-1; C-2); Pratt
*Lyman Lloyd Daugherty (CE); Manhattan
*Hyatt Lynne Davidson (Ag-1; IC-2);
Manhattan
*Lawrence Roy Davidson (GS); Manhattan
*Robert Lee Davidson (PE); El Dorado
*Albert A. Davies (VM); Kansas City, Mo.
*Charles Willard Davis (Ag); Halstead
*Ileene Genevieve Davis (C); Marysville
*Mary Frances Davis (HE); Chardon, Ohio
*Chester Raymond Dawson (EE-1; C-2);
Russell
*Ermal Irene Dearborne (GS); Manhattan
*Alvin Daniel Deaner (MI); Alliance, Neb.
*Dean Carl Debler (IC); Marysville
Peter DeCinque (VM); Woodbine, N. J.
*Clifford Newton Decker (VM); Manhattan
*Edna May Decker (IE&D); Holton
*Ernest Wilson Decker (Ag); Tecumseh
*Glenn Martin Decker (GS); Enterprise
*Everett John Degenhardt (C); Alma
*Charles Vincent Dehner (Ag); Kansas City
*Donald Pitman Deibler (GS); Manhattan
*Lucas James DeKoster (ME); Hull, Iowa
*Dale De Money (CE); Troy
*Richard DeMoss (AE); Topeka

FRESHMEN—Continued

- *Otis Gerald Dewey (GS); Hollenberg
 *Lee Dewhirst (EE); Salina
 *Wilburn Milkisedic Dicken (Ag); Winfield
 *Paul Rutherford Dickens (PE); Prairie View
 *Clarence Eugene Dickson (CE); Manhattan
 *Howard Lyle Dickson (EE-1; C-2);
 Carbondale
 *Thomas John Dickson (Ag); Admire
 *LaVerne William Dierking (ME); Holton
 *Ruth DaVida Dill (GS); Winchester
 *Lawrence Victor Diller (AA); Morrowville
 *Rose Geraldine Diller (GS); Morrowville
 *Evelyn Leone Dilsaver (HE); Athol
 *Loren John Dilsaver (Ag); Athol
 *Herbert Merrill Dimond (EE); Smith Center
 *Leslie Doane (Ar); Osborne
 *Jane Ethel Dodge (GS); Manhattan
 *Rowland Maxwell Dolan (C&A); Clifton
 *Sam Doll (ArE); Kingman
 *John Anthony Donahue, Jr. (ChE);
 Kansas City
 *Raymond James Dorman (ME); Centralia
 *Arva Ilene Douce (GS); Narka
 *Lois Elaine Douce (GS); Narka
 *Helen Antoinette Douglas (C); Belleville
 *Mary Agnes Doverspike (HE);
 Cottonwood Falls
 *Stanley James Dowds (VMP); Alton
 *Merrill Edward Downer (EE); Manhattan
 *Clifford Jerrold Drake (EE); Corbin
 *Clarence Joseph Dreier (ME); Kansas City
 *Donald Frederick Dresselhaus (C);
 Lincoln
 *Alvin Monroe Driscoll (AA); Salina
 *Charles S. Dronberger (GS); Topeka
 *Albert Jack Dryden (CE); Oberlin
 *Horace Duckenfield (VMP);
 Belmont, Cal.
 *Jack Duane Duckworth (ArE-1; IJ-2);
 Garden City
 *Verner Dugan (C&A); Green
 *Lester Frederick Duggan (C); Topeka
 *John Elias Dumford (GS); Parkerville
 *Raymond Reinholdt Dumler (AE); Gorham
 *Robert Frederick Dundon (EE);
 Junction City
 *Doris Winifred Durfee (HE); Washington
 *Walter Elsworth Dwy (CE);
 Waterbury, Conn.
 *Stanley Naimeth Dwyer (IJ); Manhattan
 *John Page Earle (Ag); Washington
 *George Washington Eberhart (VM);
 Jewell
 *Joe A. Eckart (MI); Manhattan
 *Ronald Roy Edelblute (Ag); Manhattan
 *Howard Leon Edwards (ME); Chautauqua
 *William Conwell Edward (AA); Jewell
 *Robert William Edwardson (AA);
 Hiawatha
 *Luella Edith Effland (GS); White City
 *Elnita Ella Ehler (C&A); Holyrood
 *Glenn Darold Ehler (CE); Holyrood
 *Stanley Ray Ehmon (GS); Downs
 *Charles Edward Eibes (AA); Tonganoxie
 *Irene Eisenhower (HE); Ramona
 *Doris Elizabeth Eller (HE); Colby
 *Mary Elizabeth Elliott (HE-1; C-2);
 Manhattan
 *Ben Charles Ellis (Ar); Holton
 *Jack Edward Ellis (VMP); Manhattan
 *Othal Floyd Else (GS); Hollenberg
 *Richard Bryce Elson (ME); Omaha, Neb.
 *Evelyn Uldine Emry (GS); Topeka
 *Elton Endacott (Ag); Manhattan
 *Frederick Dale Engler (Ag); Topeka
 *Burt Walter English (VMP); Fort Riley
 *Eugene Minot English, Jr. (Ar);
 Hutchinson
 *Dorothy Louise Epperson (IE&D-1; IJ-2);
 Wellington
 *Carl Frederick Erickson (VMP); Aurora
 *Earl Albert Erickson (Ag); Wilson, Pa.
 *John Ernest Erickson (VMP); Wilson, Pa.
 *Warren Kirkwood Erickson (AE); Leona
 *Pauline Hilda Ericson (PE); Lindsborg
 *James Andrew Eskeldson (VM); Ramona
 *Hoy Boyd Etling (AA); Copeland
 *Edward Etter (GS); Manhattan
 *David Edward Evans (VM);
 Montrose, Colo.
 *Roy Omar Evans, Jr. (VMP); Olathe
 *Clair Eugene Ewing (CE); Blue Rapids
 *Paul Fagler (PE); Manhattan
 *William James Faith (GS); Hancock, Md.
 *Betty Lou Falanders (HE&A);
 Chicago, Ill.
 *James Madison Fallis (ChE); Luray
 *Farland Edgar Fansher (Ag); Manhattan
 *Kenneth M. Farnsworth (Ag); Topeka
 *Henry Horatio Farrar (GS); Manhattan
 *Arthur Anthony Farrell (C); Manhattan
 *Robert Matthew Farrell (GS); El Dorado
 *Merle Martin Fate (ME); Concordia
 *Willis Bert Faulkender (Ag); Circleville
 *Harold A. Fechter (GS); Aurora
 *Murray Feldman (VM); Brooklyn, N. Y.
 *Zillah Lee Feleay (GS-1; HE-2);
 Manhattan
 *Naomi Grace Fent (HE&A); Newton
 *Paul Laverne Fickel (VMP); Chanute
 *Dean Lewis Fisher (EE); Mankato
 *James Philip Flannery (VMP); Manhattan
 *Beattie Harris Fleenor (MI); Manhattan
 *Truman Brandon Fleener (VMP);
 Tulsa, Okla.
 *Merlin J. Fleming (C&A); Oakley
 *Homer Wendell Flemmings (GS); Pratt
 *Reed Charles Fleury (Ag); Jamestown
 *Lehr Deforest Flint (EE); Lyndon
 *Virginia Lou Flory (IJ); Howard
 *Phoebe Ann Flower (HE&N-1; IJ-2);
 Wellington
 *Chester Alanson Foreman (CE); Wichita
 *Charles Steven Foster (VMP); Burlingame
 *Dolores Coralene Foster (IJ); Axtell
 *Fred Edward Foster (VMP); Kansas City
 *Jean Marian Foster (IJ); Clifton
 *Francis Willard Fox (CE); Ashland
 *Howard Walter Fox (Ar); Rozel
 *Ruth Maurine Fox (IJ); Longford
 *Herbert George Frankel (C); Newark, N. J.
 *Charles Hugh Freeman (C); Wellington
 *Emma Helen Frick (IJ-1; HE-2); Larned
 *Theodore William Fullmer (GS); Elkhart
 *Paul Willis Furst (GS); Atehison
 *Genevieve Gallagher (GS); Jewell
 *Richard William Galle (Ag); Moundridge
 *Harvey Allen Gantenbine (C); Elmo
 *Eugene Vernon Gardner (ME); Clifton
 *Garrett Gardner (CE); Belvidere, N. J.
 *Lois Pauline Garrison (HE); Salina
 *Roy Garrigues, Jr. (CE); Salina
 *Arthur Raymond Garvin (IC); Ogden
 *Edna Marie Gaston (IJ); Centralia
 *James Whittier Gatchell, Jr. (VMP);
 Kansas City, Mo.
 *Lorn Alonzo Gates (GS); Aurora
 *Modesta Frances Gatten (HE); Manhattan
 *Frances Mary Gebhart (IJ); Salina
 *Frank Leroy Gentry (ChE-1; CE-2);
 Manhattan
 *Hugh Samuel George (EE); Oswego

* Matriculated 1935-1936.

FRESHMEN—Continued

- Peter Joseph Germanio (VM); Woodbine, N. J.
 *Octavio Augusto Giammattei (Ag); El Salvador, Central America
 *Guy Edgar Gibson, Jr. (CE); Kensington
 *Charles Herbert Giddings (Ag); Dalhart, Tex.
 *John Nelson Gilbert (EE); Florence
 *James Daniel Gilchrist, Jr. (EE); Topeka
 *Hugh Hamilton Gillespie (Ag); Arkansas City
 *Frank Glendon Gillett (VMP); Wichita
 *Richard Mills Gillispie (EE); Junction City
 *Golda Lucile Gish (HE); Manhattan
 Jay Edwin Givens (GS-1; AA-2); Manhattan
 *Merle Eleanor Glass (HE); Manhattan
 *Chester Alex Gleiser (VMP); Camden, N. J.
 William Jack Glover (EE); Syracuse
 *James Banks Godin (GS); Wamego
 *Jesse Wayne Goldsmith (Ag); Melvern
 *Charles Martin Good, Jr. (IC); Eureka
 *Glenn Harley Gordon (C&A); Wheaton
 *Rex Francis Gorman (GS); Chapman
 *James LeRoy Gould (IC); Manhattan
 Lawrence L. Goyen (Ag); Pratt
 Henry Clifford Graefe (VMP); Elwood
 *William Francis Gragg (Ar); Abilene
 *Twylah Felice Grandfield (HE); Manhattan
 *Lawrence Grauerholz (IJ); Kensington
 *Mary Faye Groves (IE&D); Greensburg
 *John Dennis Green (ME); Castleton
 *Roy Raymond Green (GS); Manhattan
 *Max Leon Greenberg (VMP); Manhattan
 *Beverly Greene (C); Dodge City
 *Mary Elizabeth Greene (HE); Lincoln
 *Murray Greensaft (VMP); Manhattan
 *Kenneth Kail Greep (CE); Longford
 *Truman DeRoame Gregory (Ag); Woodston
 Orin Dean Griffing (AA); Council Grove
 *Orville William Griffith (AE); Bogue
 *Page Griffiths (IJ); Peabody
 *James William Grisham (EE); Basehor
 *Galyn Garwood Gronquist (ME); Manhattan
 *John Jacob Groody (GS); Manhattan
 Glenn Gordon Gross (VM); Russell
 Joseph C. Gross (VM); Russell
 *Gene Jordan Guarrant (GS); Manhattan
 Thomas Joseph Guilfoil (VM); Kansas City
 *John Raymond Guipre (CE); Simpson
 *Glen Walter Gulde (AA); Americus
 *Richard Ward Gundy (IJ); Manhattan
 *James L. Guseman (AA); Coldwater
 Ralph Edward Guyton (GS); Salina
 Robert Thomas Guyton (C); Salina
 *Lois Virginia Gwin (HE); Washington
 Paul Louis Habiger (Ag); Bushton
 Ernest Donald Hadsell (IJ); Manhattan
 *Ruby Pauline Hainer (HE); Lewis
 *Maurine Geneva Haley (GS); Sabetha
 William Halfhill (C); Wichita
 *Marjorie Hall (IJ); Rockford, Ill.
 *Pauline Louise Hallman (HE); Danville
 *Glenn Clough Halver (VMP); Crane, Mont.
 Clare C. Hamilton (VM); Geneseo
 Don Harrison Hamilton (EE); Kingman
 *Margery Norton Hamilton (C); Fort Riley
 *Rolland Brooks Hammond (ArE); Manhattan
 *August Martin Hanke (IC); Wathena
 *Elizabeth Celia Hanlen (IE&D); Winfield
 *Emmett Benjamin Hannawald (AA); Pratt
 *John Vernon Hansen (Ag); Hiawatha
 *Ailine Laurentia Hanson (GS-1; HE-2); Olsburg
 *Walter E. Hanson (CE); Lyndon
 *Ethel Dale Harkness (GS); Ness City
 *Gerald Fay Harner (EE); Levant
 *Anna Esch Harr (IE&D); Girard
 *John Harris, Jr. (Ag); Havensville
 *Meade Cecil Charles Harris, Jr. (MI); Tecumseh
 *Yarel LeRoy Harris (IJ); Manhattan
 *Donald Heath Hart (GS); Westmoreland
 *Eleanor Claire Harwood (HE-1; IJ-2); Humboldt
 *Herbert Earl Kaskard (C); Partridge
 *Marshall Montellis Haskin (PE); Frankfort
 *William Rainey Hathaway (ME); Melvern
 *Mary Lorane Havelly (HE&A); Mayetta
 Albert Leo Havlik (VMP); Tampa
 Ellen Anita Hawke (GS); Irving
 *Arthur Lee Hawkins (ME); Minneapolis
 *Averill Pete Hawkins (PE-1; Ag-2); Cleburne
 *Lucile Esther Hawks (HE); Hiawatha
 *Edward Millin Hayes (EE); Anthony
 *Eldon Francis Hayes (VM); Newton
 *Howard Gene Hazen (EE); Burtron
 *Wayne Heel (CE); Medicine Lodge
 *William Wallace Heer (Ag); Topeka
 *Philip Edward Heflin (Ar); Omaha, Neb.
 *Powell Harry Heide (GS); Wilmore
 *Gerard Anthony Heim (C); St. Marys
 *Bertha Lois Held (PE); Ottawa
 *Robert Jacob Heller (ME); Chanute
 *Carl Helm (GS-1; ChE-2); Chanute
 *Lois Faye Heminger (PE); Wichita
 *Elizabeth Fern Henderson (HE); Dover
 *Thomas Knight Henderson (EE); Wichita
 *Lucille Nina Hennigh (IJ); Sabetha
 Merle Logan Henrikson (VM); Concordia
 *Betty Jane Hereford (C); Hutchinson
 *Earl Francis Hertach (Ag); Claffin
 *James Henry Hickert (Ag); Bird City
 *Marjorie Lenore Higgins (IJ); Linn
 *Norman Walter Hildewein (EE-1; Ag-2); Fairview
 Ernest Wilbur Hill (GS); Manhattan
 *Ivan Willard Hills (AA); Simpson
 *Fred Homer Hoagland (EE); Sun City
 *Orr Wendel Hodges (C); Augusta
 *Florene Irene Hodgson (GS-1; HE&N-2); Little River
 *Lilith Marie Hofer (MuE); Cedar
 *Charles Dale Hofmann (C&A); Clay Center
 *Charles Edwin Hofmann (VMP); Manhattan
 *Emily Sarah Hofsess (HE-1; PE-2); Partridge
 Ralph Ray Holden (EE); Syracuse
 Doris Beatrice Hollis (HE); Manhattan
 *Ward Hollis (ME); Holton
 Lorell Elaine Hollister (IJ); Leoti
 *Charles Harris Holm (Ag); Dwight
 *Ina Elizabeth Honeycutt (HE); Blue Rapids
 *William Henry Honstead (ChE); Waterville
 *Lynn Charles Hook (Ag); Sabetha
 *Woodrow William Hoopman (C&A); Bunker Hill
 *Alfred Joseph Horn (ME); Horton
 *Louis John Horn (IJ); Horton
 *Earl Cecil Hornbuckle (Ag); Hillsdale
 Donald Eugene Horton (AA); Atwood
 *William Donald Horton (VMP); Chanute
 *James Lynn Hourrigan (VMP); Langdon
 *Tom Clark Houston (ChE); Goodland

FRESHMEN—Continued

- *Horton Kent Howard (VMP);
Canton, N. Y.
- *Twila Pearl Howard (HE); Colby
- *Adah Bernice Howat (HE); Wakeeney
- *Blanche Margaret Howe (GS); Stockdale
- *Ruth Lillian Howe (HE&A); Salina
- *Archie Willard Howell (GS); Marietta
- *John Robert Hoy (C); Manhattan
- *Frank Nicholas Hueben (VMP);
Kansas City
- *Vearl Nathan Huff (EE); Norton
- Donald Hugins (VM); Omaha, Neb.
- *Arlyn Morris Humburg (C&A); Bison
- *Lawrence Keith Hummel (PE); Kanopolis
- *Ruth Caroline Hungerford (HE&N);
Manhattan
- *Howard Newton Hunt (Ag); Belle Plaine
- *Frank Raymond Hunter (ME);
Kansas City, Mo.
- *Wyndon Vernus Hurlock (ME); St. Francis
- *Hazelbel M. Hutchins (Ar); Sterling
- *Robertia Laurine Hutchinson (MuE);
Wamego
- *Aubrey Means Hutton (VM);
St. Joseph, Mo.
- *Bertha Edith Ingels (IJ); Circleville
- Donald Clayton Innes (VM); Manhattan
- Newton Kelly Irwin (VMP-1; GS-2);
Highland
- *Margaret M'Lee Isenbart (HE); Wilmore
- *Clifford Clinton Isom (MI); Manhattan
- *Mildred Charolette Jackson (HE&A);
Reece
- *Paris Shedrick Jackson (C); Ness City
- *Arthur Otto Jacobs (AA); Harper
- *David Evan James (IJ); Bradford
- *Gaylord Austin James (GS); Deerfield
- *Ruth Mildred Jameson (GS); Garrison
- *Duane George Jehlik (CE); Cuba
- *Calvin M. Jenkins (GS); Manhattan
- *Polly Ann Jermane (IE&D); Seneca
- Eleanor May Jett (IJ); Wichita
- *Max Arden Jewell (PE); Belleville
- *Joseph John Jezl (VMP); Tobias, Neb.
- *Dale Edward Johnson (Ag); Manhattan
- *David Wilson Johnson (C); Wichita
- *Dortha Johnson (HE&A); Stafford
- *Earl William Johnson (EE); Salina
- *Keith Cleon Johnson (Ag); Sylvia
- Kenneth Eugene Johnson (Ag); Norton
- *Paul Charles Johnson (Ag); Farlington
- *Virginia Verle Johnson (HE); Circleville
- *Walter Lee Johnson (ME); Emmett
- *Herman August Jokerst (VM); Manhattan
- *Bobbie Lee Jones (IJ); Leoti
- *Charles Fenwyck Jones (GS); Irving
- *Charles Fisher Jones (VMP); Lisbon, N. Y.
- *Frances Jane Jones (GS); Reading
- *Gomer Wood Jones (ME); Reading
- *Judd Henry Jones (C); Garrison
- Raymond Albert Jones (VM); Penalosa
- *Sibyl Fern Jones (GS); Manhattan
- *George Edwin Jordan (Ag); Beloit
- *Mary Louise Jordon (HE); Topeka
- *Robert Augustine Jordon (Ag); Holton
- *Oren George Jose (VMP); McCool, Neb.
- *Vaughn Adrian Jupe (VMP); Phillipsburg
- *Patricia Catherine Kail (HE); Longford
- *Lester Loyd Kammerer (EE); Manhattan
- *Wendell Lee Kanawyer (VM);
Huntington Beach, Cal.
- *Milton Kaslow (ChE); Yonkers, N. Y.
- *Bernard Leonard Kaufman (VM);
Philadelphia, Pa.
- Harvey Herman Kaufman (C); Gridley
- *John Spears Kaul (ME); Holton
- Eldon Charles Kaup (MuE); Riley
- *Cathryn Elizabeth Kelchner (IJ);
Kansas City
- *Bernice Lucile Keller (HE); Peabody
- *Charles Milton Keller (IC); Wichita
- *Edward Jacob Keller (VMP); St. Francis
- *William Bryant Keller, Jr. (GS); Peabody
- *Marjorie Kelly (HE&A-1; C-2);
Ness City
- Dorothy Lorene Kendall (HE); Kiowa
- *Howard C. Kendall (EE); Haviland
- *Grace Lorene Kendrick (HE); Topeka
- *Byron Leslie Kennedy (GS); Esbon
- Charles Alwin Kennedy (VMP);
Kansas City
- *Chester Hennessy Kennedy (VM); Chase
- *Kathleen Marie Kerby (IJ); Clay Center
- *Charles Isaac Kern (AA); Cedar
- *Glenn Walter Kerr (IC-1; CE-2); Rossville
- *Roy Henry Kerr (VM); Hyattsville, Md.
- *Joseph Boston Key (VM); Kansas City
- Ethel Lou Kilbourne (MuE); Manhattan
- *Ralph Oliver Kilbury (ME); Manhattan
- *Betty Joyce Kilmer (GS); Kingman
- *Kent Kilmer (ME); Belle Plaine
- *Perle Everett Kimball (VMP); Eskridge
- *Horton Edward Kimble (Ag); Manhattan
- *Joe Kermit Kimble (VMP); Manhattan
- *Anthony Kimmi (MuE); Everest
- *Dora Grey King (PE); Republic
- *Ella Lucille King (C); Westmoreland
- Ivan Albert King (EE); Muscotah
- *Ray Carlyle King (IJ); Olsburg
- *Ruth May King (HE&N); Manhattan
- *Robert Kinney (IJ); Hainesburg, N. J.
- *Edward Fred Klahr (C&A); Topeka
- *Wayne Klamn (Ag); Bonner Springs
- *Alice Jule Klapp (MuE); Onaga
- *Dell James Klema (EE); Wilson
- *Frederick Vinton Klemp, Jr. (C);
Leavenworth
- *Olga Alma Knapp (IE&D); Topeka
- Jack Ross Knappenberger (VM); Penalosa
- *May Belle Marie Knight (HE); Goodrich
- *Robert Samuel Knight (AE);
Medicine Lodge
- Virginia Knostman (IE&D); Manhattan
- *Arthur John Koch (EE); Haven
- *Edward Lee Koerner (ChE); Wakefield
- *Elaine Kollins (IJ); Belleville
- Herbert James Koon (Ag); Manhattan
- *George Robert Kramer (C); Mankato
- *Margaret Kreitzer (IJ); Phillipsburg
- *Ralph Edward Krenzin (Ag); Kinsley
- *Harrison S. Krider (C); Newton
- Harold Anderson Krig (VM); Manhattan
- Russel Eugene Krotzinger (PE); Wetmore
- *Jurgen Ernst Kruse (Ag); Barnes
- *Kenneth Ernst Kruse (Ag); Barnes
- *Max Morton Kurman (PE); Woodbine, N. J.
- *Charles Davis Labahn (VMP); Sedalia, Mo.
- *Colter Adiel Landis (ChE); Topeka
- *Carline Arlene Lane (Ar); Manhattan
- *William Irl Lane (CE); Manhattan
- *Louise Cleo Lanterman (HE); Mankato
- *Charles Edward Lantow, Jr. (ME);
Hutchinson
- *Alice Lucille Lanz (HE);
North Battleford, Sask., Canada
- *Louis Clair Larsen (Ag); Salt Lake, Utah
- *Ross Farris Latimer (AA);
Kansas City, Mo.
- *Fern Adele Layman (HE); Arlington
- *Opal M. Leach (HE); Bird City
- *George Lorentes Lee (AA); Downs
- *Harold Earl Leedy (VMP-1; C-2);
Sedgwick

FRESHMEN—Continued

- *Fred William Leimbrock (Ag); Wichita
 *Lyle Francis Leinen (IJ); Simpson
 *Edward Lyle Leland (PE); Manhattan
 *Walter John Leland (Ag); Manhattan
 *James Robert Lemons (Ag); North Topeka
 *Arthur Frank Leonhard (Ag); Lawrence
 *William MacDonell Lester (C); Wichita
 *George Charles Letsch (GS); Luray
 *Robert Jerome Levi (VM);
 New York, N. Y.
 *Sidney Levine (VM); New York, N. Y.
 *Joe W. Lewis (Ag); Larned
 *Mark Dean Lewis, Jr. (VMP);
 Conway Springs
 *Howard Brice Liebengood (VM);
 Kentland, Ind.
 *Phoebe Ruth Liggett (HE); Tribune
 *Edward Charles Light (ME); Liberal
 *Leonard Lille (C); Ellsworth
 *Gladys Irene Lindall (HE); Enterprise
 *Robert W. Lindenstruth (GS);
 Marshfield, Mo.
 *Richard Edgar Lindgren (CE); Dwight
 *Charles Ashcom Lindsay (GS);
 Junction City
 *Marceline Carroll Link (HE); Chase
 *Wayne Arnold Linville (Ag); Chase
 *Vere Oakley Lipperd (ME); Udall
 *Carl Chester Livingston (GS); Kanopolis
 *Charles William Lobenstein (Ag);
 Edwardsville
 *Dorothy Margaret Lohmeyer (HE&A);
 Halstead
 *Glenn Richard Long (EE); Arlington
 *Robert Kirkwood Loomis (C);
 Flossmoor, Ill.
 Henry Loughridge (VM); Lyndon
 *Clarence Alvin Love (VM); Manhattan
 *Paul Torrence Loyd (VMP); Valley Center
 *Bill Junior Ludiker (GS); Spivey
 *Helen Margaret Lutz (PE); Manhattan
 *Pat Edward Lynch (GS); Junction City
 *Michael Clarence Lysaught, Jr. (GS);
 Kansas City
 *William Joseph McAllister (VM);
 Manhattan
 *LeRoy Lloyd McAninch (GS-1; MI-2);
 Manhattan
 *Ted Oran McAninch (Ag); Neodesha
 *Mack Eugene McCann (ME); Augusta
 *Edward Joseph McCarthy (GS); St. Marys
 *Lura Maud McCartney (PE); Wichita
 *Dale Edwin McCarty (AA); Oneida
 *Rebecca Lillian McClure (MuE); Kingman
 *Robert David McClure (IC);
 Highland Park, Ill.
 *Sterling Alfred McCollum (GS); Manhattan
 *Elizabeth Ann McComb (GS); Stafford
 *Gerald Randall McCorkle (VMP); Jewell
 *Betty McCoy (HE&A); Lawrence
 Edward Leroy McCoy (C); Manhattan
 *Charles Melvin McCrann (PE); Wichita
 *Robert Atkeson McCreery (Ag);
 Savannah, Ga.
 *Nancy Ellen McCroskey (HE); Kansas City
 *Marjie Mable McCullough (C); Marion
 *William Edward McCune (GS-1; AE-2);
 Leavenworth
 *Ernest Raymond McDonald (C); Salina
 *William McDonald (EE); Kansas City
 *James Orphas McDougal (PE); Atwood
 *Don Brooke McEntire (C); Topeka
 *Clara Ann McGill (VM); Bertram, Tex.
 *Frank Robert McGill (GS); Hoisington
 *Joseph Clark McGonagle (IJ); Zeandale
 *John Louis McGuane (VMP); Kansas City
 *Dean Elwyn McIntire (GS); Manhattan
 *Leon Deane McIntire (C); Salina
 *Dorothy Carol McKeen (HE&A);
 Manhattan
 *John Thomas McKenna (ME); Narka
 *Maxine Doris McKenzie (HE); Wayne
 *James William McKinley (CE); Manhattan
 *Kenneth McLean (EE);
 Crow Agency, Mont.
 *Elsie Marie McLendon (IE&D);
 Kansas City
 *Hugh Otis McMillen (GS); Topeka
 *Aubrey Marvin McMinimy (EE); Wichita
 *Hugh Cameron McMullen (IJ); Courtland
 *Stephen Robert McNabb (VMP);
 Elk River, Minn.
 *Pauline Marie McNary (HE); Manhattan
 *John D. McNeal (GS); Boyle
 *Helen Elizabeth Mabbott (GS);
 Fort Leavenworth
 *Helen Frances Macan (HE); Edwardsville
 *Robert MacDonald (VMP);
 Newburgh, N. Y.
 *George Daily Mackay (EE); Haviland
 *Alfred Eugene Makins (IJ); Abilene
 *Albert Leon Malle (VM); Mulberry
 *Mary Kathryn Malone (IJ); Leavenworth
 *Walter Farrel Maninger (VM); Harper
 *Robert Drury Manly (GS); Manhattan
 *Anna Mae Mann (HE); Quinter
 *Charles Franklin Manspeaker (ME);
 Topeka
 Simeon Emanuel Marcotte VMP;
 Manhattan
 *Clayton Wilson Marker (VMP); Topeka
 *Gordon John Marold (VMP);
 Saguache, Colo.
 *Mary Frances Marron (HE);
 Jacksonville, Fla.
 *Margaret Marshall (C); Herington
 *Charles Walter Martin (Ag); Admire
 *Doig Martin (Ag); La Cygne
 *Madeline Cecilia Martin (HE); Manhattan
 *Theodore Vernon Martin (Ag); Bucklin
 *Verne John Martin (C); Admire
 *Daniel E. Martinez (VMP); Manhattan
 *Jerold Arthur Marty (AE); Tonganoxie
 *Joseph Ramond Massey II, (VM);
 Sun City
 *Dale Robert Masters (C); Latham
 *Carl Eugene Mathias (ME); Colby
 *Ann Carolyn Matkins (GS); Enterprise
 *Maurine Venetta Matthaai (HE-1; GS-2);
 Axtell
 *Kenneth William Matthews (CE);
 Mullinville
 *Arthur Frederick Matthias (ME); Atchison
 *John W. H. Mattoon (EE); Kansas City
 *Don Carl Mayfield (GS); Concordia
 *Eldon Jay Mayhew (GS); Belpre
 *Barnarr Mazo (VM); Brooklyn, N. Y.
 *Galen Elmer Meckfessel (ME); Lewis
 Lester Lee Mehaffey (ME); Farmington
 *Christina Violet Mellick (IE&D); Atwood
 *Norwood Arnold Mellick (AA); Atwood
 *Helen Hope Merryfield (HE); Minneapolis
 *Roy Leonard Messenbrink (VM);
 St. Louis, Mo.
 *Arthur Hopkins Meyer (CE); Riley
 *Harry Harrison Meyer (C); Basehor
 *Ivan John Meyer (C); Basehor
 *George Perry Michael (CE); Burr Oak
 *Donald Constance Mignot (GS);
 Manhattan
 *Bernard Crumley Miller (CE); Fredonia
 *Burl Raymond Miller (IJ); Hutchinson
 *Carl William Miller (C); Manhattan
 *Donald Sherman Miller (ME); Onaga
 *Hans David Oliver Miller (VM);
 Manhattan

FRESHMEN—Continued

- *Irwin Alvin Miller (Ag); Oberlin
 *John L. H. Miller (ME); Colby
 *Leonard John Miller (VM); Clarkson, Neb.
 *LeRoy Desmond Miller (AA); Manhattan
 Merle Monroe Miller (IJ); Salina
 *Miriam Hilton Miller (GS); Fort Riley
 *Rufus Hale Miller (AE); Maplehill
 *William Rowland Miller (GS); Lyons
 *June Winifred Milliard (Ar); Manhattan
 *Harold Elwin Milligan (ArE); Wichita
 *Stanley Cole Miner (C); Ness City
 *John Junior Minnis (GS); Manhattan
 *John Ludvig Mitcha (ME); Rossville
 *Albert Peter Mitchell (VMP); Covert
 *Charles Edward Mitchell (IC);
 Ordway, Colo.
 *James Delmer Mitchell (C); Lake City
 *Lee Roy Mitchell (Ag); Auburn
 *Dorothy Mize (HE); Atchison
 *Gale Andrew Mobley (ME); Salina
 *Charles Adam Mohr (VMP); Tulsa, Okla.
 *Gordon Ray Molesworth (IJ); Colony
 *Donald Salazalr Moloney (Ag);
 Monte Vista, Colo.
 *Jefferson Farrell Montgomery (C); Wichita
 *Alice Elizabeth Moody (HE&N); Greeley
 *Charles Carson Moore (VMP); Louisburg
 *Edward Cooper Moore (C&A);
 Westmoreland
 *June Alice Moore (HE); Great Bend
 *Maurice Hyson Moore (GS); Waverly
 *Willia Margaret Moore (IE&D);
 Junction City
 *William Hugh Moore (Ag); Munden
 *Willis E. Moore (EE); Goff
 *Virgil Fred Morford (Ag); Olsburg
 *Betty-Kay Morgan (HE); Manhattan
 *Jeanne Elizabeth Morgan (C); Kansas City
 *Vera Lorene Morgan (HE); Hugoton
 *Johnnie Cline Morrill (IC); Paradise
 *Manuel Morris (Ar); Manhattan
 *Orville Ray Morris (CE); Mullinville
 *Charles George Morrison (VMP);
 Great Bend
 *Melvern Charles Morse (ArE); Salina
 *Lynus Robert Morton (VM); Yates Center
 *Leland Mark Moss (ArE); Miltonvale
 *Donald Fleet Mossman (VM); Manhattan
 *Marion Thomas Mounsey (PE); Haviland
 *Vera May Mowery (HE&J); Salina
 *William Scott Mowrey (EE); Luray
 *Clyde Dewey Mueller (Ag); Sawyer
 *Elmer Ernest Mueller (C-1; EE-2);
 MacFarland
 *James Franklin Mugglestone (Ag);
 Berkeley, Cal.
 *Charles Austin Murdock (AA);
 Kansas City, Mo.
 *Raymond Chandler Muret (C-1; EE-2);
 Winfield
 *Claude Franklin Murphy (VMP);
 Conway Springs
 *Grayson Elwood Murphy (Ag); Norton
 *Joe Kenneth Murphy (ME); Chapman
 *Donald James Murray (GS); Beloit
 *Bud Musson (Ag); Geuda Springs
 *John Alvin Myers (ME); Edgerton
 *Elizabeth Frances Nabours (HE&N);
 Manhattan
 *Robert Dean Nafziger (Ag); Narka
 *Malcolm Robbins Nash (VM); Manhattan
 *Walter M. Naylor (CE); Burr Oak
 *Samuel Siskind Nebb (VM); Manhattan
 *Warren Evans Need (GS); Ellsworth
 *Conrad Lundsguard Nelson (GS&V);
 Oklahoma City, Okla.
 *Harold Eugene Nelson (IJ); Holton
 *Robert William Nelson (C); Leavenworth
 *Walbert Oscar Nelson (VM); Olsburg
 *Bruce Paul Nemecheck (EE); Abilene
 *Viola Louise New (PE); Leavenworth
 *George Lawrence Newcomb (AA);
 Morrowville
 *Charles Clarence Newhart (VMP);
 Delaware Water Gap, Pa.
 *Joseph William Newman (IJ); Manhattan
 *Lucile Marguerite Nichols (HE&A);
 Manhattan
 *Chester Dal Nielson (VMP); Bennington
 *Leland C. Nielson (AE); Vesper
 *Mildred Elsie Nipper (GS);
 Jefferson, Okla.
 *Louisa Nixon (HE&A); Lewis
 *Paul Richard Noller (VMP); Mankato
 *Kenneth Leroy Nordstrom (MI); Norton
 *Lloyd Everett Norman (EE-1; GS-2);
 Topeka
 *Betty Louise Norton (IJ); Newton
 *Gerald Laverne Norton (GS); Manhattan
 *Morris Nossow (VM);
 New York City, New York
 *Seymour Notarius (VM); Manhattan
 *Robert William Nottorf (IC); Abilene
 *Robert Lee Nulik (EE); Coldwell
 *Agnes Louise Nunemaker (HE); Langdon
 *Russel Grant Nystrom (Ag); Dover
 *LaDonna Jean Ober (MuE); Hiawatha
 *Robert David O'Connor (AA); Macksville
 *Marjorie Floriene Officer (HE); Topeka
 *Otis Talmadge Ogg (VMP-1; MI-2);
 Topeka
 *Preston Edward Olderog (VM); Manhattan
 *Dorothy Mae Olson (IE&D); Oberlin
 *Vernon L. O'Neill (ME); Lyons
 *Vernon Alfred Ostendorf (VM);
 St. Paul, Minn.
 *Ethel Louise Owens (HE); Lane
 *Burton Pacey (VMP); Manhattan
 *Donald Solon Paddleford (C); Manhattan
 *Merton Charles Paddock (C); Manhattan
 *Harold Ward Paige (GS); Manhattan
 *Joseph Palen (VM); Hays
 *Rhoda Beatrice Palmer (HE);
 Arkansas City
 *Wilfred Leroy Park (EE); Oakley
 *Dight William Parken (ArE); Dwight
 *Mary Luise Parks (HE); Neosho Falls
 *Elsie Lorena Parsons (HE); Manhattan
 *Lyman Elbert Parsons (AA); Manhattan
 *Merle Jay Parsons (GS); Emporia
 *Myra Belle Pascal (HE); Morrowville
 *William David Paske (AA); Toronto
 *Harry Eugene Patton (ME); Anthony
 *Eugene Payer (Ag); Westphalia
 *Clifford Marvin Payne (EE); Formoso
 *Kenyon Thomas Payne (Ag); Manhattan
 *Roy Junior Payne (GS); Manhattan
 *Stephen Hurd Peery (C); Manhattan
 *Jean Josephine Pelischek (C); Manhattan
 *Sarah Ann Pence (HE); Elmont
 *John Wesley Pennington (ME); Wichita
 *Alonzo Easton Perkins (ME); Wellington
 *Robert Whitson Perkins (MI); Partridge
 *Lester Leroy Peterie (CE); Kinsley
 *Harvey Lee Peterson (Ag); Wellington
 *Lee Richard Peterson (CE); Kinsley
 *Melvin Urban Raymond Peterson (Ag);
 Riley
 *Robert Elmer Peterson, Jr. (GS);
 Kansas City
 *Winzer James Peter (Ag); Waterville
 *Wendell John Pfeffer (EE); Clifton
 *Anna Caroline Pfrang (GS); Goff
 *Mary Martha Phillips (C); Manhattan
 *Morris William Phillips (AA); Stockton
 *Buford Doyle Philpiv (VM); Lehigh

FRESHMEN—Continued

- *Gerald Ellsworth Pierce (Ag-1; AE-2);
Garrison
- *Katherine Amelia Piercy (HE); Lenexa
- *Joe Howard Pipkin (EE); Pratt
- *Sidney Smith Platt (Ar); Junction City
- *Frieda Anna Ploger (HE); Kinsley
- *Clarence Allan Pohlman (EE); Salina
- *Helen Louise Poole (GS-1; HE-2);
Manhattan
- *Charles Grant Pooler (ME); Beloit
- *Curtis Albert Poppenhouse (VM);
Manhattan
- Gerhard Charles Poppenhouse (VM);
Manhattan
- *Charles Edward Porter (ME); Junction City
- *Richard Clay Porterfield (PE); Holton
- *George Eldon Powell (C); Manhattan
- *Valti Weslie Powell (ChE); Concordia
- *Elwin Raymond Prather (PE); Eureka
- *Marceil Ellen Preble (C); Scandia
- *Philip Abbott Pressgrove (IC); Topeka
- *George Francis Preston (C); Cuba
- *Carroll Wayne Preusch (PE); Healy
- *Bernice Lovella Pribbeno (C);
Sharon Springs
- *Glenn Emerson Pribbeno (ME);
Sharon Springs
- *June Elizabeth Price (HE); Washington
- *Laurence Eggert Probasco (IJ); Manhattan
- Winifred May Prouse (GS); Winfield
- *LaVone Anna Puckett (HE); Garrison
- *Mage Nelson Puckkee (AA); Mayetta
- *Rhoda Selma Putzig (HE&J); Sylvan Grove
- *Ray Sherman Pyles (VM); Kansas City
- *Stanley Lorraine Quinby (ME); Sun City
- *Joseph Wayne Quinlan (GS); Lyons
- *Norma Lee Rebecca Quinlan (IJ-1; HE-2);
Lyons
- Dorothy Marie Rabe (HE); Topeka
- *Susan Jane Rabe (IE&D); Topeka
- *Vassar Edwin Rackley (VMP); Manhattan
- *Lois Deen Radke (C); St. John
- *Robert Edwin Ragle (C); Burdett
- Guy Arthur Railsback (VM); Langdon
- *Rolla Glenn Raines (Ag); Louisburg
- *Charles Winston Ramey (GS); Protection
- *Don Dhu Ramsay (Ag); Haxtun, Colo.
- *Rollin F. Ramsay (C); Hutchinson
- *Lauren Wesley Ramsey (GS); Parkerville
- *Ruby Randall (HE&A); Ashland
- *Leonard James Rawson (ME); Wamego
- *Charles Garvis Reed (AH&V); Stockton
- *Mark Ingalls Reed (C); Ogden
- *Howell William Reese (CE); Goodrich
- *Edgar Ernest Rehn (ME); Wichita
- *Herman J. Reitz (Ag); Belle Plaine
- *Glen Stanley Remsberg (GS&V-1; VM-2);
La Harpe
- *Mable Evelyn Ressel (HE); Colony
- *Earl Boise Reynolds (CE); Colony
- *Cecil Raymond Rhorer (EE); Lewis
- *Jane Charlotte Riach (HE&N); Topeka
- *James Rich (Ag); Manhattan
- *Robert Edward Richardson (IJ); Arlington
- *James Moore Ricks (Ag); Tulsa, Okla.
- *James Otto Ridenour (ME); Moscow
- *Leslie Ivan Rieger (AE); Fairview
- *David Clyde Rieniets (GS); Pratt
- *William Armour Roark (ME); Lake City
- *Noel Neville Robb (Ag); Dodge City
- *Verne Max Robbins (EE); Wichita
- *Bruce Everett Roberts (CE); Chanute
- *Lawrence Edward Roberts (Ar); Morrill
- *Marvin Frank Roberts (EE); Topeka
- *Wilson Lee Roberts (AE); Princeton
- *Edwin Robertson (GS); Oberlin
- *Cecil Redford Robinson (Ag); Nashville
- *Charles Kingman Robinson (EE); Topeka
- *Clarice Louise Rock (HE); Enterprise
- *Donald Edwin Rodabaugh (VM);
Manhattan
- *Harold Daniel Rodabaugh (VM);
Manhattan
- James Edward Romig (IJ); Manhattan
- Edgar LeRoy Rose (C); Herington
- *Russel Leon Rose (ME); Kiowa
- *Nathan Matthew Rosenbaum (VMP);
Yonkers, N. Y.
- *Verlin Rosenkranz (Ag); Washington
- *Stephen Frances Rosner (VMP); Bucyrus
- *William Rosner (VMP); Manhattan
- *Marjorie Katherine Rothfelder (HE);
Axtell
- *Russell Clifford Rothweiler (C); Bison
- *Bernard Bernie Rovner (VM); Manhattan
- *Madge Loberta Row (HE); Larned
- *Maynard Walter Rudolph (Ag); Riley
- *Anelda Rich Runnels (IE&D); Wichita
- *Ernest Dale Sadler (MI); Wagner, S. Dak.
- *Orville William Saffrey (IJ); Alma
- *Lot William Sailors (CE); Leonardville
- *Moutrie Wilbur Salter (VMP); Wakefield
- *Donald Eugene Sandels (C); Belleville
- *Shirley Ann Sanders (IJ); Manhattan
- *William Neill Sanders (CE); Topeka
- *Granville Boyd Scanland (ME); Hutchinson
- *Jacob Joseph Schachter (VM); Manhattan
- *Charles Mathias Schaible (AE); Fairview
- *Marjorie Rose Schattenburg (MuE); Riley
- *Stewart Claude Schell (GS);
West Lawn, Pa.
- *Charles Eugene Scherzer (CE); Larned
- Francis Noel Schlaegel (VMP); Olsburg
- Paul Schoonhoven (GS); Manhattan
- *Leonard William Schruben (AA); Dresden
- *Glen Andrew Schuetz (C); Great Bend
- *Theodore Henry Schupbach (C); Hiawatha
- *Marjorie Aileen Schwalm (GS); Paxico
- *Vincent Joseph Schweiger (VMP); Lenexa
- *Genevieve Blanche Scott (C); Atwood
- *Queen Ann Scott (C&A); Kiowa
- *Walter O'Daniel Scott (Ag); Westmoreland
- *Velma Ferne Seritchfield (C); Westmoreland
- *Carl Eugene Sechrist (IJ); Hoisington
- *Robert Paul Seidel (GS); Morrowville
- Milton Seltzer (VM); Manhattan
- *Thomas Joseph Sette (CE); Manhattan
- *Russell Nelson Seymour (ME); Moscow
- Donna Fay Shafer (Ar); Manhattan
- *Shelton Sherril Shafer (CE); Hugoton
- *Ray Robert Shannon (IJ); Chanute
- *Charles William Shatell (CE); Spivey
- *Anna Ruth Shattuck (HE); Ashland
- *Edith Esther Shaw (HE); Galesburg
- George Woodrow Shaw (AA); Moscow
- *Vera Mae Shaw (HE-1; GS-2); Moscow
- *William Dean Shearer (C); Abilene
- George Henry Shears (CE); Hutchinson
- *Charles Junior Sheetz (ArE); Topeka
- *John Aaron Sheetz (CE-1; C-2); Topeka
- Clarence Franklin Shelby (VM); Columbus
- *Clarence Allen Shelkett (GS); Ellsworth
- *Haldine Millen Shelly (VMP); Manhattan
- *Helene Ann Shepardson (IE&D-1; C-2);
Republican City, Neb.
- *Robert Baker Shepherd (Ag); Raymond
- *Ralph Vernon Sherer (Ag); Mullinville
- *John Allen Shetlar (Ag); Bayard
- *Merle Mathias Shilling (CE); Westphalia
- *Robert E. Shore (CE); Coats
- *Joseph Clyde Short (AH&V); Topeka
- *Philip Newton Shrake (EE); Topeka
- Delmer Ernest Shreve (ME); Augusta

FRESHMEN—Continued

- *Ella Lucille Hoyle Shreve (IE&D); Towanda
Harold Klager Shroff (Ar); Concordia
*Luther Paul Shuck (ME); Haviland
*Harold Davis Shull (Ag); Manhattan
*Robert D. Sieg (ChE); Greensburg
*Catherine Augusta Siem (PE); Rochester, Minn.
*Lillian Harriet Siever (IJ); Manhattan
*Jennings Wilson Sigley (GS); Canton
*Maxine Sinclair (HE-1; IJ-2); Jetmore
*Marialice Singleton (HE); Tribune
*Harold Victor Sisk (ME); Hutchinson
*Joseph Henry Skinner (Ag); Topeka
*Gordon Russell Skiver (C&A); Burr Oak
*Pelmon Frank Slater (VMP); Herington
*Howard LaVerne Slater (GS); Mankato
Loran Alvin Slaughter (IJ); Manhattan
*Samuel Dwight Slentz (EE-1; Ag-2); Lewis
*Fred Victor Small (Ar); Kansas City
*Alta Rosalie Smerchek (C); Irving
*Edward George Smerchek (GS-1; AE-2); Garnett
Albert Benjamin Smith (Ag); Manhattan
*Edward Paul Smith (EE); Morrill
*Eleanor Eileen Smith (HE&N); Coldwater
Ernest Phil Smith (VMP); Scandia
*Fred Benjamin Smith (Ag); Highland
*Lawrence Gilbert Smith (VMP); Goldengate, Ill.
*Marion Edwin Smith (AA); Mound City
*Mary Isabel Smith (HE); Manhattan
*Milton Smith (ArE); Girard
*Pauline Dorothea Smith (HE); Shreveport, La.
*Roscoe Tracy Smith (IJ); Ponca City, Okla.
*Stuart F. Smith (C); Salina
*Morton Smutz (ChE); Manhattan
*Charles Henry Snider (VMP); Manhattan
*Robert Louis Sobeslavsky (VMP); Manhattan
*Bertel Emanuel Soderblom (Ag); Delphos
*Gilbert Lyle Sollenberger (CE); Hutchinson
*Marvin David Solomon (AE-1; VMP-2); Manhattan
*John Bernard Spaeth (C); Halstead
*Orval Carl Spangler (ME); Peabody
*Norma Elizabeth Spealman (IJ); Marysville
*Otto Franklin Spencer (Ag); Manhattan
*Roger Guy Spencer (VMP); Whiting
Meredith Earl Sperline (AA-1; GS-2); Sabetha
*Betty Spoelstra (GS); Prairie View
*Eugene Seymore Spotts (VM); Marshall, Ill.
*Carmin Barton Sprague (ChE); Douglass
*John Robert Spring (VMP); Manhattan
*Clifford Raymond Springer (AE); Stockdale
*Nancy Elizebeth Steadman (GS); Junction City
Darrell Stanley Steele (VM); Manhattan
*Joseph Benton Steele (Ag); Barnes
*Russell Harvey Stephens (GS-1; Ag-2); Elk City
*Glenn Merlynn Stevens (EE); Beagle
John Mitchel Stevens (VM); Manhattan
*Alice Elizabeth Stevenson (C); Manhattan
*Mary Louetta Stewart (IE&D); Saffordville
*Robert Paul Stewart (ME); Coldwater
*Vero Monreve Stewart (GS); Eskridge
*Alfons Alfred Stiebe (CE); Rozel
*Theda Elizabeth Stine (PE); Glasco
*George James Stipe (GS); Manhattan
*Theodore Edward Stivers, Jr. (MI); Rome, Ga.
*Harry Wayne Stockhoff (ChE); Bethel
*William Neil Stone (EE-1; C-2); Hiawatha
*William Frank Stoudenmire (VM); Deland, Fla.
*James John Stout (CE); Belvidere, N. J.
*Howard Roy Stover (ME); Manhattan
*Mercedes Ruth Stratford (IJ); El Dorado
*Joseph Jacob Straub (Ag); Wathena
*Maxine Elizabeth Street (IJ); Yates Center
*Elwood Malcolm Strom (AA); Dwight
*Edna Evangeline Stullken (IE&D); Bazine
*Laurence Forest Sturgeon (Ag); Cassoday
*Mary Jane Sullivan (IJ); Harper
*Vincel Sundgren (VMP); Falun
*William Walter Suttle (GS); Lyons
*Raymond William Swanson (PE); Randolph
*Robert Allen Swartz (GS-1; Ag-2); Everest
*Ralph Wilson Swearingen (EE); Courtland
*Charles E. Sweeney (Ag); Coldwater
*Thiel Holmes Sweet (ChE); Formoso
*Valeda Fern Swenson (HE&A); Winfield
Cleon Orel Tackwell (VM); Manhattan
*Wallace Edwin Taggart, Jr. (ME); Meriden
*George Tanenbaum (VM); Manhattan
*Edgar Lewis Taylor (VM); Manhattan
*Harold Edward Taylor (C-1; AE-2); Norton
*Scott Manson Taylor (C); Chetopa
Warren Chalmer Teel (Ag); Lucerne
*Morgan William Tempero (VMP); Manhattan
*Wilbur Bevard Tendick (Ag); Kismet
*William Theis (CE); Dodge City
*Beulah Agness Thomas (HE); Manhattan
*James Thomas (MI); Garnett
*Marshall Henry Thomas (ME); Belleville
*Mary Eleanor Thomas (IJ); Easton, Pa.
*Robert Morton Thomas (GS); Green
*Virgil Dwight Thomas (CE); Manhattan
*Arthur Henry Thompson (AE); Delia
*Dorothy Leah Thompson (HE); Manhattan
*James W. Thompson (Ag); Harveyville
*Kyle Nelson Thurber (ChE); Abilene
*Mary Kathryn Tibbetts (HE); Westmoreland
Gertrude L. Tillotson (IJ); Sublette
*Lee Chester Tippet (VM); Manhattan
*Doris Lee Titus (IE&D); Cottonwood Falls
*Harold George Todd (C); Longford
*Robert Stewart Todd (VM); Kansas City
Charles Edward Tomson (Ag); Dover
*Floy Frances Toothaker (HE); Protection
*Mabel Ellen Toothaker (HE&N); Protection
*John Elwyn Topliff (Ag); Jewell
*Dale Leon Torrence (C); Lucas
*William Francis Townsell (C); Caney
John Anthony Trenkle (C); Manhattan
*Mary Jane Trusdale (Ar); Manhattan
*Marjorie Phyllis Tudor (C); Holton
*Gay Stanley Tuis (AA); Fredonia
*Ruth Mildred Tullis (M); Albert
*Henry Louis Tunnell (GS); Clyde
*Cecil Lee Turner (GS); Menlo
*Jay Turner (PE); Quinter
*Juanita Jean Turner (GS); Liberal
*Robert Lee Turner (Ag); Oskaloosa
Glenn Albert Tyler (VMP); Mankato
*Charles Calvin Underwood (IJ); Holton
*Anthony William Unanis (VM); Windsor Locks, Conn.

FRESHMEN—*Concluded*

- *Sophie Alice Usanis (HE); Windsor Locks, Conn.
 *Adam Michael Uschak (VM); Garfield, N. J.
 *Ross Harlen Van Cleave (VMP); Callaway, Neb.
 *Wilma Hazel Van Diest (C); Prairie View
 *Ted Arthur Van Greuningen (CE); Norton
 *Robert Lloyd Van Meter (EE); Ada
 *Glenn Benton Van Ness (VMP); Harrison, Ark.
 *Phillip Harris Vardiman (VM); Manhattan
 *Alice Vivian Vautravers (GS); Centralia
 *Marjorie Jane Vette (IE&D); Waterville
 *Leland Austin Viar (C&A); Dunlap
 *Frank William Viault (MI); Los Angeles, Cal.
 *Elmer Leroy Vinson (EE); Garfield
 *Fred Joseph Voeste, Jr. (C); Olpe
 *Roland Emil Vollmar (VM); Montgomery, Minn.
 *William Virgil Waddell (VMP); Manhattan
 *William Waffer (CE); White City
 *Howard Oscar Wagner, Jr. (GS); Amarillo, Tex.
 *Keith Bennett Wagoner (ME); Blue Rapids
 *James Henry Walker (Ag); McPherson
 *Maxine Walker (PE); Manhattan
 *Robert Walker (ChE); Elkhart
 *Ruth Elizabeth Walker (IE&D); Manhattan
 *Willard Hayes Walker (EE); Clayton
 *Joe Harrison Walser (CE); Manhattan
 *Theodore Parker Walton (Ag); Manhattan
 *Dixon Irving Wands (GS); Manhattan
 *Alfred Ward, Jr. (C); Johnson
 *Lloyd Robert Ware (EE); Liberal
 *Robert Charles Warner (ChE-1; C-2); Wellington
 *Francis Kenyon Warren (C); Newton
 *Arlene Lois Waterson (HE); Manhattan
 *Helen McGhie Watson (HE&N); Shawnee
 *Horace Cledus Watson (AE); Lake City
 *Norman Bernard Watson (C&A); Caldwell
 *Francis Lyle Weaver (IJ); Miltonvale
 *Gwendolyn Deane Weber (HE&N); Manhattan
 *Mary Ann Katherine Weiler (HE); Manhattan
 *Margaret Pluma Weldgrube (C); Basehor
 *Josephine Allen Wells (IJ); Iola
 *Delbert Oscar Wendt (VMP); Bonner Springs
 *Johnnie Edward Wenger (GS); Powhattan
 *Wilda Faye Wenger (HE); Sabetha
 *Oliver Edwin Werner (ME); Edgerton
 *Homer Triss Wesche (GS); Manhattan
 *William Edwin Wharton (CE); Powhattan
 *Melford Marcelle Wheatley (GS); Gypsum
 *William Hugh Wheatley (ME); Chanute
 *Charles Kenneth Whitehair (VMP); Abilene
 *Beryl Moneypenny Whitehead (Ag); Topeka
 *Lyle Milton Whittington (IJ); St. Marys
 *George Edward Wiggins (VMP); Manhattan
 *Edna Mae Wildman (HE); Manhattan
 *Lloyd Elbert Wildman (AA); Manhattan
 *Robert Mark Wiley (C); Fredonia
 *Doris Katherine Wilhelm (HE); Mount Hope
 *Charles Clinton Wilkinson (MI); Coleman, Tex.
 *Josephine Mary Williams (HE); Meriden
 *Marjorie Ellen Williams (HE); Marysville
 *Margaret Doris Williamson (HE); Dearby
 *Anna Belle Willis (HE); Kirwin
 *Morris Willis (EE); Kirwin
 *Clifford Eli Wilson (ME); Caney
 *Dorothy Belle Wilson (HE-1; M-2); Manhattan
 *George Lincoln Wilson (ME); Fredonia
 *Marguerite Lillian Wilson (HE&J); Council Grove
 *Marion Cecil Wilson (Ag); Wichita
 *Robert Thomas Wilson (C); Salina
 *Thomas Wesley Wilson (CE); Lincoln
 *Lorene Louis Winslow (HE&J); Manhattan
 *George Herbert Winter (C); Wichita
 *John Edward Winter (IC-1; Ag-2); Manhattan
 *Mary Josephine Winter (HE&N); Dresden
 *Thoralf Nolan Winter (EE); Dover
 *Otto William Winterhalter (ChE); Wichita
 *Ted Miller Winzer (CE); Atchison
 *Wayne Ross Witter (VM); Brookfield, N. Y.
 *Frances Evelyn Wolf (HE); Nickerson
 *Max Wolf (IC); Manhattan
 *Clyde Hadley Wood (C); Manhattan
 *Helen Frances Wood (GS); Wamego
 *Walter Wilson Wood (C); Whiting
 *Robert LaVerne Woodhead (AA); Hoyt
 *James Kelly Woods (GS-1; ChE-2); Burden
 *Harry Eugene Woodward (AH&V); Topeka
 *Joan Dorothy Works (HE); Humboldt
 *Ann Wright (HE&J); Salina
 *Helen Iams Wroten (GS); Keats
 *Jack Wyatt (Ag); Kansas City, Mo.
 *Juanita Charlene Wyckoff (HE); Luray
 *Leo Gerald Yeo (C); Ellsworth
 *Dale J. Yokum (VMP); Colony
 *Edwin Wayne Yordy (ME-1; C-2); Salina
 *Fred Albert York (VMP); Manhattan
 *Byron Augustus Yost (C); Sabetha
 *Leland Youk (Ag); Durham
 *Cleta Young (GS); Ness City
 *Clinton Volney Young (ME); Salina
 *Russell John Younkin (GS); Wakefield
 *Edward Brewer Zahn (Ag); Miltonvale
 *Abraham Zatman (ME); Pittsburg, Pa.
 *Edward Bonjour Zickefoose (VM); Rossville

* Matriculated 1935-1936.

SPECIAL STUDENTS

- *Joe Wendell Baker (Ag); Ozawkie
 *Carolyn George Balding (HE); Manhattan
 Ethel Tharp Barthold (HE); Hutchinson
 *Analee Warren Beach (HE); Manhattan
 *Armand Bass (GS); Manhattan
 *Robert Edward Beck (GS); Vermillion
 *Vilgil B. Belfield (GS); Manhattan
 *Floyd Evertt Beyer (ME); Gridley
 William Jacob Braun (Ag); Council Grove
 *Lila Ruth Breeding (HE); Herkimer
 Charlie Alexander Brown (ME);
 Junction City
 *Robert Bruce Brown (GS); Manhattan
 Charlotte Lela Buchmann (HE);
 Clay Center
 *Woodrow Russell Coatney (GS); Lincoln
 Clarence Coffey (GS); Platte City, Mo.
 *Margaret Lyle Coleman (GS);
 Junction City
 Doris Compton (GS); Manhattan
 Oscar George Cook (AE); Larned
 Dale Rush Curtis (GS); Manhattan
 *John Henry Davis (Ag); Paola
 *Thomas Doryland (GS); Manhattan
 *Ann Margaret Duncan (GS); Wakefield
 *John James Durbon (GS); Junction City
 Helen Virginia Ehrlich (Ar); Marion
 Adah Lou Eier (GS); Manhattan
 *Carrie Opal Ensign (Ar); Garrison
 *Tom Benjamin Fegan (ME); Junction City
 Louise Ann Frank (GS); Colby
 Salvador Gomez Gonzalez (CE);
 Guadalajara, Mexico
 *Ann Towles Gunby (Ag); Fort Riley
 *Raye Hankins (HE); Holcomb
 *Gertrude Kretzschmar Hansing (GS);
 Manhattan
 *Edythe VanDyke Harrison (GS);
 State College, N. Mex.
 *Charles Bellows Hazeltine Jr. (GS);
 Fort Riley
 Hazel Ruth Hedstrom (GS); Burdick
 Mildred Louise Hill (GS); Washington
 *Rosanna Hitchings (Ar); Fort Riley
 *Dorothy Marie Hobbie (HE); Osborne
 *Adelaide Agnes Hoch (GS); Wilson
 †*Helen Pansy Hostetter (HE-1; Grad-2);
 Manhattan
 Mary Etta Isaacson (GS); Topeka
 Alice Claypool Jefferson (HE);
 Manhattan
 *Donald John Kraus (Ag); Hays
 *Frank Liebwein (GS); Junction City
 Rex Cole McCluggage (GS); Manhattan
 *Manoutchehre Mahin (Ag);
 Teheran, Iran Avenu, Kakh
 *Elizabeth May Mauck (GS); Junction City
 Ziba Thomas Moore (GS); Manhattan
 Margaret Boore Muse (GS); Manhattan
 Beulah Burnetta Nelson (GS); Manhattan
 *Walter Norvel Nelson (GS); Waterville
 Mary Jane Nesselrode (HE); Kansas City
 *James Vardiman Owens (GS); Salina
 *Harry Plotkin (Ag); Manhattan
 Margaret Etzold Reed (HE); Liberal
 James Hazen Rexroad (GS);
 Fort Leavenworth
 *Keith Milton Rice (GS); Lebo
 Anne Pauline Schloesser (GS); Fredonia
 Bussey E. Scott (GS); Atwood
 Gladys Dowd Seaton (GS); Manhattan
 Louise Adele Sherrard (GS); Concordia
 *Mary Kathryn Smith (GS);
 Loveland, Colo.
 *Rogers Smith (Ag); Seneca
 *Thomas Milton Spickelmier (ME); Willis
 John Frederick Stoskopf (GS);
 Hoisington
 Frances Todd (GS); Coldwater
 Anna Jean Tolman (GS); Wamego
 *Earl Emerson Whipple (ME); Wichita
 Homer Eugene Withee (Ag); Manhattan

* Matriculated 1935-1936.

† Also pursuing graduate study.

Summer School Students

Nine-week Summer School

MAY 28 TO JULY 27, 1935

GRADUATE STUDENTS

Hugh Carson Adams; Sterling
 Louis Carlyle Aicher; Hays
 Helen Rose Anderson; Thayer
 Ross Harris Anderson; Richland
 Edwin Lee Andrick; Glen Elder
 Ethel Desdemona Archer; Hiawatha
 Harold Duane Arnold; Manhattan
 Esther Ann Atkinson; McPherson
 Zola V. Avery; Humboldt, Neb.
 Margaret Dillon Bair; Minneola
 Rachel Bales; Wichita
 Ora Belle Barber; Warrensburg, Mo.
 Robert Claude Barnett; Osborne
 Esther Kathryn Beachel; Norcatur
 Philip Becker, Jr.; Peoria, Ill.
 Frances Elaine Bell; Marysville
 Silas S. Bergsma; Howard
 Loren Richard Berner; Agenda
 Max William Bickford; Phillipsburg
 Chester Bert Billings; Manhattan
 Ralph Bogart; Manhattan
 Roy Elmer Bonar; Alta Vista
 Evelyn Mildred Bonham; Sapulpa, Okla.
 Vira Brown; Edmond
 Ada Pearl Brunk; McPherson
 Ray James Bryan; Woodbine
 Hazel Eirene Buck; Derby
 Margaret Iola Buck; Derby
 Harry Stephen Bueche; Edwardsville
 Lloyd Richard Burdge; Parsons
 Marion John Caldwell; Manhattan
 Roy Ramond Cameron; Havensville
 Lela Margarite Canavan; Lawrence
 Marjorie Henrietta Casper; Clifton
 Marguerite Virginia Chaffin; Caldwell
 Ross Albert Challans; Halstead
 James Percy Chapman; Manhattan
 Merle Vernon Chase; Riley
 Blanch Lucille Christensen; Bushong
 Helen Louise Church; Osage City
 Frank Barker Cookson; Mound City
 Mary Ellen Cormany; Junction City
 Donald Risdon Cornelius; Wheaton
 Frances Sarah Courter; Munden
 Hildur M. Dahlsten; Lindsborg
 Hilma Ruth Davis; Manhattan
 Dorsie Lawrence Deniston;
 Kansas City, Mo.
 Faye Dennis; Winfield
 Dorothy Rosencrans Donnelly; Manhattan
 Ralph Henry Eaton; Wilson
 Nina Edelblute; Manhattan
 Doris Evangeline Ekstrom; Agenda
 Sylvia M. Epler; Scott City
 Theodore Allen Fleck; Wamego
 Lorena Catherine Foreman; Hutchinson
 Margaret Lansden Foster; Manhattan
 Sina Faye Fowler; Manhattan
 Glenn Sylvester Fox; Rozell
 Harold J. Froning; Copeland
 Wanie Opal Froning; Copeland
 Gladys Furness; Rantoul
 Emma Thompson Galbraith;
 Cottonwood Falls
 Inez Belle Gardner; Hartford
 Margaret Priscilla Gibson; Lindsborg
 Malaeska Milton Ginter; Wilsey
 Muriel Ada Glasson; Almena
 Earl Todd Goodfellow; Wells

Arthur Leonard Goodrich; Manhattan
 Arthur Ernest Goodwin; Merriam
 Joshua N. Gottfrid; Assaria
 Edward W. Grigg; Coffeyville
 Lloyd Oscar Gugler; Woodbine
 Roland Edward Gunn; Great Bend
 Hannora Hammel; Sturgeon, Mo.
 Cecil Edgar Hammett; Manhattan
 Florence Lavina Harold; Dresden
 Margaret Harper; Glasco
 Ira Miller Hassler; Chapman
 Merle Preston Haymond; Burdett
 Loren Bryce Hefling; Manhattan
 Earl Martin Hiestand; Elwood
 Madge D. Hildreth; Altamont
 Anita May Holland; Harper
 Arthur Delphin Holmes; Enterprise
 Myrtle Evelyn Horne; Alma
 Lester Carlton Howard; Belfry, Mont.
 Lois Elda Howard; Belfry, Mont.
 Hazel Dell Howe; Manhattan
 Walter Henry Hukriede; Lewis
 Bruce Charles Hutchins; Manhattan
 Imo Lucille Inley; El Dorado
 Leota Isabelle Irvine; Stafford
 Percy Jennings Isaacson; Manhattan
 Luther Arthur Jacobson; Horton
 Alice Marie Jennings; Zeandale
 Arline Johnson; Frankfort
 Mary C. Johnson; Belleville
 Elmer W. Jones; Pittsburg
 Helen Louise Kadel; Scottsville
 Ethel H. Keith; Attica
 Althea Leonore Keller; Enterprise
 Earle Lewis Kent; Manhattan
 Romney Carlyle Ketterman; Rock Creek
 Doris Selma Klein; McPherson
 Ruth Alice Kramer; Maryville, Mo.
 Alice Charlotte Linn; Clyde
 Peter Rudolph Linscheid; Attica
 Ruth Merriam Linscott; Holton
 Eva Elizabeth Lisk; Manhattan
 Charles Howard Lockhart; Junction City
 Henry Wilbert Loy, Jr.; Manhattan
 Lloyd Everett McDaniel; Michigan Valley
 C. Fred McKee; Robinson
 Emily Mae McKenzie; Wayne
 Charles Dean McNeal; Boyle
 Edna Leona Mann; Quinter
 Arthur James Mattis; Ottawa
 Mary Evangeline Maxwell; Manhattan
 Norman John Mellies; Ellinwood
 George A. Merkey; Burr Oak
 Victor Pinkerton Morey; Munden
 Clark Leroy Morford; Huron
 Winifred Ann Nachtrieb; Atchison
 Alma Dale Newell; Durham
 James Thomas Newton; Douglass
 Myra Jane Newton; Manhattan
 Isabelle Chesney Nixon; San Antonio, Tex.
 Betty Ozment; Manhattan
 Donald Baker Parrish; Fort Scott
 Clara Katherine Paulsen; Stafford
 Oliver Pearson; Lindsborg
 Mart G. Pederson; Manhattan
 Frederick Adams Peery; Manhattan
 Virginia Janette Peterson; Manhattan
 Maun Poleson; Wamego

GRADUATE STUDENTS—Continued

Julia Ellen Potter; Girard
 Ivan Pratt; Hope
 Harry Charles Quantie; Riley
 *Ernest Lee Raines; Mound City
 Helen Marjorie Reed; Circleville
 Luella May Reeve; Winfield
 Pearl Florence Reeve; Winfield
 Ruth Reinhardt; Glendale, Ariz.
 Charles Edward Reitz; Riley
 Herbert Maxwell Rivers; Hutchinson
 Mary Eilleen Roberts; Manhattan
 Rachel Edith Roberts; Morrill
 Miriam Rogers; Manhattan
 Ralph Rogers; Madison
 George Albert Rogler; Matfield Green
 Dale Servetus Romine; Oswego
 Loretta May Sawin; Waterville
 Ella H. Schalansky; Bunker Hill
 Mae Schermerhorn; Gardner
 Marlin Charles Schrader; Olivet
 William George Schrenk; Leonardville
 LaVelle Robert Schruben; Centralia
 Mary Jo Sherwood; Dexter, Mo.
 Otho Wilbur Shoemaker; Logan
 Curtis Daniel Sides; Manhattan
 Sister M. Melania Goracke; Atchison
 Sister Ethelburg Leuschen; Atchison
 Sister M. Bonaventure McKenna; Atchison
 Sister Jeanette Obrist; Atchison
 Sister Marcella Siela; Atchison

Elvon Gilbert Skeen; Eskridge
 Lydia Elizabeth Andres Skeen; Eskridge
 Howard Dewight Smethers; Haddam
 Daphayne Vivian Smith; Manhattan
 Edna Marie Smith; Kingman
 Norman John Sollenberger; Manhattan
 Vesta Spurgeon; Red Bird, Mo.
 Hamilton Arlo Stewart; Topeka
 Melvin Paul Tack; Gaylord
 Chester Arthur Templer; Moline
 Newell B. Terry; Enterprise
 Arch Thompson; Blackwell, Okla.
 Hazel Emma Thompson; Parsons
 Margaret Lucille Titus; Council Grove
 Alice Mary Towson; Topeka
 George Edward Truby; Lane
 Katherine Ann Tucker; Topeka
 Leland Stanford Van Scoyoc; Manhattan
 Elizabeth Daniel Walbert; Columbus
 Melvin Orville Ward; Manhattan
 Rees Conway Warren; Manhattan
 John Hendrick Whitlock; Manhattan
 Kathryn Whitten; Topeka
 Gertrude H. Wilber; Belleville
 James Herdman Wilmoth; Blue Rapids
 Jo Marie Wise; Manhattan
 Chester Stanley Wood; Pratt
 Bernie William Wright; Manhattan
 Lilliefred Yonkey; Yates Center

UNDERGRADUATE STUDENTS

Helen Marguerite Adams; Wakefield
 Claud Wilson Allen; Kildare, Tex.
 Anna Belle Alton; Brenham, Tex.
 Lawrence Sylvester Alwin; Morrowville
 Max Donald Alwin; Morrowville
 Virginia Amend; Sterling
 Earl Preston Anderson; Manhattan
 Ethel Valeria Anderson; Manhattan
 Jennie Laurene Anderson; Haddam
 Margaret Esther Anderson; Clyde
 Victor Lawrence Anderson; Osborne
 Richard Elliott Armstrong; Riley
 Lawrence Robert Arnett; Broughton
 Maud Arnold; Frankfort
 Lester Joseph Asher; Cheyenne, Wyo.
 Edward Leroy Askren, Jr.; Manhattan
 Leonard Maurice Aubuchon; Emporia
 Arthur Clyde Ausherman; Elmont
 Marjorie Helen Austin; Irving
 Ethel Evelyn Avery; Riley
 Helena Elizabeth Ayers; Sabetha
 Nora Alice Babb; Broughton
 Marvin Philip Baecker; Riley
 Charles Edgar Baker; Kansas City
 Virgil Elaine Baker; Ozawkie
 Dorothy Ella Barbour; Washington
 Ella Marie Barger; Alma
 Glen O. Barleen; Concordia
 Wayne Winfield Barnes; Morrowville
 Wilma Mildred Barr; Manhattan
 H. LaVerne Barton; Pretty Prairie
 Alberta Basye; Coats
 Lyda Martha Basye; Coats
 John Henry Bateman; Emporia
 Lova Fern Bauer; Gallatin, Mo.
 Roy Edward Beach; Abilene
 †Buell Wesley Beadle; Talmage
 J. Clyde Bearden; Manhattan
 Forrest Overton Beardmore; Mankato
 Doris A. Beebe; Lenexa
 Grace A. Bell; Beverly
 William Woodrow Bell; Marysville
 Walter Mark Bellairs; McPherson

Geraldine Mabel Bender; Holton
 Frances Mildred Bergren; Morganville
 Carl John Bergman; Randolph
 Minnie Louise Bergsma; Lucas
 Doris Helen Berner; Wamego
 Stanley Fraats Berner, Jr.; Wamego
 AnnaLee Evelyn Berry; Aliceville
 Max A. Besler; Manhattan
 Ervin William Bevin; Manhattan
 Carl Henry Beyer; Manhattan
 Naomi Sara Bilderback; Nortonville
 Mary Blackman; Manhattan
 Paul Everett Blackwood; Talmo
 Leslie Marion Blake; Glasco
 Robert Vincent Blanche; Leavenworth
 Harriet Ellen Bliss; Minneapolis
 Adzanna Mary Blochlinger; Concordia
 Rose Helene Bohow; Pratt
 Zelma Maude Bolinger; Hamlin
 Leta Naomi Bonebrake; Concordia
 Earl Clarence Borgelt; Zenda
 William Samuel Bork; Clay Center
 Armand Boss; Manhattan
 Kenneth Carson Bottenberg; Wetmore
 Walter Enos Boyer; Kinsley
 Wave Lucille Boyer; Kinsley
 Doris Boyle; Spivey
 Fred Ewing Brady; Kansas City
 Gean Augusta Brandenburg; Manhattan
 Wilberine Breckenridge; Agenda
 Grace Breeden; Manhattan
 Merle Dutton Breeding; Herkimer
 Wilma DeNell Brewer; Riley
 Berniece Lanoda Brien; Bern
 Wade Oberlin Brinker; Manhattan
 Alice Vera Britschge; Manhattan
 Gerald James Brown; Circleville
 Ord Kent Brown; Edmond
 William Everett Brown; Junction City
 Edna Marjorie Brubaker; Marysville
 Virgil Richard Bryan; Woodbine
 Elizabeth Brychta; Bremen
 Norman Edward Burandt; Belleville

† Also pursuing graduate study.

UNDERGRADUATE STUDENTS—Continued

Clark Wayne Burch; Manhattan
 Sherman Stanford Burcher; Kinsley
 Ben Salvatore Burdo; Manhattan
 Lloyd Clair Burkes; Nickerson
 Elwin Matthew Burmaster; Ellsworth
 Oran Frank Burns; Topeka
 Grace Louise Burson; Oakley
 Lucile Burt; Manhattan
 Emma Bushell; Broughton
 Beth Alice Byers; Jewell
 †Frances Caldwell; El Dorado
 Wayne Callahan; Coffeyville
 Albert B. Cameron; Smith Center
 Veda Campbell; Concordia
 Augustus Caesar Cardarelli; Manhattan
 Emma Olive Carkuff; Miltonvale
 Astrid Ingeborg Carlson; Clifton
 LaVone Carlson; Morganville
 Eva Mae Carney; Kackley
 Barbara Rairden Carr; Manhattan
 Lola Rairden Carr; Manhattan
 J. Gerald Cash; Jewell
 Paul Wendell Cassell; Salina
 Margaret Bessie Cassity; Clifton
 Mildred Edna Chappell; Plains
 Charles Deferese Chase; Manhattan
 Ned Chestnutt; Logan
 Eunice Sara Christenson; Olsburg
 Neva Anna Christenson; Jewell
 Beulah Alice Christie; Effingham
 Beatrice Marie Clark; Ottawa
 George Jay Clark; Riley
 Julia Ellen Clark; Miltonvale
 Vera Grace Clymer; Miltonvale
 Mary Josephine Coffman; Manhattan
 Lawrence Donaldson Colburn; Manhattan
 Carlos Irving Cole; Logan
 Joseph Edward Cole; Nevada, Mo.
 Robert Cole; Wetmore
 Eunice Mae Coll; Ottawa
 Ethel Iris Collins; Junction City
 Grace Carolyn Collins; Leavenworth
 Alice Bertha Conrow; Clay Center
 Ivan Bernard Conwell; Manhattan
 Edythe Leona Coons; Lakin
 Harold Keim Cooper; Manhattan
 Hildred Ann Cooper; Lyons
 Edna Marie Copeland; Clay Center
 Jennie Ethel Copeland; Idana
 Audrey Marie Corcoran; Onaga
 Fae Dorothy Cornelius; Lane
 Betty Frances Costello; Nickerson
 George Edward Cottrall; Manhattan
 Elva Laurene Coulter; Dresden
 Una Idella Coutermarsh; Bala
 Edwin Morris Crawford; Manhattan
 Madelyn Crawford; Spring Hill
 Margaret Louise Crawford; Hugoton
 Pauline Violet Crawford; Luray
 Ruth Ellen Crawley; Elkhart
 Wilbur Oliver Creighton; Denison
 Myrtle Pauline Cress; Manhattan
 Ruth Elizabeth Crouch; Everest
 Alta Annie Cunningham; Wakefield
 Donald Curtis; Kansas City
 Dale Alfred Dahlgren; Enterprise
 Richard B. Dale; Stafford
 Doris Marjorie Dalton; St. George
 Alden Dannevik; Chapman
 Bernice Arlene Dappen; McPherson
 Larry Aldon Darnell; Osborne
 Russell Thomas Daulton; Manhattan
 Kermit Davidson; Kansas City
 Eugene Price Davies; Winchester
 Martha Mary Davies; Bala
 Caroline Dawley; Manhattan
 Earl Hamilton Dearborn; Manhattan

Loris Arthur Dehner; Concordia
 Louise Denton; Manhattan
 Irene Evelyn Deschner; Beloit
 Mary Beatrice Dickson; Washington
 Evelyn Elizabeth Diehlman; Findlay, Ohio
 William Hyde Dieterich; Minneola
 Max Roland Diller; Washington
 Ferne Lucille Dixon; Agra
 Hal Hollingsworth Doolittle; Manhattan
 Raymond James Dorman; Centralia
 Fern Louisa Downs; Clay Center
 Philip Doyle; Beloit
 John William Drisko; Kansas City
 Yale Druley; Muncie
 Elsie Duesing; Morrill
 Junia Louise Duffin; Kingman
 Fern Collins DuMars; Manhattan
 Maxine M. Dunback; Belleville
 Roy Allison Dunham; Jewell
 F. Dana Durand; Junction City
 Mary Jane During; Tulsa, Okla.
 John Page Earle; Washington
 Norma Mae Ebright; Courtland
 Harold Francis Eddington; Dodge City
 A. Thornton Edwards; Junction City
 Karl D. Edwards; Alida
 Harold C. Elder; Smith Center
 Howard Surber Elliott; Oakley
 Walter Titus Emery, Jr.; Manhattan
 Donald Leroy Engle; Manhattan
 Kenneth Harold Engleman; Arkansas City
 Albert Cassius Eterly; Manhattan
 Alfred Lincoln Evans; Barnard
 Darrel Lee Evans; Manhattan
 Anne Cordelia Everett; Coffeyville
 Mildred Louise Ewing; Olathe
 Evelyn Pauline Ezell; Pratt
 Pearl Faye Fairchild; Manhattan
 William Ramsdell Farmer; Kansas City
 Joseph Abraham Farney; Kiowa
 Edith A. Fear; Clay Center
 Marian Fegan; Junction City
 Lucile M. Fincham; Blue Rapids
 Morris Finkelstein; Syracuse, N. Y.
 Ladek Charles Fiser; Mahaska
 Ermina Jane Fisher; Holton
 Elizabeth Jean Fleming; Piper
 Richard Winston Fleming; Manhattan
 Thalia Frances Follmer; Buffalo
 Marjorie Forbes; Columbus
 Kathern Belle Forest; Garden City
 Martha Louise Fost; Peabody
 Evelyngrace Fox; Salina
 Irene E. Fox; Junction City
 Sidney Lorenz Franz; Soldier
 Charles Frederick Frey; Alma
 William R. Friend; Randall
 Robert Wilfred Froelich; Abilene
 Ara Nelsene Froman; Wichita
 Florence Mae Froman; Wichita
 Vivian Ione Frundell; Concordia
 Velma Kathrin Funnell; Clifton
 Alma Lucille Furman; Clearwater
 Mark Earnest Gale; Concordia
 Richard Fredrick Garinger; Harveyville
 Opal I. Garlow; Concordia
 Harold Ernest George; Manhattan
 Clyde Robert Getty; Winchester
 Virginia Noah Gibson; Manhattan
 Alberta Marie Gieber; Clifton
 Mary Margaret Glass; Manhattan
 Martha Elizabeth Gordon; Waterville
 Bessie Gosting; Vesper
 Willetta Eloise Govan; Kansas City
 Alice Lucile Graham; Webber
 Harry White Grass III; La Crosse
 Donald Clair Green; Independence
 Esther Virginia Green; Whiting
 Bernice I. Griffie; Blue Rapids

UNDERGRADUATE STUDENTS—Continued

- Jeanita Lorraine Griffie; Blue Rapids
 Leo Raymond Griffing; Morrowville
 Esther Marie Griswold; Marysville
 Norma LaVern Grob; Randolph
 John Jacob Groody; Manhattan
 Tom Conrad Groody; Manhattan
 Loren Dwight Grubb; Phillipsburg
 Thomas Joseph Guilfoil; Kansas City
 Mary Sue Haas; Arrington
 LaVern Evelyn Hahn; Clay Center
 Norroena Helen Hall; Coffeyville
 Robert Vance Hall; New Cambria
 Charles Robert Hanner; Manhattan
 Irene J. Hank; Holton
 Jacqueline Hanly; Manhattan
 Gertrude Kretzschman Hansing;
 Manhattan
 Gladys Viona Hanson; Leonardville
 Julia Laura Hanson; Marysville
 Mary Hanson; Marysville
 Florence Haptonstall; Republic
 James D. Haptonstall; Republic
 Marguerite Hargrove; Effingham
 Thelma Alta Harman; Indianapolis, Ind.
 Hal Charles Harned; Manhattan
 George Bertrand Harrop; Manhattan
 George Thomas Hart; Phillipsburg
 Edward Thomas Haslam; Council Grove
 Mary Elizabeth Hatcher; Wamego
 Ray Vincent Hauck; Miltonvale
 Howard Claude Hedges; Sylvan Grove
 Margaret Cecilia Hedlund; Clay Center
 Hazel Ruth Heikes; Wakefield
 Lawrence Henry Helms; Alma
 James Eugene Hemphill; Clay Center
 George Clifford Henderson; Herington
 Vann Hess; Manhattan
 Kenneth M. Heywood; Summerfield
 Ida Lue Hildibrand; Latham
 Bonnie Muriel Hill; Melvern
 Lucile Adele Hiller; Lewis
 John Worth Hines; Manhattan
 Arthur Wayne Hjort; Manhattan
 Wilma Marguerite Hobbie; Tipton
 Grace Ellen Hodgson; Hutchinson
 Maxine Hofmann; Manhattan
 Norma Frances Hofsess; Partridge
 Garland Clarence Hoggund; Miller
 Lela Arvella Holder; Marion
 Thelma Frances Holuba; Manhattan
 Janie Mae Hood; Washington
 Boyd Herbert Hope; Manhattan
 Edward Anderson Houser; Udall
 Dorothy Elaine Howard; Belfry, Mont.
 Mary Alice Howard; Manhattan
 Harry Burt Hubbard; Manhattan
 Howard Busby Hudiburg; Independence
 Florence Lorena Huey; Louisville
 Hazel Gertrude Huey; Louisville
 Mildred Elinor Huey; Sterling
 Robert Bruce Huey; Sterling
 Della LaFerne Huggins; Wamego
 Charles Wilfred Hughes; Pittsburg
 Irene Bernice Hughes; Oak Hill
 Opal Carola Hughes; Oak Hill
 Reba Hugos; Norway
 Aaron Trent Hunt; Altamont
 Merna Rachael Hunt; Salina
 Bernice Marie Hunter; Formoso
 Mary Frances Hurley; Paola
 Louise Elizabeth Hyde; Beloit
 Mildred Mae Ince; Wamego
 Letha Pearl Irvine; Stafford
 Ruth Enda Irving; Manhattan
 Irvin Irwin; Wilsey
 Howard Nelson Jackson; Greenleaf
 Verland F. Jahnke; Woodbine
 Arthur Randolph James; Macon, Mo.
 Della Marie James; Lakin
 Agnes Irene Jenkins; Jewell
 Esther Elizabeth Jenkins; Jewell
 Florence Esther Jensen; Manhattan
 George Roll Johnson; Council Grove
 Helen Sylvia Johnson; Wichita
 Mabel Louise Johnson; Filer, Idaho
 Myrtle Helena Johnson; Concordia
 Arthur Clayton Jones; Oskaloosa
 Aimison Jonnard; Manhattan
 Mary Carolyn Jordan; Topeka
 Eunice Ruth Justis; Washington
 Gertrude Beulah Kammer; Atchison
 DeVere Kay; Manhattan
 Maire Ruth Kay; Lawrence
 Arthur Bruce Keckley; Alma
 Donald Dee Keeney; Lucas
 Harold Buhrer Keller; Enterprise
 Lawrence Louis Kelley; Vinland
 Robert Burton Kendall; Council Grove
 Ruth Elaine Kenley; Belleville
 Oliver Willard Kershaw; Garrison
 James Randle Ketchersid; Manhattan
 Marjory Aline Kiger; Washington
 William Thomas Kilian; Chapman
 Katharine Frances Kilmer; Kirwin
 Ned William Kimball; Manhattan
 Peter Arthur Kimen; Manhattan
 Clara Bess King; Manhattan
 M. Elsie Kirby; Stilwell
 Carl Lawrence Kirk; Winfield
 Roy Charles Kirkpatrick; Manhattan
 Grace Kisby; Clifton
 Zelda Mary Kleven; Manhattan
 Florence Elizabeth Kling; Holton
 Velma M. Koontz; Jetmore
 William Charles Kosinar; Manhattan
 Mildred J. Kratochvil; Manhattan
 Dorothy Orlene Krig; Manhattan
 Harold Anderson Krig; Manhattan
 Justina Susie Kroeker; Hutchinson
 Anthony Francis Krueger; Gardner
 Ethel May Kurz; Coldwater
 Leon Jules LaCroix; Manhattan
 Boyda Jo Lacy; Everest
 Amy Carol Lamb; Blue Rapids
 James Ellis Lander; Coffeyville
 William Irl Lane; Manhattan
 George Kendrick Lang; Amy
 Grace Margaret Larson; Leonardville
 Keith Obed Lassen; Manhattan
 Alta Mary Lathrop; Smith Center
 Mary Ruth LeBow; Manhattan
 Karl Marx Lee; Garden City
 Irene Lily Leiszler; Clifton
 Dorothea Leland; Valley Falls
 Walter John Leland; Valley Falls
 Maryann Lewis; Gove
 Mildred M. Lewis; Gove
 William John Lewis; Manhattan
 Velma Marie Lietzan; Hollenberg
 Vivian Ruth Light; Manhattan
 Robert William Lindenstruth;
 Marshfield, Mo.
 Angelus Joseph Lingenfelser; Atchison
 Raymond Edwin Lippenberger; Manhattan
 Anna Viola Lippert Green
 Helen Emma Lippert; Green
 Luella Mary Lisk; Manhattan
 Sarah Josephine Lister; Wamego
 Maxine Elizabeth Litel; Republic
 Glenn Orville Lloyd; Oak Hill
 Alice Lucille Lofton; Washington
 Glenn W. Long; Manhattan
 Louis Morrison Long; Parsons
 Sam Long; Abilene
 Hugo Frederick Lucas; Manhattan
 Bill Junior Ludiker; Spivey
 Alice Lucile Lund; Manhattan
 Emily Lena Lund; Green
 Charles R. Lutz; Hutchinson
 Edith E. Lyness; Walnut

UNDERGRADUATE STUDENTS—Continued

Lyman Max Lyon; Sabetha
 Sue Lyon; Nevada, Mo.
 Clyde McCauley, Jr.; Arkansas City
 Mayme Catharine McCawley; Hollenberg
 Lola May McCleery; Esbon
 Edmund Burke McCormick; Manhattan
 Ethel LuVina McCormick; Arkansas City
 Hal McCoy; Manhattan
 Emilie Angeline McDonald; Bremen
 Lola Lucretia McDonald; Bremen
 Esther Almira McFillen; Cedar
 Helen M. McGill; Moscow
 Edward Lawrence McGuire; Rossville
 Albert Edward McKay; Manhattan
 Ada McKeever; Holton
 James William McKinley; Manhattan
 Jane McKinney; Junction City
 Margaret Elenore McKown; Manhattan
 Mary Lucille McNamee; Walnut
 Reva McNeil; Miltonvale
 Avis Loretta Mack; Clay Center
 Chester Lyle Macredie; Wichita
 Alvin Arthur Maddy; Utica
 Lehman Dedrick Madsen; Corbin
 Gladys I. Mahaffey; Lenora
 Gladys Thersa Mann; Scottsville
 Kathryn Marquart; Hutchinson
 Wilma N. Marsh; Chanute
 Carrie Elizabeth Marshall; Westmoreland
 Rachel Martens; Hutchinson
 Beulah E. Martin; Grainfield
 Delite Martin; Lewis
 Elva Coreen Marty; Courtland
 Thelma Oreana Mathes; Leoti
 Esther Carol Mathies; Alma
 Evelyn Laura Mathies; McFarland
 Minnie Isabel Matthias; Atchison
 Homer Emsley Mayo; Kansas City
 Martha Meagher; Solomon
 Thelma Elizabeth Mears; Beloit
 Iola Silva Meier; Abilene
 Alvah T. Menhusen; Randall
 Pauline Sadler Menhusen; Randall
 Phelena Deane Merten; Morganville
 Erby Messimer; Manhattan
 Alice Arla Meyer; Washington
 Beatrice Meyer; Frankfort
 Edith Lenora Meyer; Leonardville
 Frances Lucille Meyer; Frankfort
 Helen Ruth Meyer; Anthony
 Marcella Meyer; Frankfort
 Burris Edward Miles; Cunningham
 Frances Geraldine Miller; Miltonvale
 Wayne Ishmael Miller; Kansas City
 Helen Lawson Millican; Topeka
 John Junior Minnis; Manhattan
 William Davisson Mitchell; Ness City
 Floyd Edward Monroe; Manhattan
 Helen Marguerite Moore; Muscotah
 Charles Edgar Moorman; Manhattan
 Joseph Wade Morey; Narka
 Alvin Hanson Morgan; Manhattan
 Emory Lavern Morgan; Ottawa
 Levi George Morgan; Richfield
 Vivian Morgan; Fort Scott
 Dorothy Maratha Morris; Bakersfield, Mo.
 Myrte Mae Morris; Paxico
 John Englen Bertus Mouw; Manhattan
 Mara Elizabeth Mulligan;
 Cambridge, Mass.
 Robert Dean Murphey; Manhattan
 Vera Lois Murphy; Detroit
 Eltie Mae Musgrove; Fort Riley
 Homer Samuel Myers; Salina
 Obed Edmund Myrah; Manhattan
 Walter M. Naylor; Burr Oak
 Joe M. Neal; Kansas City, Mo.
 Theron Andrew Newell; Junction City
 Joseph William Newman; Manhattan
 Clara Wilhelmina Niemoller; Wakefield
 Gladys Esther Niles; Liberal
 Dorothy Nelle Noell; Syracuse
 Ethel Myrtle Noland; Manhattan
 Betsy Ann Norelius; Springfield, Ill.
 Fred William Nussbaumer; Lebanon
 Blanche Berniece Nutter; Talmo
 Russell Grant Nystrom; Dover
 Preston Edward Olderog; Manhattan
 Lela Ruth Oliver; Iola
 M. Helen Oliver; Rydal
 Elna Joyce Olson; Manhattan
 Verna Elvira Olson; Clyde
 Tom Raymond O'Neill; Clifton
 Leonard R. Ottman; Washington
 Eleanor Otto; Manhattan
 Merritt Lawrence Owens; Pendennis
 Merton Charles Paddock; Manhattan
 Lucille Ruth Palmquist; Concordia
 Augustus Stanley Parr; Rossville
 Buel Roux Patterson; Manhattan
 Lillian S. Paustian; Manhattan
 Dorothy Esther Peak; Densmore
 Chester Winfred Peeples; Manhattan
 Mary Louise Peery; Randall
 Walter Eugene Peery; Manhattan
 William Raymond Petersen; Manhattan
 Effie Ane Peterson; Clifton
 Elvira Esther Peterson; Clyde
 John Donald Peterson; Enterprise
 Lorraine Geraldine Peterson; Randolph
 Mary Katherine Peterson; Riley
 Margaret Goldie Pfizenmaier; Clay Center
 David Frank Phelps; Miltonvale
 Florence Emma Phillips; Emporia
 Robert Emmett Phillips, Jr.; Manhattan
 Ronald D. Pickett; Manhattan
 Hazel Ida Pierce; Junction City
 Louise Jennie Pierce; Junction City
 Charles Morris Platt; Manhattan
 Maurice Frank Plotkin; Manhattan
 Sylvia Beryl Plymire; Beloit
 Hyman Pogorelsky; Manhattan
 Roland Sanford Powers; Manhattan
 Roy Seymour Prather; Reece
 Charles Frank Prchal; Manhattan
 William Phillips Price; Little River
 Elsie Elizabeth Prickett; Wamego
 Leland John Propp; Marion
 Ray Sherman Pyles; Kansas City
 Dorothy Marie Rabe; Topeka
 Edra Aileen Ramsay; Garnett
 Mae Irene Ramsay; Beloit
 Gopal Singh Rathore; Jodhpur, India
 Maxine Virginia Redman; Manhattan
 Robert Lockhart Reid; Kansas City, Mo.
 Jeremiah Francis Reilly; Emmett
 Jack Chilcott Remmele; Manhattan
 Anna Hilkea Remmers; Riley
 Rowland Herman Renwanz; Enterprise
 Anna Katherine Renz; Riley
 Hattie Elizabeth Reynolds; Gary, Ind.
 Joe Buel Reynolds; Chetopa
 Howard Eugene Rhoads; Arkansas City
 Nell Richards; Wamego
 Martha Luise Ringel; Alma
 Zola M. Roach; Manhattan
 Violet May Robb; Louisville
 Charles P. Roberts; Manhattan
 Leland Roberts; Manhattan
 John H. Robinson; Cullison
 Ruth Rockey; Manhattan
 Helen Ann Roeder; Frankfort
 Clinton Gerald Roehrman; White City
 Jane E. Roether; Junction City
 Ross E. Rogers; Glasco
 Charles Eugene Roper; Atchison
 Ethel Agnes Rosey; Junction City
 Vernal George Lee Roth; Emporia

UNDERGRADUATE STUDENTS—Continued

Francenia Routt; Paola
 Florence Ethel Rubart; Milford
 Anna M. Rueschhoff; Grinnell
 Vera D. Ruetti; Irving
 Louise Rust; Manhattan
 Oliver Whan Sadberry; Caldwell, Tex.
 Ellen Elizabeth Sage; Maplehill
 Edwin Charley Sample; Council Grove
 Janet Anabel Samuel; Manhattan
 Gladys Caroline Samuelson; Beattie
 Lola Viola Sanders; Barnard
 Carl Robert Sandstrom; Herington
 Jay Jewell Sarasohn; Manhattan
 John Franklin Scantland; Manhattan
 Rosemary Grace Scheier; Everest
 Lyle Leon Schlaefli; Cawker City
 Erma Schmedemann; Manhattan
 Wilma Ruth Schmidt; Blue Mound
 Viola Louise Schmitz; Alma
 Carl William Schnell; Manhattan
 Merwin Ellenwood Schoonover; Topeka
 Carl William Schroeder; Hillsboro
 Thelma Mae Schroth; Concordia
 Edwin Schuetz; Mercier
 LaVonne Reva Schurr; Palmer
 George Albert Schutter; Silver Lake
 Louis Carl Schwanke; Alma
 Minnie Scoggins; Munden
 Beverly Horace Scott; Atwood
 Sarah Elizabeth Scott; Manhattan
 Louis Mary Scott; Manhattan
 Marjorie Marie Scott; Altoona
 Emily Alberta Seaburg; Manhattan
 Maxine Elizabeth Seeberger; Hanover
 Iva Mildred Sell; Stockton
 Allan Eugene Settle; Strong City
 Bernice Cecelia Shaffer; Greenleaf
 Maxine M. Shaffer; Beloit
 Mildred Marie Shaffer; Simpson
 Royal Franklin Shaner; Topeka
 Edna May Shannon; Manhattan
 Bonita Maurine Sharp; Newton
 Cecelia M. Shea; Haddam
 Regis Maria Shea; Concordia
 Dale Allison Shearer; Columbus
 Dorothy Jane Shearer; Junction City
 Garnet Evadna Shehi; Topeka
 Edward Temple Sheldon; Topeka
 Haldine Miller Shelley; Manhattan
 Richard Dickinson Sherman; Manhattan
 Eula Pauline Sherwood; Grenola
 Ward Haynes Shurtz; Manhattan
 Althea Lenora Siddens; Blaine
 Virgil Edwin Siddens; Manhattan
 Catherine Augusta Siem; Rochester, Minn.
 Imogene Ruth Siemers; Clay Center
 Gerald Edward Simms; Republic
 Ruth Simpson; Leonardville
 Wilbert Homer Simpson; Bala
 Corinne Sinclair; Jetmore
 Alice Arvilla Singley; Plains
 Sister Clement Marie Heidrick; Concordia
 Ethel Sklar; Manhattan
 Alice Pearl Sloop; Nortonville
 Elizabeth Annetta Sloop; Nortonville
 Ilene Sluyter; Jewell
 Berniece Smart; Quinter
 Albert Benjamin Smith; Manhattan
 Elvera Minnie Smith; Waterville
 Margaret E. Smith; Oketo
 Marjorie Nan Smith; El Dorado
 Roy Ivan Smith; Lincoln
 Sylvia Faye Smith; Maplehill
 Velda M. Smith; Republic
 Woodrow Wilson Smith; Emmett
 Wilmer Ray Smittle; Columbus
 Genevieve Ferne Snapp; Barnard

Don Arnold Snyder; Elkhart
 Hester Virginia Snyder; Potwin
 Corinne Solt; Manhattan
 Fred Wilbur Songer; Olathe
 Inga R. Soyland; Horton
 Kenneth Marion Sparrow; Newton
 Cecil Otto Spencer; Manhattan
 Lawrence Eric Spong; Enterprise
 Carl Fred Steinhauer;
 Mountain Lake, Minn.
 Geraldine Pearl Stepp; Smith Center
 Vern Emmett Stepp; Neodesha
 Charlesanna Dorothea Stewart; Hutchinson
 Darrella Lynette Stewart; Hutchinson
 Dorothy Eldora Stewart; Wamego
 Mary Luella Stewart; Topeka
 Nila Mae Stewart; Hutchinson
 Louise Marie Stone; Beloit
 Oren Paul Stoner; Hiawatha
 Marguerite Corinne Stoops; Bellaire
 Emma Anne Storer; Muncie
 James Dean Stout; Independence
 Hattie Helen Strauss; Chapman
 J. Maurice Street; Yates Center
 Charles Raymond Stumbo; Lawrence
 Charles Edward Sullivan; Leavenworth
 Rachel Bess Swan; Narka
 Raymond William Swanson; Randolph
 Buford Delmont Tackett; Topeka
 Beulah Talley; Miltonvale
 Dorothy Rebecca Taylor; Downs
 Elsie May Tempero; Clay Center
 Thelma Mae Terpening; Morrowville
 Madeen P. Terrass; Alma
 Victor Preston Terrell; Syracuse
 Lillian Velma Thiele; Bremen
 Beulah Helen Thomas; Ottawa
 Albert Adam Thornbrough; Lakin
 Wallace William Thurston; Elmdale
 Margaret Tillinghast; Clifton
 Mayne Thelma Toburen; Cleburne
 Mary Adeline Todd; Clay Center
 Leona E. Toedter; Marysville
 George Eugene Toothaker; Manhattan
 Alice Torgeson; Kelso
 Hazel Marie Torgeson; Council Grove
 Raymond Charles Trentman; Zenda
 James Monroe Troutt; Fort Riley
 Lorine N. Trudell; Clay Center
 Theresa LaVone Trudell; Clay Center
 Evelyn Turner; Manhattan
 Margaret Jean Turner; Hartford
 John David Umberger; Manhattan
 Margaret Ruth Urquhart; Wamego
 James Paul Vandergriff; Douglass
 Alice C. VanMeter; Ada
 Floy Anna VanNortwick; Republic
 Irene Katherine VanNortwick; Republic
 Leonard Charles VanNortwick; Republic
 Lucile Emily VanNortwick; Republic
 Rose Mary Vesely; Blue Rapids
 Edwin Leslie Walker; Junction City
 James Thomas Wallingford; Kansas City
 Esther Elizabeth Walter; Princeton
 Maxwell Perrine Wann; Hays
 Raymond Woodrow Wann; Manhattan
 Leland C. Ward; Manhattan
 Dorothy Agnes Warner; Goodland
 Etta E. Warner; Glasco
 William Barnes Warner; Wellington
 Frederick Gail Warren; Beverly
 Treva Arlene Warren; Lovewell
 Jean Washburn; Manhattan
 Dorothy Washington; Manhattan
 Irene M. Wassmer; Garnett
 Merle Alfred Webb; Meriden
 Evelyn Jeannette Wehling; Hollenberg
 Mary Ann Katherine Weiler; Manhattan
 Eleanor Marie Weller; Abilene

UNDERGRADUATE STUDENTS—*Concluded*

Alma Ray Wells; Spivey
 Guy Justin Wells; Morrowville
 Otto Earnest Wenger; Tonganoxie
 Hilary John Wentz; Concordia
 Francis Linton Wesley; Parsons
 Anna Laura West; Manhattan
 Evelyn Clara West; Clifton
 Opal A. Westhausen; Belleville
 Ida May Weygandt; Keats
 Elton Clive Whan; Manhattan
 Donald Eugene Wheeler; Seneca
 Alfred Everett White, Jr.; Manhattan
 Hallie Elizabeth Whitney; Council Grove
 Maxine Wickham; Manhattan
 Carson Harold Wiedeman; Caldwell
 Curtis Wieland; Morrowville
 Paul Chapman Wilber; Belleville
 Ross Wilcox; Dodge City
 Howard Ivo Wildman; Manhattan
 Leona Margaret Wilkerson; McFarland
 Myrtle Elizabeth Wilkins; Miltonvale
 Arthur Owen Williams; Belleville
 Lucile Thirza Williams; Marysville
 Rachel Thelma Williams; Meriden
 Jean Brown Willoughby; Manhattan
 Daisy Mae Wilson; Irving
 Mildred Frances Wilson; Herington

Ben N. Winchester; Kinsley
 Elmer Benjamin Winner; Topeka
 Homer Eugene Withee; Hamilton, Mass.
 Harry John Witt; Manhattan
 Agnes Viola Woellhof; Clay Center
 Ethel Grace Wohler; Green
 Max Wolf; Manhattan
 Catherine Louise Wood; Wakefield
 John D. Woodman; Manhattan
 Albert Alfred Worrel; Manhattan
 Iola May Wright; Beattie
 Winnivere Button Wright; Manhattan
 Velda Pauline Wunder; Valley Falls
 Alice M. Wurtz; Clifton
 Marie Bertha Wurtz; Clifton
 Margaret Wyant; Topeka
 Spencer Hastings Wyant; Topeka
 Maurice Ivan Wyckoff; Luray
 Jack Frederic Wynne; Salina
 Mildred Maxine Yenni; Glasco
 Eunice Pearl Youngquist; Topeka
 Herman Wilson Zabel; Westmoreland
 Viola Helene Zech; Home
 Edward Bonjour Zickefoose; Rossville
 Mildred Edna Zimmerman; Newton
 Ruth Virginia Zirkle; Jamestown
 Joe Zitnik; Scammon

Four-week Summer School

JULY 1 TO JULY 27, 1935

GRADUATE STUDENTS

Murlin Clyde Barrows; Webster
Glen D. Beougher; Oakley
Thomas Glen Betts; Wellsville
Hale H. Brown; Washington
Oren Emery Campbell; Ellis
Elery L. Collins; Parker
Leonard Elden Croy; Havensville
Vern Oren Farnsworth; Topeka
Ruth Flanders; Ellsworth
Vernett Edward Fletcher; Manhattan
Walter Clare Hulburt; Wichita
Carl Grant Iles; Iola
John Humphrey Kerr; Miltonvale

Clark Carlyle Milligan; Linn
Marion Wesley Pearce; Argonia
Leonard Milton Pike; Goddard
Ernest Lee Raines; Mound City
Paul Wilfred Russell; Mankato
Ralph William Russell; Marysville
*Lester John Schmutz; Wakefield
Hsioh Nien Shen; Yu Yav, China
David Loyd Signor; Effingham
Sam Joseph Smith; Mullinville
Mary Summers; Horton
Clemens Harry Young; Beverly

UNDERGRADUATE STUDENTS

Earl H. Johnson; Norton
John E. Massey; Apple Springs, Tex.
James W. Pryor; Kansas City, Mo.

George Lee Smith; Prairie View, Tex.
Demosthenes White; Crockett, Tex.

* In absentia.

Students by States, Foreign Countries and Kansas Counties

STATES

Arizona	2	Kentucky	1	Ohio	5
Arkansas	3	Louisiana	2	Oklahoma	15
California	6	Maryland	3	Pennsylvania	8
Colorado	8	Massachusetts	2	South Carolina	1
Connecticut	4	Minnesota	5	South Dakota	1
District of Columbia...	1	Mississippi	1	Texas	20
Florida	2	Missouri	57	Utah	1
Georgia	2	Montana	5	Virginia	2
Idaho	1	Nebraska	18	Wisconsin	4
Illinois	16	New Jersey	13	Wyoming	3
Indiana	4	New Mexico	2		
Iowa	5	New York	20		
Kansas	4,002	North Carolina	1	Total	4,246

FOREIGN COUNTRIES

Canada	1	India	1	South Africa	1
Central America	1	Iran (Persia)	1		
China	4	Japan	1	Total	15
Egypt	1	Korea	1		
		Mexico	3	Grand total	4,261

KANSAS COUNTIES

Allen	22	Hamilton	5	Phillips	30
Anderson	17	Harper	25	Pottawatomie	101
Atchison	37	Harvey	36	Pratt	29
Barber	19	Haskell	3	Rawlins	12
Barton	31	Hodgeman	4	Reno	113
Bourbon	15	Jackson	48	Republic	79
Brown	62	Jefferson	33	Rice	48
Butler	53	Jewell	49	Riley	842
Chase	14	Johnson	23	Rooks	10
Chautauqua	2	Kearney	9	Rush	17
Cherokee	11	Kingman	27	Russell	23
Cheyenne	7	Kiowa	15	Saline	89
Clark	14	Labette	25	Scott	7
Clay	83	Lane	4	Sedgwick	103
Cloud	71	Leavenworth	45	Seward	10
Coffey	18	Lincoln	26	Shawnee	156
Comanche	18	Linn	14	Sheridan	11
Cowley	37	Logan	10	Sherman	8
Crawford	20	Lyons	35	Smith	30
Decatur	21	McPherson	36	Stafford	18
Dickinson	105	Marion	32	Stanton	2
Doniphan	12	Marshall	81	Stevens	10
Douglas	17	Meade	6	Sumner	47
Edwards	27	Miami	14	Thomas	17
Elk	11	Mitchell	31	Trego	3
Ellis	14	Montgomery	33	Wabaunsee	45
Ellsworth	28	Morris	47	Wallace	6
Finney	17	Morton	10	Washington	80
Ford	31	Nemaha	43	Wichita	4
Franklin	26	Neosho	23	Wilson	23
Geary	71	Ness	15	Woodson	11
Gove	18	Norton	20	Wyandotte	110
Graham	11	Osage	25		
Gray	5	Osborne	26	Total	4,002
Greeley	5	Ottawa	16		
Greenwood	16	Pawnee	28		

Record of Registration and Degrees Conferred, 1863-1936

Advanced degrees..	Graduated.....	Net total.....	Counted twice....	Graduate.....	Senior.....	Junior.....	Sophomore.....	Freshman.....	Vocational school...	Subfreshman.....	Preparatory.....	Special	Apprentice.....	Farmers' short course.....	Dairy short course..	Dairy Mfg. short course.....	Housekeepers' short course	Summer school.....	YEAR.
.....	.....	107	.....	.....	.....	.....	.....	14	.....	.....	93	.....	.....	.....	.....	.....	.....	.....	1863-'64
.....	.....	113	.....	.....	.....	.....	8	14	.....	.....	90	.....	.....	.....	.....	.....	.....	.....	1864-'65
.....	.....	150	.....	.....	.....	.....	5	28	.....	.....	112	.....	.....	.....	.....	.....	.....	.....	1865.....
.....	5	178	.....	.....	5	.....	7	11	.....	.....	154	.....	.....	.....	.....	.....	.....	.....	1866-'67
.....	.....	168	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1867-'68
.....	.....	170	.....	1	.....	.....	10	11	.....	.....	146	.....	.....	.....	.....	.....	.....	.....	1868-'69
.....	.....	173	.....	.....	.....	.....	.....	13	.....	.....	164	.....	.....	.....	.....	.....	.....	.....	1869-'70
.....	5	194	.....	.....	5	.....	7	22	.....	.....	162	.....	.....	.....	.....	.....	.....	.....	1870-'71
.....	3	202	.....	3	2	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1871-'72
.....	2	*217	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1873.....
.....	5	183	.....	.....	6	.....	14	24	.....	.....	136	.....	.....	.....	.....	.....	.....	.....	1873-'74
.....	2	143	.....	.....	2	.....	10	26	.....	.....	103	.....	.....	.....	.....	.....	.....	.....	1874-'75
.....	5	232	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1875-'76
.....	9	234	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1876-'77
.....	4	150	.....	.....	5	.....	23	42	.....	.....	75	.....	.....	.....	.....	.....	.....	.....	1877-'78
.....	9	207	.....	.....	12	.....	89	89	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1878-'79
.....	7	276	.....	2	11	.....	61	166	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1879-'80
.....	8	267	.....	2	9	.....	48	178	.....	.....	6	.....	.....	.....	.....	.....	.....	.....	1880-'81
.....	9	312	.....	.....	11	.....	50	227	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	1881-'82
.....	12	347	.....	.....	12	.....	60	241	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	1882-'83
.....	17	395	.....	.....	18	.....	92	255	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	1883-'84
.....	.....	401	.....	.....	16	.....	71	271	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	1884-'85
.....	21	428	.....	.....	24	.....	91	273	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1885-'86
.....	21	481	.....	.....	44	.....	100	303	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1886-'87
.....	22	472	.....	.....	27	.....	92	305	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1887-'88
.....	25	445	.....	.....	41	.....	103	266	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1888-'89
.....	27	514	.....	.....	63	.....	105	307	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1889-'90
.....	52	593	.....	.....	53	.....	135	343	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1890-'91
.....	35	584	.....	.....	37	.....	139	336	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1891-'92
.....	39	587	.....	.....	43	.....	110	339	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1892-'93
.....	39	555	.....	.....	42	.....	141	275	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1893-'94
.....	57	572	.....	.....	64	.....	108	276	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	1894-'95
.....	66	647	.....	.....	71	.....	121	353	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	1895-'96
.....	55	734	.....	.....	62	.....	163	321	.....	.....	6	.....	.....	.....	.....	.....	.....	.....	1896-'97
.....	68	803	.....	.....	82	.....	174	316	.....	.....	15	.....	.....	.....	.....	.....	.....	.....	1897-'98
.....	10	870	.....	.....	65	.....	177	306	.....	.....	40	.....	.....	.....	.....	.....	.....	.....	1898-'99
.....	58	1,094	.....	.....	69	.....	163	376	.....	.....	50	.....	.....	.....	.....	.....	.....	.....	1899-1900
.....	60	1,321	.....	.....	74	.....	80	348	.....	.....	79	.....	.....	.....	.....	.....	.....	.....	1900-'01
.....	9	1,396	.....	.....	65	.....	120	396	.....	.....	19	.....	.....	.....	.....	.....	.....	.....	1901-'02
.....	55	1,574	.....	.....	110	.....	141	471	.....	.....	36	.....	.....	.....	.....	.....	.....	.....	1902-'03
.....	102	1,605	.....	.....	114	.....	161	403	.....	.....	33	.....	.....	.....	.....	.....	.....	.....	1903-'04
.....	107	1,462	.....	.....	117	.....	122	289	.....	.....	30	.....	.....	.....	.....	.....	.....	.....	1904-'05
.....	96	1,690	.....	.....	110	.....	145	373	.....	.....	46	.....	.....	.....	.....	.....	.....	.....	1905-'06
.....	119	1,937	.....	.....	133	.....	149	411	.....	.....	48	.....	.....	.....	.....	.....	.....	.....	1906-'07
.....	116	2,192	.....	.....	148	.....	202	450	.....	.....	42	.....	.....	.....	.....	.....	.....	.....	1907-'08
.....	146	2,308	.....	.....	171	.....	243	491	.....	.....	134	.....	.....	.....	.....	.....	.....	.....	1908-'09
.....	141	2,305	.....	.....	170	.....	286	456	.....	.....	87	.....	.....	.....	.....	.....	.....	.....	1909-'10
.....	219	2,407	.....	.....	248	.....	288	533	.....	.....	107	.....	.....	.....	.....	.....	.....	.....	1910-'11
.....	231	2,523	.....	.....	261	.....	288	337	.....	.....	85	.....	.....	.....	.....	.....	.....	.....	1911-'12
.....	4	2,928	.....	.....	268	.....	355	444	.....	.....	129	.....	.....	.....	.....	.....	.....	.....	1912-'13
.....	8	3,027	.....	.....	327	.....	324	516	.....	.....	112	.....	.....	.....	.....	.....	.....	.....	1913-'14
.....	6	3,089	.....	.....	321	.....	383	560	.....	.....	120	.....	.....	.....	.....	.....	.....	.....	1914-'15
.....	18	3,314	.....	.....	401	.....	305	484	.....	.....	175	.....	.....	.....	.....	.....	.....	.....	1915-'16
.....	13	3,340	.....	.....	282	.....	378	422	.....	.....	172	.....	.....	.....	.....	.....	.....	.....	1916-'17
.....	17	2,406	.....	.....	238	.....	294	231	.....	.....	138	.....	.....	.....	.....	.....	.....	.....	1917-'18
.....	7	2,991	.....	.....	201	.....	254	216	.....	.....	199	.....	.....	.....	.....	.....	.....	.....	1918-'19
.....	11	3,376	.....	.....	200	.....	297	224	.....	.....	271	.....	.....	.....	.....	.....	.....	.....	1919-'20
.....	14	3,395	.....	.....	273	.....	318	280	.....	.....	270	.....	.....	.....	.....	.....	.....	.....	1920-'21
.....	28	3,560	.....	.....	422	.....	422	297	.....	.....	221	.....	.....	.....	.....	.....	.....	.....	1921-'22
.....	31	3,626	.....	.....	401	.....	460	1004	.....	.....	163	.....	.....	.....	.....	.....	.....	.....	1922-'23
.....	43	3,812	.....	.....	413	.....	458	1160	.....	.....	161	.....	.....	.....	.....	.....	.....	.....	1923-'24
.....	52	4,031	.....	.....	347	.....	467	1391	.....	.....	139	.....	.....	.....	.....	.....	.....	.....	1924-'25
.....	51	4,019	.....	.....	344	.....	512	1494	.....	.....	89	.....	.....	.....	.....	.....	.....	.....	1925-'26
.....	77	4,083	.....	.....	411	.....	509	1311	.....	.....	71	.....	.....	.....	.....	.....	.....	.....	1926-'27
.....	70	3,878	.....	.....	500	.....	584	1039	.....	.....	88	.....	.....	.....	.....	.....	.....	.....	1927-'28
.....	84	3,879	.....	.....	537	.....	584	1084	.....	.....	57	.....	.....	.....	.....	.....	.....	.....	1928-'29
.....	91	3,987	.....	.....	554	.....	581	1128	.....	.....	70	.....	.....	.....	.....	.....	.....	.....	1929-'30
.....	91	4,045	.....	.....	†432	.....	605	1077	.....	.....	50	.....	.....	.....	.....	.....	.....	.....	1930-'31
.....	119	3,928	.....	.....	528	.....	633	933	.....	.....	54	.....	.....	.....	.....	.....	.....	.....	1931-'32
.....	118	3,359	.....	.....	590	.....	552	666	.....	.....	72	.....	.....	.....	.....	.....	.....	.....	1932-'33
.....	70	2,928	.....	.....	518	.....	520	707	.....	.....	61	.....	.....	.....	.....	.....	.....	.....	1933-'34
.....	52	3,436	.....	.....	557	.....	548	1081	.....	.....	52	.....	.....	.....	.....	.....	.....	.....	1934-'35
.....	72	4,261	.....	.....	391	.....	660	1330	.....	.....	69	.....	.....	.....	.....	.....	.....	.....	1935-'36

† Figures above this column include neither graduate students in summer session, nor undergraduate students pursuing graduate work. * Estimated.

College Registration, 1935-1936

THE DIVISION.	Men.	Women.	Total.
The Division of Agriculture.	589	4	593
Graduate students	34		34
Seniors	91		91
Juniors	119	2	121
Sophomores	125	1	126
Freshmen	211	1	212
Special students	9		9
The Division of Veterinary Medicine.	307	1	308
Graduate students	2		2
Seniors	23		23
Juniors	27		27
Sophomores	45		45
Freshmen (including 107 preveterinary students)	210	1	211
The Division of General Science.	812	492	1,304
Graduate students	72	21	93
Seniors	111	94	205
Juniors	132	105	237
Sophomores	171	111	282
Freshmen	307	141	448
Special students	19	20	39
The Division of Home Economics.		587	587
Graduate students		33	33
Seniors		104	104
Juniors		94	94
Sophomores		140	140
Freshmen		205	205
Special students		11	11
The Division of Engineering.	924	12	936
Graduate students	22		22
Seniors	153	1	154
Juniors	191		191
Sophomores	242	3	245
Freshmen	308	6	314
Special students	8	2	10
Totals	2,632	1,096	3,728
Counted twice	68	30	98
Net totals	2,564	1,066	3,630
The Summer School (1935)	459	530	989
Totals	3,023	1,596	4,619
Counted twice	248	110	358
Net grand totals	2,775	1,486	4,261
The Division of Graduate Study.	236	155	391
Graduate students in regular session	130	54	184
Graduate students in summer school	117	101	218
Counted twice	30	8	38
Net (in summer school only)	87	93	180
Graduate students in absentia (included in above figures)	27	1	28
Seniors carrying graduate work	19	8	27

Degrees Conferred in the Year 1935

DIVISION AND CURRICULUM (OR MAJOR STUDY).	Men.	Women.	Total.
Division of Agriculture (B. S.)	68		68
Agriculture.....	61		61
Milling Industry.....	7		7
Division of Engineering (B. S.)	129	2	131
Agricultural Engineering.....	4		4
Architecture.....	3	2	5
Architectural Engineering.....	9		9
Chemical Engineering.....	11		11
Civil Engineering.....	31		31
Electrical Engineering.....	49		49
Mechanical Engineering.....	22		22
Division of General Science (B. S.)	86	56	142
General Science.....	31	25	56
Commerce.....	30	2	32
Industrial Chemistry.....	11		11
Industrial Journalism.....	5	13	18
Music.....	3	11	14
Physical Education.....	6	5	11
Division of Home Economics (B. S.)		74	74
Home Economics.....		73	73
Home Economics and Nursing.....		1	1
Division of Veterinary Medicine (D. V. M.)	55		55
Veterinary Medicine.....	55		55
Total of undergraduate degrees	338	132	470
Division of Graduate Study (M. S.)	34	13	47
Agricultural Economics.....	4		4
Agricultural Engineering.....	1		1
Agromony.....	3		3
Animal Husbandry.....	1		1
Architectural Engineering.....	1		1
Botany and Plant Pathology.....	1		1
Chemistry.....	2		2
Child Welfare and Euthenics.....		1	1
Clothing and Textiles.....		1	1
Education.....	8		8
Electrical Engineering.....	2		2
Entomology.....	1		1
Food Economics and Nutrition.....		2	2
General Home Economics.....		2	2
History.....	2	2	4
Institutional Economics.....		4	4
Mathematics.....	1		1
Physics.....	1		1
Psychology.....	1		1
Poultry Husbandry.....	1		1
Sociology.....	1		1
Zoölogy.....	3	1	4
Professional Degrees	2		2
Civil Engineer.....	1		1
Flour Mill Engineer.....	1		1
Honorary Degrees	3		3
Doctor of Science.....	1		1
Doctor of Engineering.....	2		2
Total of degrees conferred in 1935	377	145	522

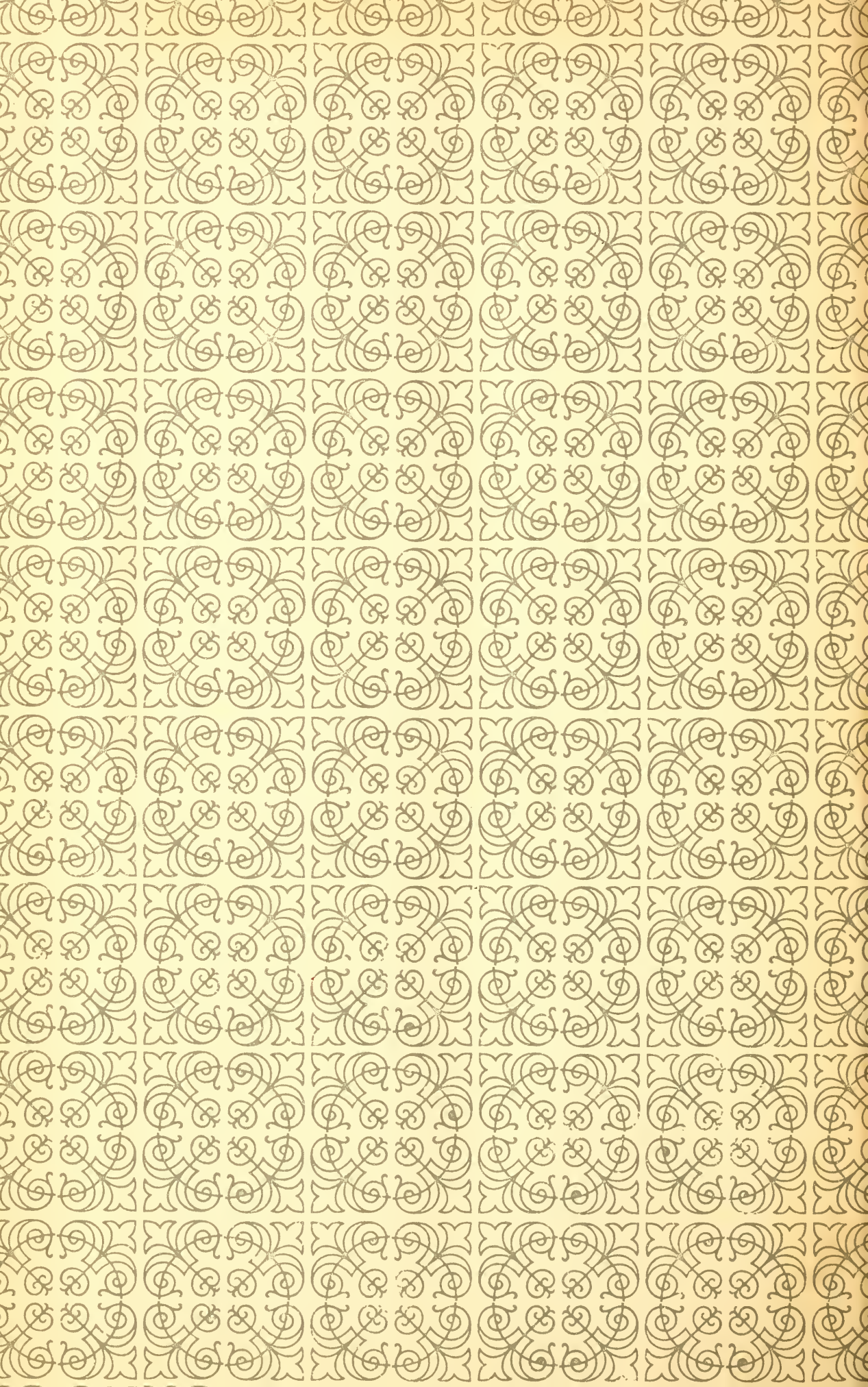
YSIS

		Totals.....	Counted twice.....		Net totals.....		Net Grand Totals.....
	M.	W.	M.	W.	M.	W.	Total.
10	8	199	3	.....	375	199	574
20	9	201	8	2	461	199	660
12	3	255	11	7	572	248	820
17	6	354	41	19	995	335	1,330
.....	6	33	.....	.....	36	33	69
5	2	429	218	102	124	327	451
64	4	1,471	281	130	2,563	1,341	3,904
.....	0	54	.....	.....	130	54	184
.....	7	101	30	8	87	93	180
.....	7	1	27	1	.....	.....	.....
1	9	8	.....	.....	19	8	27
1	3	164	57	9	236	155	391
65	7	1,635	338	139	2,799	1,496	4,295
5	.....	.....	.....	.....	24	10	34
60	.....	.....	.....	.....	2,775	1,486	4,261

CLASSIFICATION	Agriculture.	Agricultural administration.	Landscape Gardening		Milling industry.	Veterinary medicine.
	M.	M.	M.	W.	M.	M.
Undergraduates*						
Senior....	56	28	1		6	
Junior....	70	33	3	2	9	
Sophomore....	*77	30	1		14	
Freshman....	*151	36	2		20	
Special...	9					
Summer sessions	36	10	2		3	
Totals	†309	137	9	2	52	1
Graduates:						
In regular session	34	...	...	...
In summer sessions			...	...
In absentia....			...	...
Undergraduates carrying graduate work	4	3	...	...	1	
Totals	38	3	...	...	1	
Grand totals	†437	140	9	2	53	1
Counted twice.	23	6	2	...	2	
Net grand totals	†414	134	7	2	51	1
Group totals			9			

* One woman. † Two women. ‡ Including 107 preveterinary.





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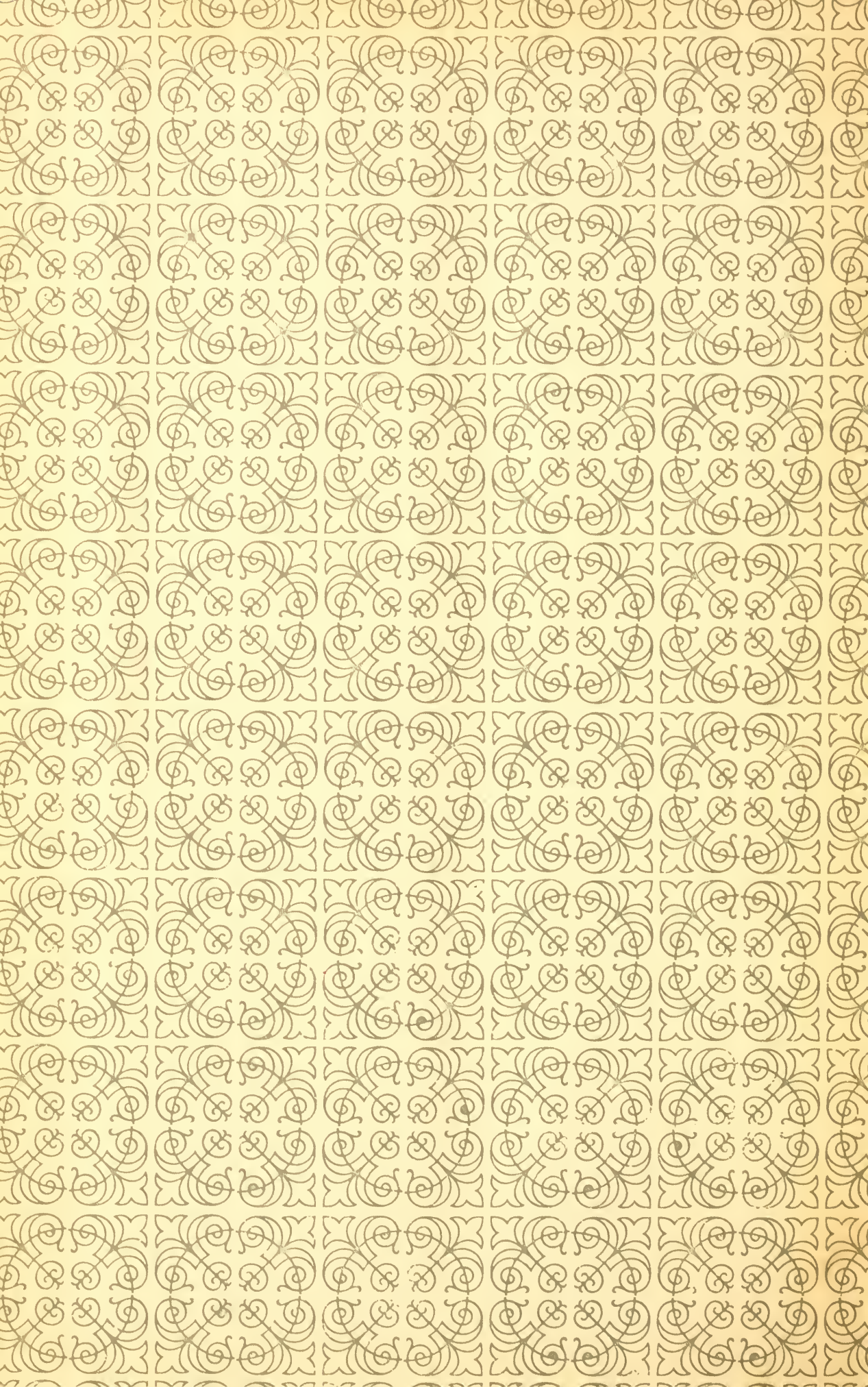
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1935/36

17 May 85

Nov 27 '61 A

Jan 18 62 J



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