## University of ILlinois Annual Register 1915-1916



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## ENVIRONS OF THE CAMPUS, 1915-16

KEY, ALPHABETICAL

| 64. | Chi Psi |
| :---: | :---: |
| 35. | Chinese Club |
| 4. | Church of Christ |
| 22. | College llall Dormitory |
| 70. | Congregational Guild |
| 55. | Cosmopolitan Club |
| 37. | Delta fiamma |
| 40. | Delta Kappa Epsilon |
| 29. | Delta Tau Delta |
| 13. | Delta Upsilon |
| 58. | Gamma Alpha |
| 53. | Gamma Phi Beta |
| 2. | German M. E. Church |
| 16. | Illinois Union |
| 31. | llus |
| 10. | Iris |
| 57. | Kappa Alpha Theta |
|  | Kappa Kappa Gamr |



## KEY, NUMERICAL


54. Sigma Alpha Epsilon
55. Cosmopolitan Club
56. Acacia
57. Kappa Alpha Theta
58. Gamma Alpha
59. Osborne Hall
60. Kappa Kappa Gamma
61. Phi Kappa Psi
61. Phi Kappa Psi
63. Alpha Delta Pi
64. Chi $\mathrm{P}_{\mathrm{si}}$
65. Phi Kappa Sigma
66. Achoth
67. Unitarian Church
68. Zeta Beta Tau
69. Alpha Chi Sigma
70. Congregational Guild

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# University of Illinois 

## ANNUAL REGISTER 1915-1916

General Announcements, 1916-1917
Faculty and Courses, 1915-1916
Students, 1915-1916
©

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& 1915-16 \\
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## CALENDAR 1915, 1916, 1917



# THE UNIVERSITY CALENDAR 

## 1915-1916-1917

FIRST SEMESTER, 1915-1916
Sept. 13-17, Mon. to Fri. Entrance examinations

Sept. 14, Tues.
Sept. 15, Wed.
Sept. 20-21, Mon., Tues.
Sept. 20, Mon.
Sept. 22, Wed., 8 a. m. Instruction begun
Sept. 22-24, Wed. to Fri. Entrance examinations, departments in Chi-
Scpt. 25, Sat.
Sept. 27, Mon.
Sept. 27-30, Mon. to Thurs. Examinations for removal of conditions,
Sept. 30, Thurs.
Oct. 2, Sat., 5 p. m.
Oct. 4, Mon., 4 p. m.
Oct. 6, Wed.
Oct. 7, Thurs.
Oct. 15, Fri.
Oct. 16, Sat.
Oct. 22, Fri.
Oct. 29-31, Fri. to Sun.
Nov. 1, Mon., 5 p. m.
Nov. 16-24
Nov. 18-20, Thurs. to Sat.
Nov. 20, Sat.
Nov. 22, Mon.
Nov. 22-24, Mon. to Wed.
Nov. 24, Wed., 12 m.
Nov. 25-27, Thurs. to Sat.
Nov. 29, Mon., 8 a. m.
12 m.

7 p. m. Examination for exemption from Rhetoric 1
4 p. m. Freshman convocation cago
(P. T. 1a and 9) begun College of Medicine
Quarterly meeting of the Board of Trustees
Scholarship examination for second nominees Registration Days
Registration, School of Pharmacy

Assignments in the Brigade posted (Engineering Building, first floor, west end)
Military drill (Mil. 2) and Hygiene lectures (P T 1a and 9) begun

Registration, College of Medicine
Latest date for rebates in full and for change of study-list without fee
Senate meeting
Registration, College of Dentistry
Registration closes, College of Medicine
Assignment of vacant scholarships in agriculture and household science
Registration closes, College of Deatistry
Latest date for removal of "incompletes"
Alumni hone coming
Latest day for announcement of subjects for all undergraduate and graduate theses
Mining inspection trip
High school conference
Latest date for rebates of one-half fees
St. Louis Symphony Orchestra
Engineering inspection trips
Household science inspection trip
Thanksgiving recess begun, departments in Urbana and College of Medicine
Thanksgiving recess, College of Dentistry Instruction resumed, College of Medicine
Instruction resumed, departments in Urbana

Dec. 3, Fri. Illinois day
8 p. m. Iowa-Minnesota-Illinois debates
Dec. 6, Mon.
Dec. 10, Fri.
Dec. 14, Tues.
Senate meeting
Junior promenade
Quarterly meeting of the Board of Trustees
8 p. m. Christmas concert
Dec. 18, Sat.
Holiday recess begun, School of Pharmacy
Dec. 21, Tues., $5 \mathrm{p} . \mathrm{m}$. Holiday recess begun
$6 \mathrm{p} . \mathrm{m}$. Holiday recess begun, College of Medicine
Dec. 21-23, Tues. to Thurs. Inspection trip, animal husbandry
Dec. 24, Fri. Holiday recess begun, College of Dentistry
Dec. 31, Fri., 5 p. m. Latest day for submission of outlines of theses by candidates for professional degrees in engineering
Jan. 3, Mon., 9 a. m. Instruction resumed, School of Pharmacy and College of Dentistry
1 p. m. Instruction resumed, departments in Urbana and College of Medicine
Jan. 10-22
Jan. 17-29
Tan. 27, Thurs.
Short courses in ceramic engineering and highway engineering

Jan. 31-Feb. 4, Mon. to Fri. Semester examinations, College of Dentistry Short course in business
Jan. 31-Feb. 5, Mon. to Sat. Semester examinations, College of Medicine
Feb. 2-5, Wed. to Sat. Entrance examinations
Feb. 3, Thurs. Semester examinations ended

## SECOND SEMESTER, 1915-1916

Feb. 7, 8, Mon., Tues.
Feb. 7, Mon.
Feb. 9, Wed., 8 a. m.
Feb. 12, Sat.
Feb. 19, Sat.
Feb. 22, Tues.
Feb. 25, Fri.
March 2, Thurs.
March 4, Sat.
March 10, Fri.

March 14, Tues.
March 17, Fri.
March 22, Wed.
March 31-April 3
April 1, Sat., 5 p.m.

April 1-7
April 3, Mon.

Registration Days
Senate Meeting
Instruction begun
Lincoln day
Last day for rebates in full and for change of study-list without fee
Washington day
Military ball
University day
Annual band concert
Latest day for removal of incompletes and for removal by seniors of first semester failures
Annual meeting of the Board of Trustees
Midwest League debate
New York Symphony Orchestra
Chemistry inspection trip
Latest day for filing of completed theses by candidates for professional degrees in engineering
Geology inspection trip
Senate meeting

April 8, Sat., 5 p. m.
April 10, Mon.
April 12, Wed.
April 18, Tues.
April 18-21, Tues. to Fri.
April 20, Thurs., 12 m .
April 20-26
April 23-30
April 24, Mon., 8 a. m.
April 25, Tues., 12 m.
April 26, Wed.
May 5, Fri.
May 10, Wed.
May 11-13, Thurs. to Sat.
May 12, Fri.
May 13, Sat.
12 m.

May, between 15 and 31

May 29, Mon.
May 30, Tues.
June 1, Thurs.,

June 2, Fri.
June 3, Sat., 12 m .

June 5, Mon.
June 8, Thurs.
June 9, Fri.
June 10, Sat.
June 11, Sun.
June 12, Mon.
8:30 p. m. Senior ball
June 13, Tues.
June 14, Wed. course

Annual inspection

Military Day theses

Senate meeting Medicine

Class day
Alumni day

Latest day for rebates of one-half fees
Animal husbandry inspection trip
New York Philharmonic Orchestra
Railway inspection trip
Annual meeting of American Chemical Society
Easter recess begun
Geology inspection trip
Easter recess, School of Pharmacy, longer
Instruction resumed, College of Medicine
Instruction resumed
Commencement, School of Pharmacy
Northern Oratorical League contest
Minneapolis Symphony Orchestra
Public School art exhibit
Interscholastic oratorical contest
Interscholastic athletic meet
Latest day for the receipt by the Dean of the Graduate School of certified copies of doctors' theses
Hazelton prize drill
Company competitive drill
Final examinations begun, Colleges of Medicine and Dentistry

Final examinations begun
Latest day for acceptance of undergraduate
Class day, College of Dentistry
Latest day for receipt by the Dean of the Graduate School of certified copies of masters' theses

Final examinations ended
End of longer course, School of Pharmacy
Class day and alumni meeting, College of
Baccalaureate address

Quarterly meeting of the Board of Trustees
Forty-fifth Annual Conimencement

SUMMER SESSION, 1916
June 19, Mon.
June 20, Tues.
Registration Day
Instruction begun
July 8, 15, 22, 29, Aug. 5, Sat. Entrance examinations
Aug. 10, 11, Thurs., Fri. Final examinations.

FIRST SEMESTER, 1916-1917
Sept. 11-15, Mon. to Fri. Entrance examinations

Sept. 12, Tues.
Sept. 13, Wed.
Sept. 18, 19, Mon., Tues.
Sept. 18, Mon.
7 p. m.
Sept. 20, Wed.
4 p. m.
Sept. 20-22, Wed. to Fri.
Sept. 23, Sat.
Sept. 25, Mon.
Sept. 25-28, Mon. to Thurs. Examinations for removal of conditions, Col-
Sept. 28, Thurs.
Sept. 30, Sat., 5 p. m.
Oct. 2, Mon.
Oct. 4, Wed.
Oct. 5, Thurs.
Oct. 14, Sat.
Oct. 16, Mon.
Oct. 20, Fri., 5 p. m.
Nov. 6, Mon., 5 p. m.
Nov. 17-19, Fri. to Sun.
Nov. 18, Sat., 5 p. m.
Nov. 23-25, Thurs. to Sat.
Nov. 27-29, Mon. to Wed.
Nov. 30, Thurs.
Dec. 3, Sun.
Dec. 4, Mon.
Dec. 8, Fri.
Dec. 12. Tues.
Dec. 19, Tues., 8 p. m.
Dec. 21, Thurs., 11 a. m.
Dec. 30, Sat., 5 p. m.

Jan. 3, Wed., 1 p. m.
Jan. 8-20
lege of Medicine
Quarterly meeting of the Board of Trustees
Scholarship examinations for second nominees
Registration Days
Registration, School of Pharmacy
Examination for exemption from Rhetoric 1
Instruction begun
Freshman convocation
Entrance examinations, departments in Chicago
Assignments in the Brigade posted (Engineering Building, first floor, west end)
Military drill (Mil. 2) and Hygiene lectures (P. T. la and 9) begun

Registration, College of Medicine
Latest day for rebates in full and for change of study-list without fee
Senate meeting
Registration, College of Dentistry
Registration closes, College of Medicine
Registration closes, College of Dentistry
Assignment of vacant scholarships in agriculture and household science
Latest day for removal of "incompletes"
Latest day for announcement of subjects of all undergraduate and graduate theses
Alumni home coming
Latest day for rebates of one-half fees
High school conference
Engineering inspection trips
Household science inspection trip
Thanksgiving day
Illinois day
Senate Meeting
Junior promenade
Quarterly meeting of the Board of Trustees
Christmas concert
Holiday recess begun
Latest day for submission of outlines of theses by candidates for professional degrees in engineering
Instruction resumed
Short courses in ceramic engineering and highway engineering

Jan. 15-27
Jan. 25, Thurs.
Jan. 29-Feb. 2, Mon. to Fri. Semester examinations, College of Dentistry
Jan. 29-Feb. 3, Mon. to Sat. Semester examinations, College of Medicine
Jan. 31-Feb. 3, Wed. to Sat. Entrance examinations
Feb. 1, Thurs. Semester examinations ended

## SECOND SEMESTER, 1916-1917

Feb. 5, 6, Mon., Tues. Registration Days
Feb. 5, Mon.
Feb. 7, Wed., 8 a. m.
Feb. 12, Mon.
Feb. 17, Sat., 5 p. m.
Feb. 22, Thurs.
Feb. 23, Fri.,
March 2, Fri.
March 3, Sat.
March 9, Fri., 5 p. m.

March 13, Tues.
March 31, Sat., 5 p. m.

April 2, Mon.
April 5, Thurs., 12 m.
April 5-11
April 7, Sat., 5 p. m.
April 10, Tues., 12 m .
April 25, Wed.
May 12, Sat., 12 m.

May, between 15 and 31 ,

May 17-19, Thurs. to Sat.
May 18, Fri., evening
May 19, Sat.
May 30, Wed.
May 31, Thurs., 8 a. m.
June 1, Fri., 12 m .
June 2, Sat., 12 m .

June 4, Mon.

Short course in business
Short courses in agriculture and household science
Semester examinations begun
t. Entrance examinations

Senate meeting
Instruction begun
Lincoln day
Latest day for rebates in full and for change of study-list without fee
Washington day
Military ball
University day
Annual band concert
Latest day for removal of "incompletes" and for removal by seniors of first semester failures
Annual meeting of the Board of Trustees
Latest day for filing of completed theses by candidates for professional degrees in engineering
Senate meeting
Easter recess begun
Geology inspection trip
Latest day for rebates of one-half fees
Instruction resumed
Commencement, School of Pharmacy
Latest day for receipt by the Dean of the Graduate School of certified copies of doctors' theses
Hazelton prize drill
Annual inspection
Company competitive drill
Public school art exhibit
Interscholastic' oratorial contest
Interscholastic athletic meet
Military day
Final examinations begun
Latest day for acceptance of undergraduate theses
Latest day for receipt by the Dean of the Graduate School of certified copies of masters' theses
Senate meeting

June 7, Thurs.
June 10, Sun.
June 11, Mon.
June 12, Tues.
June 13, Wed.

Final examinations ended
Baccalaureate address
Class day
Senior ball
Alumni day
Quarterly meeting of the Board of Trustees Forty-sixth Annual Commencement

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[^9]
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(Congress and Honore Streets, Chicago)

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# THE COLLEGE OF DENTISTRY 

## (Harrison and Honore Streets, Chicago)

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## PART I <br> GENERAL INFORMATION

## LOCATION

The University of Illinois is situated in Champaign County, about fifty miles northeast of the geographical center of the State. It is 126 miles south of Chicago, 118 miles west of Indianapolis, 164 miles northeast of St. Louis.

The campus of the University lies just within the corporate limits of the city of Urbana and is bounded on the west by the city of Champaign. The two municipalities form one community of about twenty-four thousand inhabitants. The city halls of the two towns are two miles apart, the campus half way between. The railway, express, telegraph, and telephone services of both cities are available for the University. Mail for the institution itself should be directed to Urbana to insure prompt delivery. The Urbana postoffice maintains a sub-station at the University, located in the Library Building.

## Urivana-Champaign

The cities of Urbana and Champaign are in the heart of the "Corn Belt" and form the business and social center of a rich farming community.

In matters pertaining to health, conditions are good. There is a hospital within three blocks of the campus, in which students may be cared for at moderate expense.

The University has no dormitories, but the number of boarding houses is large, and there are sixty-three residence halls erected by fraternities, sororities, and local clubs.

There are thirty churches, representing eleven denominations, and a number of students' religious associations, leagues, and guilds, including Young Men's and Young Women's Christian Associations.

Under a special State law, the liquor traffic has been barred from all territory within a radius of four miles from the University.

## Railway Connections

The University is connected with neighboring cities in Illinois, including Bloomington, Danville, Decatur, Peoria, and Springfield, and also with St. Louis, by the electric interurban lines of the Illinois Traction System.

It may be reached from Chicago and the north and from points in the south by the Illinois Central Railroad, being on the direct line from Chicago to Cairo and New Orleans. It is joined to the east and the west by the Peoria \& Eastern Division of the "Big Four" route, as well as by the division of the Wabash Railway which connects Kansas City and St. Louis with Detroit and Buffalo.

The station of the Illinois Central Railroad is in Champaign. The Wabash and "Big Four" have stations in both Champaign and Urbana. There are several hotels in Champaign and Urbana within easy reach of the University, the Beardsley and the Inman in Champaign and the Columbian in Urbana being the largest.

## HISTORY

## 1862. The Morrill Land Grant

By this act the national government donated to each state in the Union public land scrip, in quantity equal to 30,000 acres for each senator and representative in Congress, "for the endowment, support, and maintenance of at least one college, whose leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanical arts, $* * * * *$ in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

On account of this grant the State pays the University, semi-annually, interest at the rate of five per cent on about $\$ 610,000$ and deferred payments on land contracts amounting approximately to $\$ 35,000$.

## Location chosen

To secure the location of the University several counties entered into competition by proposing to donate to its use specified sums of money or their equivalent. Champaign County offered a large brick building in the suburbs of Urbana, erected for a seminary and nearly completed, about 1,000 acres of land, and $\$ 100,000$ in county bonds. To this the Illinois Central Railroad added $\$ 50,000$ in freight.

## 1867. Incorporation

The institution was incorporated February 28, 1867, under the name of the Illinois Industrial University. It was placed under the control of a Board of Trustees, consisting of the Governor, the Superintendent of Public Instruction, and the President of the State Board of Agriculture, ex officio members, and twenty-eight citizens appointed by the Governor. The chief executive officer was called the Regent, and was made an ex officio member of the Board and the presiding officer of both the Board of Trustees and the Faculty. (See also 1873 and 1887 below.)

## 1867. Dr. Gregory Regent

On March 12, 1867, John Milton Gregory, LL.D., was elected Regent of the University. On April 1, 1867, Dr. Gregory accepted the position and entered upon his duties. He served as Regent until September 1, 1880.

## 1868. The University opened

The University opened on March 2, 1868. The number of students enrolled was about fifty; the faculty consisted of the Regent and two professors. During the first term another instructor was added, and the number of students increased to 77-all young men.

During the first term instruction was given in algebra, geometry, physics, history, rhetoric, and Latin. Work on the farm and gardens or about the buildings was at first compulsory for all students. In March of the next year, however: compulsory labor was discontinued, save when it was to serve as a part of instruction.

## 1868-9. The first laboratories

During the autumn of 1868 a chemical laboratory was fitted up; and laboratory work in botany was begun the following year.
1870. Pioneer shop instruction

In January, 1870, a mechanical shop was fitted up with tools and machinery, and here was begun the first shop instruction given in any American university. In the summer of 1871 the Wood Shops and Testing Laboratory (burned on June 9, 1900) were erected and equipped for students' shop work in both wood and iron.

## 1870. Women adnitted

On March 9, 1870, the Trustees voted to admit women as students. In the year 1870-71 twenty-four availed themselves of the privilege. Since that time they have constituted from one-sixth to one-fifth of the total number of students.

## 1873. First reorganization of the Board of Trustees

At this time the number of members was reduced from thirty-two (see 1867 above) to eleven-the Governor and the President of the State Board of Agriculture, ex officio, and nine others, who were still appointed by the Governor. Beginning at this time also, the President of the Board has been chosen by the members from among their own number for a term of one year. (See also 1887 below.)
1877. Authority to confer degrees received

According to the original State law, the usual diplomas and degrees could not be granted by the University; certificates showing the studies pursued and the attainments in each were given instead. The certificates proved unsatisfactory to the holders, and in 1877 the legislature gave the University authority to confer degrees and issue diplomas.

## 1880-81. Dr. Peabody Regent

In June, 1880, Regent Gregory's resignation was accepted to take effect September 1, 1880, and Selim Hobart Peabody, A.B., Ph.D., Professor of Mechanical Engineering and Physics, was made Regent pro tcmporc. At the next annual meeting, in March, 1881, he was elected Regent.
1885. Change of name

In this year the General Assembly changed the name of the institution from the Illinois Industrial University to the University of Illinois. 1885. The State Laboratory of Natural History transferred to the University See page 431.
1887. Second reorganization of the Board of Trustees

In 1887 a law was passed making membership in the Board elective, at a general State election, and restoring the Superintendent of Public Instruction as an ex officio member. There are now, therefore, three ex officio and nine elective members. (For the previous organization of the Board see 1867 and 1873 above.)
1887. The Agricultural Experiment Station established at the University

See page 425.

## 1890. Additional Federal endowment

In 1890 the Congress of the United States made further appropriations for the endowment of the institutions founded under the act of 1862 . Under this enactment each such college or university received the first year $\$ 15,000$, the second year $\$ 16,000$, and in each succeeding year a sum larger by $\$ 1,000$ than the amount of the preceding year, until the amount reached $\$ 25,000$; this sum was to be paid yearly thereafter.

## 1891. Dr. Burrill Acting Regent

In June, 1891, Regent Peabody's resignation was accepted, to take effect September 1, and in August Thomas Jonathan Burrill, A.M., Ph.D., Professor of Botany and Horticulture, was appointed Acting Regent. Dr. Burrill served in this capacity until September, 1894.

## 1892. The Graduate School

Beginning with this year, graduate work was undertaken under the name of the Graduate School, but without the organization of a separate faculty.
1894. The Summer Session

The first Summer Session of the University was authorized by a vote of the Trustees on March 3, 1894, and was opened in June of that year.

## 1894. Dr. Draper President

On April 13, 1894, Andrew Sloan Draper, LL.D., was elected Regent. He accepted May 10, 1894. On August 1 his title was changed to President. Dr. Draper entered upon his duties on August 1, 1894. He served until June, 1904. 1896. The School of Pharmacy

On May 1, 1896, the Chicago College of Pharmacy, founded in 1859, became the School of Pharmacy of the University of Illinois.

## 1897. The College of Medicine

Negotiations looking to the affiliation of the College of Physicians and Surgeons of Chicago with the University, which had been going on for several years, were concluded by the Board of Trustees March 9, 1897. Accordingly, the College of Physicians and Surgeons became, on April 21, 1897, the College of Medicine of the University of Illinois. (The College of Medicine was discontinued on June 30, 1912, but was re-opened on February 12, 1913.)
1897. The School of Music

By vote of the Trustees on June 9, 1897, the department of music, which had been reorganized and enlarged in 1895, was erected into the School of Music, with a separate faculty and organization.
1897. The State Water Survey authorized

See page 433.
1897. The Library School

In 1897 the School of Library Economy, which had been established in 1893 at the Armour Institute of Technology in Chicago, was transferred to the University, the Director of that school was appointed Librarian of the University Library, and the Library School was opened.

## 1897. The Collcge of Law

Pursuant to an action of the Board of Trustees, taken December 8, 1896, the School of Law was organized, and was opened September 13, 1897. The
course of study covered two years, in conformity with the then existing requirements for admission to the bar of Illinois. In the following November, however, the Supreme Court of the State announced rulcs relating to examinations for admission to the bar which made three years of study necessary, and the course of study in the Law School was immediately rearranged on that basis. On February 9, 1900, the name of the School of Law was changed, by vote of the Board of Trustees, to College of Law .
1899. The State Entomologist's Office permanently established at the University See page 432.
1900. Courses in Business Administration

In 1900 the General Assembly made an appropriation for the establishment of courses of training for business life, and, in accordance with that action, the Trustees approved the organization of the Courses in Business Administration. (See also 1915 below.)
igor. The Collcge of Dentistry
In accordance with an action taken by the Board of Trustees on March 12, 1901, a School of Dentistry was organized as a depariment of the College of Medicine. The School was opened October 3, 1901. The name was changed to College of Dentistry on April 27, 1905. (The College of Dentistry was discontinued on June 30, 1912, but was re-opened on October 1, 1913.)
1903. The Board of Examiners in Accountancy created

See page 436.
1903. The Engineering Experiment Station established

See page 429.
1904. Dr. James President

On March 9, 1904, President Draper's resignation was accepted, to take effect July 1. On August 23, 1904, Edmund Janes James, Ph.D., LL.D., was elected President. He accepted on August 26, 1904, and cntered upon his duties in the fall of that year.

## 1905. The School of Education

By a vote of April 27, 1905, the Board of Trustees established the School of Education, to provide for the professional training of teachers.
1905. The State Geologieal Survey establishcd

See page 434.
1906. Adams Fund

This fund was created by an act of Congress dated March 16, 1906, and provides for an appropriation of $\$ 5,000$ for the year ending June 30, 1906, and an increase of $\$ 2,000$ a year for five years. The present appropriation to the University under the Adams Act, is, therefore, $\$ 15,000$ a year. Its use is limited to the necessary expenses of original research and experimental work in agriculture.
1907. Nelson Fund

This fund was created by an act of Congress dated March 4, 1907, and carried with it an appropriation of $\$ 5,000$ for the fiscal ycar ending June 30 , 1908, and an annual increase of $\$ 5,000$ for four years. The present appropriation to the University under the Nelson Act is, therefore, $\$ 25,000$ per year. Its uses are identical with those of the Morrill Find.

1906-7. The School of Railway Engincering and Administration
On January 30, 1906, the Board of Trustees created in the College of Engineering a department of railway engineering; on January 22, 1907, supplementing that action, it established the School of Railway Engineering and Administration.
1906-7. The Graduate School organized as a separate faculty
The General Assembly appropriated $\$ 50,000$ for the Graduate School, and the Executive Faculty of that school was organized.

## igIt. The Mill Tax

The General Assembly passed a law providing that in the year 1912, and annually thereafter, the proceeds of a tax of one mill for each dollar of the assessed valuation of the taxable property of the State should be set apart as a fund for the maintenance of the University.

## 19Ir. Cooperative Investigation of Illinois Coal Problems

See page 437.
1912. The Colleges of Medicine and Dentistry discontinued

The Colleges of Medicine and Dentistry were discontinued on June 30, 1912.

## 1913. The Colleges of Medicine and Dentistry reopened

On February 12, 1913, the Board of Trustees accepted the gift of the capital stock of the College of Physicians and Surgeons, donated to the University by the alumni and other friends of medical education in Chicago, and the College of Medicine was reopened.

The College of Dentistry was reopened on October 1, 1913.

## 1913. The College of Liberal Arts and Sciences

In this year the College of Literature and Arts and the College of Science were united to form the College of Liberal Arts and Sciences.

## 1915. The College of Commerce and Business Administration

The Courses in Business Administration, organized in 1900, were erected into a separate College of Commerce and Business Administration.

## EQUIPMENT

## BUILDINGS AND GROUNDS

The land occupied by the University embraces 235 acres, besides a farm of 865 acres. There are at the present time some forty-five buildings on the campus.

## Liberal Arts Group

University Hall (erected 1873) is the "old main building" of the University. It occupies three sides of a quadrangle, and is five stories in height. It is devoted to class rooms and offices.

Lincoln Hall (erected 1911) has a frontage of 230 feet. The exterior is brick, stone, and terra cotta. This building provides for the advanced work of the departments of the classics, English, Romance languages, Germanic languages, history, economics, education, political science, sociology, and philosophy. The first three floors provide, in addition to the ordinary class and consultation rooms, seminar libraries and conference rooms. On the fourth floor are research rooms and two museums, the Museum of Classical Art and Archeology, and the Museum of European Culture.

## General Science Group

Natural History Hall (old part erected 1892; addition 1909) covers a ground area 135 feet by 275 feet. It is occupied by the departments of botany, entomology, zoology, physiology, geology, and mathematics, together with the offices and equipment of the State Geological Survey, and the State Natural History Survey, and the office of the State Entomologist. A fireproof muscum 51 feet by 63 feet in size, equipped with fireproof and dustproof cases, occupies the center of the building.

The Laboratory of Physics (erected 1909) is a three-story fire-proof brick building trimmed with Bedford limestone. The length is 178 feet and the depth of the wings is 125 feet. The lecture room has a seating capacity of two hundred sixty-two. A one-story annex, 78 by 28 feet, contains the ventilating and heating fans and the machine shop of the department. The total available floor area, exclusive of the basement, is about 60,000 square feet. The large laboratories and the recitation rooms are mostly in the west wing. The east wing contains about thirty smaller laboratories for advanced experimental work. The blue print department of the University occupies rooms on the top floor of the building. Gas, distilled water, compressed air and vacuum, and direct and alternating electric currents of a wide range in amperes and in volts are available in all parts of the building.

The Chemistry Laboratory (original structure erected 1901-2; addition 191415) is a brick building. The original structure is of slow burning construction, and the addition, which will have five stories available, fireproof. The total available floor area is about 164,000 square feet. The ground plan is a hollow square, the extreme dimensions of which are 230 feet along the front, and 200 feet along the sides. The center court contains the lecture
amphitheatre, which seats 390 . The side wings of the building contain the general student laboratories, while the center portions of both old and new structures are occupied by offices, class and seminar rooms, library, museums, supply rooms, and graduate research laboratories. The main store room is in the basement under the lecture room. In this building are also located the offices and laboratories of the State Water Survey and the department of bacteriology.

The Astronomical Obstrvatory (erected 1896) is a brick building with extreme dimensions of 75 by 55 feet. It has three wings and is surmounted by a dome 25 feet in diameter. An adjacent building with a 15 -foot dome was erceted in 1914.

The Entomology Building (erected 1905 for the use of the State Entomologist and his staff) is a two-story building 48 by 20 feet, with basement storerooms, and with two insectary wings of greenhouse construction, each 25 by 20 feet. It contains the office of horticultural inspection, a stenographer's room, rooms for the assistant inspectors and insectary assistants, and a large fireproof vault. The glass-covered wings are equipped for experimental entomology and life-history studies.

The Ecological Laboratory (remodeled and reconstructed in 1914 from a residence at 1210 Springfield avenue) is equipped for the experimental study of the relations of animals to environment.

The Botany Ainnc.x (erected 1914) is a greenhouse laboratory covering 5,000 square feet, divided into compartments that are severally provided with devices for controlling humidity and temperature within close limits for exact experimentation in the fields of plant physiology and pathology. To this laboratory is attached a reconstructed two-story dwelling, giving working and class rooms for use in connection with the experiments conducted under glass.

The Vivarium (erected 1915-16) occupies the block south of the Iilinois Traction System tracks, between Wright and Sixth streets, the main facade of the building being toward Healey street. The scheme involves a main building containing eight laboratories, one office, and store rooms, with supplementary greenhouses at each end, and a head house serving two greenhouses, together with two screened houses. The main building is a brick structure, two stories high, connected to the head house by a one story passage from the main corridor. The building is occupied by the departments of zoology and entomology.

## Commerce and Business Administration

The Commerce Building (erected 1912) is a fireproof building three stories high, 153 feet on the front and 60 fect deep, with a one-story annex containing a lecture room 48 feet square. The building has a total floor area of about 29,000 square feet; it provides class rooms, offices, and laboratories for the work in business administration. The exterior first story finish is buff Bedford stone; the second and third stories are of brick with carved stone trimmings and cornice. The roof is of tile, and the interior trim is of dark oak. The Administration Building (see page 56) is a second unit of this building and will eventually be occupied by this College.

## Engineering Group

Engincering Holl (erected 1894) is a four-story building, with a frontage of 200 feet, a depth of 76 feet on the wings and 138 feet on the center, and a
floor area of 47,000 square feet. The first and sccond foors are occupied by the offices and recitation rooms, and the instrument and drafting rooms of the departments of civil engineering and municipal and sanitary engineering. The engineering lecture room, on the second foor, las a seating capacity of two hundred twenty-five. The third floor is occupied by the offices of the Dean of the College of Engineering and Dircctor of the Engineering Experiment Station, and by offices, recitation, and drafting rooms of the department of mechanical enginecring. A portion of the third floor and all of the fourth floor are occupied by the department of architecture.

The Electrical Engineering Laboratory (erected 1898) is a two-story brick Luilding with floor area of 18,000 square feet. The basement contains the departmental shop, the storage battery room, the electric furnace room, and rooms for electrical research. The first floor contains the undergraduate laboratory, the instrument room, the high potential laboratory, and the drafting, lecture, and recitation rooms. The second floor contains the photometric laboratory, the offices, the departmental library, and a room used by the Electrical Engineering Society.

The Mechanical Engineering Laboratory (erected 1905) is a brick building with a frontage of 120 feet, a total depth of 182 fcet, and a floor area of 24,000 square feet. The front section is two stories high, and contains offices, lecture and computation rooms, and an instrument room. Back of this are three bays. The middle bay is provided with a concrete testing floor and a 10 -ton threemotor traveling crane of 38 -foot span. The north bay contains a 5 -ton traveling crane and is used for laboratory work in connection with the departments of civil engineering and theoretical and applied mechanics.

The Laboralory of Applied Mechanics (erected 1901-2) is a brick building having a floor area of 16,000 square feet. The front part contains the materials testing laboratory, and the rear wing the hydraulics laboratory.

The Ceramics Laboratory (erected 1910) is a two-story brick building in which are provided a general laboratory, plaster room, poticry room, machine room, drawing room, library, recitation rooms, chemical laboratory, and officc.

The Ceramics and Mining Laboratory (crected 1912) is a one-story building forming a wing connected with the Ceramic Engineering Building, and having a floor area of 11,200 square feet. It contains a kiln and furnace room, having an area of 4300 square feet, a mining engineering laboratory of 3600 square feet, and a chemistry laboratory for the department of mining engineering. There are also offices and class rooms for the department of ceramic engineering, and a Mine Rescue Station, equipped and arranged for training men in the methods of mine rescue work.

The Coranic Engincering Building (erected 1915-16) is a three story structure, $188 \times 65$ feet, of fireproof construction, built of texture brick and polychrome terra cotta. The front of the building is decorated with colored tile panels. The roof is of Spanish tile, and the floor of the halls and corridors of clay tile. The structure is intended to present modern achievement in the use of ceramic structural materials. The third foor is occupied by the State Geological Survey and about one-third of the first floor by the department of applied mechanics. The main portion of the building is utilized by the recitation rooms, laboratories, and offices of the department of ceramic engineering.

The Locomotive Testing Laboratory (erected 1912) is a fireproof building with brick walls, 117 feet long and 42 feet wide, connected by a spur with the Illinois Traction System tracks. It houses a locomotive testing plant, which consists of supporting wheels on which rest the drivers of the locomotive to be tested, a dynamometer to which the locomotive drawbar is attached, and which measures the tractive force exerted by the locomotive, water brakes for absorbing the power developed by the locomotive, and other auxiliary apparatus. The exhaust gases pass through a "transite" (or asbestos board) duct to a large fan which forces them through a reinforced concrete cinder separator; the separator removes the cinders and discharges the gases into the air through 2 brick stack eight feet in height.

The Transportation Building (erected 1912) is a three-story fire-proof building of brick trimmed with stone. The dimensions of the building are $65 \times 189$ feet and the total floor area is 34,225 square feet. The first and second floors of the building are occupied by the departments of railway and mining engineering, and the third floor by the department of general engineering drawing.

The Metal Shops (erected 1902) occupy a one-story brick building with a floor area of 12,000 square feet, containing four office rooms, a machine shop, and a forge shop. The machine shop is 48 by 140 feet. Power is supplied by a 20 -horsepower electric motor. A 3-ton traveling crane of 10 foot span covers the center of the floor for the entire length.

The Wood Shop (erected 1901-2) and the Foundry (added 1904) occupy a brick building which has a floor area of 16,000 square feet. The part of the building devoted to the wood shop contains a bench room, lathe room, machine room, and various smaller rooms for lectures and exhibition purposes. The part devoted to the foundry has a molding floor $35 \times 80$ feet, traversed by a 5 -ton traveling crane, and a basement room for the storage of materials.

## Agricultural Group

The Agricultural Building (erected 1900) consists of four separate structures, built around a court and connected by corridors. The court was enclosed in 1912 and divided into five large class rooms. The main building, three stories in height, contains offices, class rooms, and laboratories for the departments of agronomy, animal husbandry, dairy husbandry, and horticulture; the chemical laboratory of the Experiment station; administration rooms; and assembly room (Morrow Hall) with a seating capacity of 500 . The other three buildings are two stories high; one is for dairy manufactures, one for farm crops, and one for class rooms and laboratories. These buildings are of stone and brick, roofed with slate, and contain 113 rooms and a total floor space of about two acres.

The Agronomy Building (erected 1904-5) is a brick and slate structure 50 by 100 feet. It contains a field laboratory and storage room for crop work.

The Farm Mechanics Building (erected 1906-7) is a three-story brick structure, containing class rooms, offices, lecture rooms, drafting room, library, laboratories, and tool and storage rooms. The third floor, which is reached by an elevator, furnishes storage room for the greater part of $\$ 16,000$ worth of farm machinery, lent the College by various manufacturing companies and used for laboratory work. The facilities afforded by this building, with its equipment, make possible the assembling, testing, and adjusting of all the important machines used in farm operations.

The Stock Pavilion (erected 1913) is a fireproof building 54 feet high on the front and 148 feet deep with circular ends 92 feet in diameter and 20 feet high. The total ground area is 30,000 square feet, and the show arena is 216 feet long and 65 feet wide. Seats of concrete provide accomodations for 2000. Arrangements are to be made providing for a division of the arena into three parts, giving three separate judging rooms for instructional purposes. The building also contains class rooms and offices. Stabling will be provided in a separate structure. The exterior is of brick and terra cotta, renaissance in design, the frieze being enriched with medallions of animal heads.

The Agronomy Greenhouse (erected 1900, rebuilt 1912) consists of two glass structures covering a total floor space of 6500 square feet, and a service building equipped with research and photographic laboratories.

The Agronomy Barn (erected 1915) is a wooden structure 36 by 70 feet, designed as a service and storage building for the field work of the department of agronomy.

The Animal Husbandry Cattle Feeding Plant has a capacity for feeding 150 steers at a time. It consists of open and closed sheds with paved lots adjoining, with a storage barn 44 by 72 feet and an experimental silo.

The Beef Cattle Building (erected 1904-5) is a one-story structure of brick and slate, trimmed with stone, 217 feet across the front, with a wing at either end 33 by 49 feet; the central portion rises two stories and is used for the storage of feed. Other portions of the building are used as quarters for the breeding herd, and will accommodate about 100 head of cattle.

The Sheep Barn is a wooden structure consisting of a main barn 36 by 90 feet, and a shed, opening to the south, 25 by 100 feet in size. A 6 -foot aisle, lined by pens on each side, runs through the center of the barn. This building besides accommodating the University flock is used for experimental work. Its location and construction insures dry footing and ample light and ventilation throughout the year.

Other buildings for the accommodation of live stock are the horse barn, the piggery, and two large barns on the South Farm.

The Experimental Dairy Barns (erected 1912) comprise a round barn 70 feet in diameter with a reinforced concrete silo in the center, a semi-detached rectangular structure 40 by 70 feet with a Grout silo adjacent, and a small dairy house and shop 26 by 32 feet. The barns are of frame construction on brick walls with solid floors of the mill type of construction, and contain feed rooms, hay lofts, and other accommodations for the experimental dairy herd. The dairy house is of frame construction, two stories in height, and contains office, shop, coal room, dairy room, and four sleeping rooms for employees.

The Cattle Feeding Plant (erected 1915-16) is of brick and wood construction, located on the axis of Fourth street, south of the "Farm Lanc". The lower part is a fireproof structure, 300 feet long, open to the south. The feeding lots are paved with brick and extend out some 30 feet from the building line. The plant is used as a storage place for feed for the animal husbandry department, and the upper stories are constructed as an elevator with large grain bins, where several tons of grain can be elevated, preparatory to grinding, shipping, or feeding. In connection with the plant is a corn crib of the capacity of 12,000 bushels. The four silos to the north are $16 \times 70$ and open into the feed room of the plant. They are of three different materials: tile, concrete, and brick.

The Genetics Building (erected 1915-16) is a one-story brick structure (located on Farm Lane and Mathews Avenue) housing the laboratories, offices, and animal rooms of the genetics department of the Agricultural College. The work carried on in this building is done principally by graduate students.

The Horticuliure Building (erected 1904-5) is a structure of brick and slate trimmed with stone, approxinately 50 by 100 feet in size. It is used as a field laboratory for horticultural tests, and contains sorting rooms, storage rooms, and a laboratory for the mixing of spraying materials and other operations in connection with the horticultural work.

The Horticulture Greenhouse Group (erected 1912-13) includes (1) a floricultural group and (2) a vegetable and plant breeding group.
(1) The Floriculture Greenhouse Group (erected 1912-13) consists of a two-story and basement service building 93 by 37 feet, and the following glass structures: four houses each 105 by 28 feet, three houses each 105 by 35 feet, one corridor house 139 by 10 feet, one storage house 50 by 12 feet, and a palm house 80 by 40 feet. The service building is of hollow tile and cement construction, and contains laboratories, lecture room, herbarium room, offices, and seminar room, as well as potting, storage, and work rooms.
(2) The Vegciable and Plant Breeding Greenhouse Group (erected 191213) consists of a glass house for vegetable growing 105 by 28 feet, two houses for plant breeding each approximately 80 by 30 feet, a wire house 80 by 30 feet, and a two-story and basement service building 82 by 36 feet, containing laboratories, work rooms, class rooms, offices, and storage rooms. The type of construction of this building is the same as that of the floriculture service building.

## Law Building

The Law Building (erected 1878; remodeled 1902 and 1912) is the second oldest building in the University group. It has two stories and a basement. The upper floor contains the Law Library, the students' conference room, the private offices of the members of the law faculty, and the Moot Court Room, a model court room with a seating capacity of four hundred. On the main floor are the recitation rooms, the Dean's offices, and the faculty room. In the basement are the lockers, the students' reading room, and a court room for the Law Clubs.

## Buildings for General University Use

The Administration Building (erected 1914-15) is a three-story and basement fireproof building of brick and stone. It is 153 feet long and $661 / 2$ feet deep with a one-story annex, 48 feet by 42 feet, with a total floor area of 36,000 square feet; it contains the rooms of the Board of Trustees and the offices of the President, the Registrar, the Comptroller, the Supervising Architect, the Dean of Men, the High School Visitor, the Adviser to Foreign Students, and the Alumni Association, and the Information and Stenographic Bureau. This building is the second unit of the Commerce Building, and will eventually be occupied by that College.

The Litrary Building (erected 1896-7; an addition to the stack room erected 1914) is modern Romanesque in style, is built of Minnesota sandstone, and measures 167 by 141 feet, with a tower 132 feet high. The first floor, or
basement, contains the rooms of the catalog and order departments, the bound newspapers, and the University Station Postoffice. The second, or main floor, contains the general reference room, the periodical reading rooms, a small conference room, and the delivery room, which opens into the second story of the stack. The third foor contains the study room, lecture rooms, and office of the Library School, faculty study room, and the office of the librarian and assistant librarian. The five-story look stack is a rear wing to the building, separated from it by a fireproof wall. The delivery room is open to the roof and is lighted by a dome of art glass; the luneties are decorated with frescoes symbolic of the four older colleges of the University-Literature and Arts, Science, Agrictilture, and Engineering.

The Auditorium (erected 1007 - 8 ) is a brick and stone building for general meeting purposes. It contains an auditorium seating about 2,200, a memorial vestibule, and a four manual organ. Ali general University exercises and convocations are held in this building.

The Men's Gymnasium (erected 1901) is a three-story buiding of stone and pressed brick, 100 by 150 feet. On the first floor there is a swimming pool, 26 feet wide, 75 feet long, and 8 feet deep at the lower end, lined with white enamel bricks. This floor contains also the general locker room, which is fitted up with all-metal lockers, and with shower bath, and stean laths; rooms for the University athletic teams; a room for visiting teams; a special dressing room for members of the faculty; and offices for the physical director and the instructors in athletics. The entire second floor is one room, fitted up with modern appliances for gymnastic exercises. The third floor contains an elevated running track, 15 laps to the mile, lanked on the turns to secure speed and comfort in running.

The Gymnosium Annex (erected in 1889-90) has a clear foor space of 15,000 square feet in one hall.

The Armory (erectad 1914-15) comprises a dinil room with a clear area of $200 \times 400$ feet and a height of 98 feet at the center, the roof being carried by fourteen three-hinged steel arches. The sides are of hollow tile and the ends, supported by columns, are of steel, glass, tile, and concrete, with wood frames and sashes. The drill foor is of sufficient area to permit the maneuvering of an entire battalion of the cadet lutigade. Provision has been made for the addition of a balcony around the drill fioor with seats for 3,000 and for the addition of three-story facades along the sides flanked by towers at each end. This will provide space for company rooms, locker roons, shooting tubes, and class rooms.

The Woman's Building (erected 1905; addition 1912) is in the new England colonial style of architecture, of reddish brown bric', with white stone trimmings. The central part of the structure is the wonen's gymmasium. On the lower floor there are swimming tank, lockers, dressing rooms, and baths. The unper floor is devoted to the main gymmasimm, which is 92 by 50 feet. The north wing of the building is given to the department of household science, and the soutly wing provides rooms for the social life of the women students. The addition is a three-story fireproof building with basement. It is 200 feet long on the front and 83 feet on each connecting wing, having $\$ 3,000$ square feet of foor area. It has a large colonnade with towers on the front and two smaller colonnades on the north and south of the inner court. The addition is similar to the old building in finish and supplements the working space of the depart-
ments using it. It has two halls for literary societies and a modern flat on the upper floor, and an institutional kitchen and large dining room on the second floor. There are also offices for the Dean of Women and the Director of the Courses in Household Science, laboratories, social rooms, and space for the expansion of gymnasium work.

## The President's House

The President's House (erected 1896) is a three-story frame building, in the colonial style. The first story is designed primarily for entertaining; large reception and dining parlors are so arranged as to open together into a central corridor. The second and third stories provide library and living rooms.

## Service Buildings

The Central Heat and Power Plant (erected 1902; addition 1910) is 55 by 120 feet. It contains boilers aggregating 1,800 horsepower. A supplemental boiler and power plant, designed ultimately to carry the load of the present station, is equipped with boilers of 1,000 horsepower. These two stations furnish steam for heating and power to all buildings on the campus. A power plant containing a 250 -kilowatt Allis-Chalmers direct connected steam engine and dynamo, a 125 -kilowatt direct connected Westinghouse engine and generator, and a 100 -kilowatt Curtiss turbo-generator, together with the accessories necessary to a complete power station, supplies current for light and power to all parts of the grounds. The pipe lines of the heating system and the circuits for distributing electricity are carried from the central plant to the several buildings through brick and concrete tunnels and clay and concrete conduits. Altogether there are now 6,275 feet of tunnels and 3,800 feet of conduit for the distribution of steam, and 7,000 feet of conduit for the distribution of electricity. The new boiler and power plant provides temporary quarters for the electric test car of the department of railway engineering.

The Pumping Station of the University water-works is a brick building, 38 by 73 feet, connected with the central heating station. Four 8 -inch wells, 145 feet deep, and one 12 -inch well 148 feet deep supply the University with water. A masonry reservoir provides for a fire-reserve supply. The pumps, tanks, and connections are arranged to give opportunities for experimental work, and also to vary the working conditions in the adjacent hydraulics laboratory. In this building is kept the equipment of the University fire department, including an electric automatic hose and chemical wagon.

## BUILDINGS IN CHICAGO

The College of Medicine Building, in which are housed all the departments except that of anatomy, is a brick and stone structure two hundred feet long by one hundred and ten feet deep and five stories high, fronting on four streets. The building contains three lecture rooms with a seating capacity of two hundred each; a clinical amphitheater with a seating capacity of over three hundred; an assembly hall with a seating capacity of seven hundred; besides recitation rooms. It also contains laboratories for physiology, chemistry, materia medica, therapeutics, and microscopical and chemical diagnosis, each accommodating from fifty to one hundred students at a time.

A three-story annex to the main building contains the laboratories used by the departments of pathology, bacteriology, and chemistry. All of these
laboratories have outside light and are furnished with work tables, desks, lockers, and the necessary apparatus. There is a supply of microscopes, lenses, and oil immersions, and a projection apparatus for the illustration of lectures by means of steropticon views.

The College of Dentistry is housed in a six-story building containing three amphitheaters, recitation rooms and lecture rooms, laboratories, dissecting rooms, a clinical operating room, and an infirmary. A parlor is provided for the use of the women students. This building adjoins that of the College of Medicine.

The School of Pharmacy leases the four upper floors of a brick structure five stories in height, having a frontage of fifty feet on Michigan avenue and one hundred and seventy feet on Twelfth street.

## LABORATORIES

The University maintains in the departments at Urbana thirty-one laboratories. The following list shows the buildings in which these are located:

## General Science Laboratories

Botany-Natural History Hall
Chemistry-Chemical Laboratory
Entomology-Natural History Hall
Geology-Natural History Hall
Physics-Laboratory of Physics
Physiology-Natural History Hall
Psychology—University Hall
Zoology-Natural History Hall

## Engineering Laboratorics

Cement-Mechanical Engineering Laboratory
Ceramics-Ceramics Laboratory
Electrical Engineering-Electrical Engineering Laboratory
Foundry-Wood Shop
Forging--Metal Shops
Hydraulics-Laboratory of Applied Mechanics
Locomotive-Locomotive Laboratory
Machine Construction-Metal Shops
Materials Testing-Laboratory of Applied Mechanics
Mechanical Engineering-Mechanical Engineering Laboratory
Mining-Mining Engineering Laboratory
Mine Dust and Gas-Natural History Hall
Roads-Mechanical Engineering Laboratory
Woodworking-Wood Shop

## Special Research Laboratories

Agricultural Experiment Siation-
Agricultural Building
Bacteriological laboratory
Chemical laboratory
Physical laboratory

Animal Husbandry-
Genetics Laboratory
Geology-
Laboratory of economic geology
State Entomologist's Officc-
State Laboratory of Natural HistoryState Watcr Survey-

Laboratory for sanitary water analysis
Zoology and Entomology-
Research laboratory

Genetics Building
Natural History Hall
Entomology Building
Natural History Hall
Chemical Laboratory
Vivarium

## LIBRARIES <br> (For the Library Staff see page 33.)

The University Library includes all the boolss belonging to the colleges and schools of the University which are situated in Urbana and also the libraries of the College of Medicine and the School of Pharmacy in Chicago.

On December 1, 1915, the contents of the several libraries were as follows: In Urbana: Volemes Pamphlets Maps

Gencral library, including departmental collections .......................... 321,097 36,200 1,752
State Laboratory of Natural History libraty $8,238 \quad 39256 \quad 82$
State Geological Survey library....... 1,700 4,500 1,017 In Chicago:

| College of Medicine library. | 15,472 | 3,000 |
| :---: | :---: | :---: |
| Pharmacy library | 2,100 | 600 |
| Total in the University | 343,607 | 83,566 |

The Library is housed, for the most part, in the Library building, and is for the use of the whole University. The officers of instraction and administration of the University, the graduate students, and the members of the senior class have direct access to the shelves; other students may have this privilege upon the recommendation of their instructors. All students have the direct use of 10,700 volumes in the reading rooms, and in addition advanced students have the use of the seminar libraries. Over 3,000 periodicals are currently received.

As a part of the Litrary are included several special collections: The University of Illinois collection, including printed material illustrating the history of the University: about 300 volumes. College Publications collection, comprising the catalogs, announcements, reports, studies, etc., of other educational institutions: about 5,200 volumes. Thesis collccion, a complete file of the original copies of the theses presented for graduation from the University of Illinois, bound and filed by ycars: 2,100 volumes. The Collections of School Reports, a catalogued collecion of school reports, courses of study, and other documents published by public school authorities throughout the United States. The Dizatzko collcction of Library Economy, bought in 1905, the entire library of Karl Dziatzko, librarian of Göttingen University: 300 volumes, 250 pamphlets. The Dittcnberger Collection of the Classics, bought in 1907, the entire library of Wilhelm Dittenberger, professor of Classical Philology in the University of Halle : 5,600 items. The Heyne collection purchased by the University
in 1909, the philological library of Professor Moritz Heyne of the University of Göttingen: about 5,000 items, principally on German philology and literature. The Karsten collection, principally on French and German philology and literature, the library of the late Professor Gustaf E. Karsten, presented by Mrs. Eleanor G. Karsten. The Gröber collection, purchased in 1912, the entire library of the late Professor Gustav Gröber, of Strasburg: 6,300 titles, principally on the Romance languages. The Vaflen collection, purchased in 1913, the entire classical library of the late Professor Johannes Vahlen, of Berlin: 10,000 volumes. The Aron collection, purchased in 1913, the pedagogical library of the late Dr. R. Aron, of Berlin: 20,000 volumes. The Carl Martin James collection, about 1,000 volumes relating to statistics and similar subjects, presented in 1915 by President Edmund J. James. The D. C. Greene collection, presented in 1915 by Professor E. B. Greene: 219 volumes of books and newspapers relating to Japati.

A number of seminar and departmental collections are maintained in various buildings on the campus, including the sis seminars in Lincoln Hall; these libraries do not necessarily contain all the books in the respective subjects, but are in most instances reference collections for the use of graduate students and advanced undergraduate students in the departments using the respective buildings. The principal departmental libraries and reading rooms are the following:

| Name of Library | Location | Volumes |
| :--- | :--- | ---: |
| Philosophy, Psychology, and Education | Lincoln Hall | 10,800 |
| Classics | Lincoln Hall | 15,800 |
| Modern languages | Lincoln Hall | 19,700 |
| English | Lincoln Hall | 16,500 |
| History and Political Science | Lincoln Hall | 21,800 |
| Economics and Sociology | Lincoln Hall | 17,200 |
| Natural History | Natural History Building | $* 19,700$ |
| Law | Law Building | 19,000 |
| Commerce Reading Room | Commerce Building | 1,300 |
| Architecture | Engincering Building | 3,600 |
| Agriculture Reaing Room | Agricultural Building | 5,300 |
| Chemistry | Chemistry Building | 5,000 |
| Physics | Physics Building | 1,100 |
| Mathematics | Natural History Building | 3,600 |
| Railway Engineering and Mining | Transrortation Building | 1,000 |

Mason Library of Western History. The library of western history collected by Edward G. Mason, Esq., long president of the Chicago Historical Society, is in the Public Library of the city of Champaign, and is accessible to students in the University.

## Library Regulations

The Getneral Library is primarily for free reference use; any student or citizen of the State may use the books in the general reading rooms. The privilege of drawing books for use outside the building is accorded to all officers of instruction and government, to all registered students, and to other accredited persons. Books not reserved for classes may be borrowed for lome use for two weeks and may be renewed for two weeks more if not specially restricted or called for. All books are subject to recall at any time when necded for university work.

[^10]General reference books, books reserved for classes, all general periodicals, and certain other groups of books are to be consulted in the reading rooms only. They may not be loaned from the Library except when the reading rooms are closed. They must then be returned by the time the Library next opens.

Books from the stack which are not returned on time are subject to a fine of two cents a day. Books from the reference, reserve, and periodical shelves, as well as some special collections, are subject to a fine of twenty-five cents for the first hour and five cents for each additional hour if kept overtime. Books recalled for university work must be returned at once upon receipt of the notice. If not returned within two days after notice is mailed a fine of twentyfive cents a day is charged. All books lost or damaged must be replaced or paid for. Books not at the time needed in Urbana, or not subject to special restrictions, may be loaned for a limited period to other libraries in the State, for the use of students.

Hours of Opening. The General Library is open week days during the general sessions of the University, from 7:45 a. m. to $10 \mathrm{p} . \mathrm{m}$., and on Sundays from $2 \mathrm{p} . \mathrm{m}$. to $6 \mathrm{p} . \mathrm{m}$. During the Summer Session, the Library is open from $7: 45 \mathrm{a} . \mathrm{m}$. to $10 \mathrm{p} . \mathrm{m}$. on week days, but is not open on Sundays. During the summer vacation the Library is open from $9 \mathrm{a} . \mathrm{m}$. to 12 m . Permits may be given for use at other hours. The Library is regularly closed on New Years', Independence, Labor, Thanksgiving, and Christmas days. The hours of opening of the departmental libraries differ somewhat from those given above.

## MUSEUMS AND COLLECTIONS

College of Liberal Arts and Sciences

## Liberal Arts Group

Art.-A collection of casts, photographs, and engravings presented to the University in 1876 by citizens of the community has, for want of a suitable gallery, been placed in different buildings on the campus. Eight large statues are in the Auditorium foyer. Numerous pieces of this collection are now in the studios of the department of art and design in University Hall, and others are used to decorate the corridors and class rooms of University Hall, Lincoln Hall, Natural History Hall, and the Library. A collection of eighty-one German and Japanese prints purchased by the department of art and design from the St. Louis Exposition in 1905 is displayed in the rooms of the department of art and design.

Other collections of value to art students, consisting of a number of casts of Moorish, Spanish, and German ornament and miscellaneous casts, models, prints, and drawings, are placed in the studios and corridors of the department of art and design.

Classical Archeology and Art.-This museum is located in Rooms 402, 404, and 406 Lincoln Hall, and contains casts and photographs of works of Greek and Roman sculpture; miscellaneous originals and models of Babylonian, Greek, and Roman antiquities; and many objects from the finds of the Egypt Exploration Fund, received through the generosity of Mr. W. G. Hibbard, Jr., of Chicago; museum coins; about 30 Greek papyri; Babylonian tablets; and 1020 mounted photographs of historic sites and archeological remains in Greece, Italy, and other parts of the ancient world. Over 1,600 slides belonging to the
department of the classics are also available for illustrative purposes. The museum is open on Sunday, Monday, Wednesday, and Friday afternoons.

Education.-In Room 417 University Hall is a collection of illustrative material from the manual training departments of various schools; photographs of school buildings; drawings and constructive work by pupils in the public schools; and the nucleus of a collection of apparatus for the school laboratory. It is planned to gather here particularly materials that are illustrative of the development of public schools in Illinois.

European Culture.-The Museum of European Culture is in the north wing of Lincoln Hall. The collection consists of casts of Romanesque, Gothic, and Renaissance sculpture; color reproductions of masterpieces of painting; originals and facsimiles of medieval manuscripts, and early printed books; early maps of the world; peasant costumes shown in full size and in small costume manikins; models of ships; theater models and prints of theaters and actors; replicas of seals; reproductions of prehistoric antiquities, of early ivory carving, of runic inscriptions, of early musical instruments, and of arms and armor. The museum is open on Sunday, Monday, Wednesday, and Friday afternoons.

## Science Group

Botany.-The herbarium contains about 85,000 sheets of mounted specimens. It is fairly representative of the higher plants and fungi of Champaign County and of the State, and forms a useful collection for the general flora of the United States. Through acquisition of the herbaria of the late Dr. Frederick Brendel of Peoria, the late Dr. W. Welsch of Mascoutah, and the late Dr. Jacob Schneck of Mount Carmel, incorporated during the past year, and the earlier gift of the large personal herbarium of Mrs. Agnes Chase, its value for students of Illinois flora has been largely increased. Because of the interest of Professor Burrill and his special students, Clinton, Earle, Seymour, and others, in the study of parasitic fungi, the part of the herbarium devoted to the representation of plants of this group is rich in material records of investigation, and the published "exsiccatae" in this group are well represented. The recent gift of lier personal set of the Phycotheca Boreali-Americana by Mrs. Mary S. Snyder has increased the reference value of the herbarium for students of algae, of which it represents over 2,000 named species.

Entomology.-The entomology collections of the University include a reference series of 6,400 specimens, representing 1,600 common species; and the Bolter collection, donated to the University by the executors of the estate of the late Andreas Bolter of Chicago, which now contains about 120,000 specimens representing over 16,000 species. The department has access, also, to the insect collections of the State Laboratory of Natural History, which contains 315,000 pinned insects and 23,000 vials and bottles of specimens in alcohol, mainly from Illinois.

Geology.-The geology collections are to be found in the Natural History Building. Lithology is represented by type collections of rocks aggregating 9,000 specimens; 2,000 thin sections of rocks and minerals; ornamental building stones; a collection of rock samples to illustrate Illinois geology; a collection of Illinois soils (104), a collection of gems and precions stones, a collection of meteorites, and one of polished marbles, granites, and other ornamental stones. The mineralogy collection contains over 12,000 specimens; 670 crystal models; and a collection of gems and precious stones. The paleontology collection
( 60,000 specimens) contains representative fossils from the entire geologic series, but is especially rich in paleozoic forms. It embraces the private collections of A. H. Worthen (inclucing 742 type specimens) ; Tyler McWhorter; Hertzer; the grcater part of the collections made by the Geological Survey of the state under Worthen; dctailed stratigraphic collections from various geological formations in the Mississippi valley; 200 thin sections of corals and bryozoa; the Ward collection of casts. In September, 1913, a collection of marine and fresh water shells that had belonged to the late A. H. Worthen was presented to the Museum by Mrs. Thomas A. Worthen. This collection includes about 3,000 specimens.

Geography.-The gcography collection consists of a complete file of the United States topographic maps; a coliection of U. S. Geological Survey folios; combined contour maps representing the physiographic provinces of the United States; a collection of foreign topographic maps; rainfall and vegetation maps; relief models of all the continents and of smaller areas; and several thousand lantern slides.

The Museum of Natural History includes the zoology collections which have been specially selected and prepared to illustrate the courses of study in zoology and to present a synoptical view of the zoology of the State. Most of them are placed in the museum room in the Natural History Building, and in adjacent corridors. The mounted mammals include a collection of the ruminants of the United States and representatives of the other orders of Mammalia except the Sirenia. The same orders are also represented by mounted skeletons.

The collection of mounted birds includes representatives of all the orders and families of North America, together with a number of characteristic tropical, Bornean, and New Zealand forms. The collection is practically complete for Illinois species.

The Barnum collection of birds' eggs represents about 300 species and there is a collection of nests and eggs of Illinois birds.

The cold-blooded vertebrates are represented by a series of monnted skins of larger species, both terrestrial and marine; mounted skeletons of typical representatives of the principal groups; alcoholic specimens; and casts. The alcoholics include series of the reptiles, amphibians, and fishes, the latter comprising about 300 species. The casts represent about seventy-five species, nearly all fishes.

The Mollusca are illustrated by alcoholic specimens of all classes and orders, and dissections showing the internal anatomy of typical forms. There are several thousand shells, belonging to more than 2000 species. The collection of the Illinois aquatic species is nearly complete.

The lower invertebrates are represented by several hundred dried specimens and alcoholics, and by a series of Blaschka glass models.

The embryology of vertebrates and invertebrates is illustrated by several sets of Ziegler wax models and series of sections and other preparations.

In addition to the foregoing, the collections of the State Laboratory of Natural History are available for illustrative purposes, as well as for original investigation by advanced students.

## College of Commerce and Business Administration

Commerce.-For its courses in industrial economics and commerce the University has a collection of the materials of commerce; lanterns and several hundred slides; political and industrial maps; and diagrams and stereoscopic views illustrating phases of commerce and industry. Most of the articles constituting the commercial museum are the gifts of the Philadelphia Commercial Museum and of private manufacturing and mercantile establishments.

## College of Engineering

Architecture.-The collections of the department of architecture include plaster casts of architectural detail and ornament; 9,400 lantern slides of architectural subjects and 900 slides of painting and sculpture ; 20,000 classified plates, photographs, and 2,400 stereoscopic views; a working library of about 4,000 volumes on architecture and the allied arts; a collection of 300 examples of American woods, shown in three sections each; and collections of architectural drawings and of specimens of building materials, fittings, and appliances.

Civil Engineering.-The department of civil engineering has samples of iron, steel, wood, brick, and stone; materials for roads and pavements; models of arches and trusses. The department also possesses a collection of photographs and blue-print working drawings of bridges, metal skeleton buildings, masonry structures, and standard railroad construction.

Electrical Engineering.-This department has a collection of samples illustrating standard practise in the industrial applications of electricity. There is also a collection of lantern slides, photographs, blue-prints, drawings, pamphlets, and other engineering data.

Mechanical Engineeering.-This department includes in its equipment part of a set of Reuleaux models; models of valve gears; sections of steam pumps; injectors; valves, skeleton steam and water gauges; standard packings; steampipe coverings; and drop forgings. There are also examples of castings; perforated metal, defective boiler plates, and set of drills, with samples of oil, iron, and steel. A number of working drawings from leading firms form a valuable addition to these collections.

Mining Engineering.-This department has an exhibit of sized coal as prepared by typical Illinois washeries, the raw materials and the finished products illustrating the briquetting of coal, models of a metalliferous mine and of timber and steel mine supports, an exhibit of explosive and blasting materials and appliances, breathing apparatus, and appliances necessary for mine rescue and first aid demonstration, a collection of safety-lamps and other mine-lighting and signaling devices, and working drawings and photographs of mine machinery.

Municipal and Sanitary Enginecring.-The collection of the department of municipal and sanitary engineering includes maps of cities and towns, working plans of waterworks, sewerage systems, water purification and sewage disposal plans, photographs of a variety of municipal engineering works, and models of filters, flushing devices, valves, pipe, tile, and well strainers.

Railway Engineering.-The department of railway engineering has an exhibit of photographs illustrating the development in transportation; an exhibit showing the progress in the design and manufacture of rails; models of locomotive valve gears; a full-sized model of the front end of a Richmond compound locomotive; sectioned models of safety valves; brake beams; electric car controller; rail bonds; and sets of working drawings of locomotives and cars.

Theoretical and Applied Mechanics.-The department of theoretical and applied mechanics has a collection of materials of construction showing failures by tension, compression, twisting, shearing, and bending, and of lantern slides showing the manufacture, treatment, and tests of engineering materials. There are also models showing sections of water meter, gate valvẹ, pressure reducing valve, and turbine.

## College of Agriculture

The agricultural departments maintain collections illustrative of their work; among which are specimens of standard varities of corn; wax models of fruit and vegetables; a horticulture herbarium; specimens of breeds of live stock; a collection of farm machinery; and exhibits of negatives and samples showing the progress of investigations with fruit, crops, and soils.

See further the description of the facilities for instruction and methods of work of the departments of agronomy, animal husbandry, dairy husbandry, and horticulture, under the College of Agriculture, in Part II.

## Library School

The School has made a collection of books and pamphlets on library science; of library reports and catalogs; of mounted samples showing methods of administration in all departments; of labor-saving devices and fittings; and of photographs and lantern slides illustrating the history of books and libraries.

## ADMINISTRATION

## GOVERNMENT

The government of the University is vested by law primaiily in a Board of Trustees, consisting of twelve members. The Governor of the State, the Superintendent of Public Instruction, and the President of the State Board of Agriculture are members ex officio. The other nine members are elected by the people of the State for terms of six years; the terms of three members expire every second year.

The administration of the University is vested by the Board of Trustees in the President of the University, the Senate, the Council of Administration, the Faculties of the several colleges, and the Deans of the colleges and Directors of the schools.

The President is the administrative head of the University.
The Senate is composed of the full professors and those other members of the faculty who are in charge of separate departments of the various colleges and schools. It is charged with the direction of the general educational policy of the University.

The Council of Administration is composed of the President, the Dean of the Graduate School, the Deans of Men and Women, and the Deans of the several colleges. It constitutes an advisory board to the President, and has exclusive jurisdiction over all matters of discipline. The Council docs not determine educational policy; but when any matier arises which has not been provided for by common usage or by rule of the Senate and cannot be conveniently laid over until the next meeting of the Senate, the Council may act upon the same according to its discretion.

The Faculties of the colleges and schools of the University, composed of the members of the corps of instruction of these colleges and schools, have jurisdiction, subject to higher University authority, over all matters which pertain exclusively to these organizations.

The Dean of the Graduate School, the Deans of the several colleges, and the Directors of the schools are responsible for the carrying out of all University regulations within their respective departments.

## DEPARTMENTS AND COURSES

For the purpose of administration the University is divided into several colleges and schools. These are not educationally separate, but are interdcpendent and form a single unit.

The colleges and schools are as follows:
I. The College of Liberal Arts and Sciences
II. The College of Commerce and Business Administration
III. The College of Enginecring
IV. The College of Agriculture
V. The Graduate School
VI. The Library School
VII. The School of Music
VIII. The School of Education
IX. The School of Railway Engineering and Administration
X. The College of Law
XI. The College of Medicine
XII. The College of Dentistry
XIII. The School of Pharmacy

The College of Liberal Arts and Sciences offers courses in-

1. Philosophy and arts, including-
(a) The ancient classical languages
(b) The Romance languages
(c) The Germanic languages
(d) The English language and literature, including rhetoric
(e) Mathematics
(f) The political and social sciences-

History
Economics
Political science
Sociology
(g) Philosophical subjects-

Philosophy
Psychology
Education
(h) Art and design
2. General Science, affording opportunity to specialize in-
(a) Astronomy
(b) Geology, including mineralogy and geography
(c) Physics
(d) Chemistry
(e) Botany, including bacteriology
(f) Zoology
(g) Entomology
(h) Physiology

By the grouping of certain subjects students in this College are also offered opportunities for specific vocational and professional training as follows:

1. Teaching and school administration
2. Journalism
3. Chemistry
4. Chemical engineering
5. Household science and household administration
6. Library administration
7. Law (combined course)
8. Medicine (combined course)
9. Engineering (combined course)

The College of Commerce and Business Administration offers curriculums in-

1. General business
2. Commercial and civic secretarial service
3. Banking
4. Insurance
5. Accountancy
6. General railway administration
7. Railway transportation
8. Commercial teaching
9. Foreign commerce

The College of Engineering offers curriculums in-

1. Architecture
2. Architectural engincering
3. Ceramic engincering
4. Civil engineering
5. Electrical engineering
6. Mechanical engineering
7. Mining engineering
8. Municipal and sanitary engincering
9. Railway civil engineering
10. Railway electrical engincering
11. Railway mechanical engineering

The College of Agriculture offers curriculums in-

1. Agronomy
2. Horticulture, floriculture, and landscape gardening
3. Animal husbandry
4. Dairy husbandry
5. Household science
6. Agricultural extension
7. The teaching of agriculture

Military science and physical training are provided in all the undergraduate colleges in Urbana.

The Graduate School offers courses in-
Philology, including the classical languages, Romance languages, Germanic languages, and English
Mathematics
Political and social sciences, including history; economics. sociology, and political science
Philosophy, including psychology and education
Physical sciences, including plysics, chemistry; astronomy, and geology
Biology, including botany, zoology, entomology; and physiology
Engineering, including architecture, architectural engineering, ccranic engineering, civil engineering, elfctrical engineering, mechanical engineering, mechanics, mining enginecring, municipal and sanitary engineering, and railway engineering
Agriculture, including agronomy, animal husbandry; dairy husbandry, floriculture, horticulture, and thremmatology
Household science
The Library School offers a professional curriculum of two years in preparation for the librarianship, leading to the degrec of Bachelor of Library Science.

The School of Music offers curriculums in vocal and instrumental music, leading to the degree of Bachelor of Music, and provides training in public school methods in music.

The School of Education enrolls, at the beginning of the junior year, students already registered in other colleges of the University who are preparing to teach, and directs their work for the remaining two years.

The School of Railway Engineering and Administration offers curriculums leading to the degree of Bachelor of Science in railway civil, railway electrical, and railway mechanical enginecring; and also curriculums in railway transportation and in railway administration, leading to the degree of Bachelor of Arts.

The Collcge of Law offers a curriculum of three years leading to the degrec of Bachelor of Laws.

Students holding the bachelor's degree in arts or science may become candidates in this College for the degree of Doctor of Law (J.D.)

The College of Medicine offers a curriculum of four years leading to the degree of Doctor of Medicine; and, in conjunction with the College of Liberal Arts and Sciences, a curriculum of six years, leading at the end of four years to the degree of Bachelor of Arts or Bachelor of Science, and at the end of two additional years in the senior college of the College of Medicine, to the degree of Doctor of Medicine.

The Collcge of Dentistry offers a three-year curriculum leading to the degree of Doctor of Dental Surgery.

The School of Pharmacy offers curriculums leading to the degrees of Graduate in Pharmacy and Pharmaccutica! Chemist.

The Summer Session, of eight weeks, offered in 1915 courses in accountancy, agriculturc, art and design, botany, chemistry, drawing (general engineering), economics, education, English, entomology, French, German, history, houschold science, Latin, library science, manual training, mathematics, mechanical engineering, mechanics (theoretical and applied), microscopical technics, music, physical training for men and for women, physics, political science, psychology, rhetoric, sociology, and zoology.

All the courses given in the Summer Session are of collegiate grade and may be counted toward the bachelor's degree. Certain advanced courses may be counted toward the master's degree.

## ADMISSION

## GENERAL STATEMENT

An applicant for admission to any of the colleges or schools of the University must be at least sixteen years of age. Candidates for admission to the College of Dentistry (Chicago) must be eighteen, and candidates for admission to the Schocl of Pharmacy (Chicago) must be seventeen years of age.

Women are admitted to all departments under the same conditions and on the same terms as men.

Students may be admitted at any time, but should enter if possible at the beginning of the fall semester (in 1916, September 19), or at the beginning of the spring semester (in 1917, February 5). Students can seldom enter the College of Engineering to advantage except at the opening of the school year in Scptember.

The entrance requirements for the undergraduate departments, including the colleges of Liberal Arts and Sciences, Commerce and Eusiness Administration, Engineering, and Agriculture, and the School of Music, amounting in each case to 15 units of high-school work, are stated in detail immediate?y below (page 72).

The College of Law requires, in addition to 15 units of high-school credit, two years ( 60 semester lours) of college work in arts, letters, and science in an institution having standards equal to those of the University of Ilinois. (See page 214.)

The Library School requires a bachelor's degree in arts, letters, and science from an institution having standards equal to those of the University of Illinois. (See page 196.)

The College of Medicine (Chicago) requires, in addition to 15 units of highschool credit, two years ( 60 scmester hours) of college work in an institution having standards equal to those of the University of lllinois. (See page 219.)

The College of Dentistry (Chicago) requires an applicant for admission to present a certificate of graduation from an accredited high school or the equivalent; which equivalent is intcrpreted to mean 15 units of preparatory work in an accredited high school or academy or a state normal school. (See page 244.)

The School of Pharmacy (Chicago), for the ycar 1915-10, raquired for admission to its shorter curriculum, leading to the degree of Graduate in Pharmacy, two ycars of high-school work or the full educational equivalent; and for admission to its longer curriculum, leading to the degree of Pharmacentical Chemist, graduation from an accredited high school or the equivalent. For the year 1916-17 and thereafter, graduation from an accredited high school with 15 acceptable units will be required for admission to both curriculums in this School. (See page 254.)

## ENTRANCE REQUIREMENTS OF THE UNDERGRADUATE COLLEGES

Under an action taken by the Board of Trustees of the University of Illinois on June 9, 1914, the following new entrance requirements for the curriculums leading to the degrees of Bachelor of Arts, Bachelor of Science, and Bachelor of Music-or, in other words, for the undergraduate departments at Urbana, including the College of Liberal Arts and Sciences, the College of Commerce and Business Administration, the College of Engineering, the College of Agriculture, and the School of Music-went into effect September 1, 1915 :

## High School Graduation

A candidate for admission by certificate must be a graduate of an accredited high school or other accredited school.

An applicant who has not been graduated from an accredited school must pass entrance examinations in the following subjects, amounting to 5 units*:

Algebra ........................................................................................ 1 unit
Additional subjects to be designated by the University authorities.................... 3 units
Total 5 units
The remaining 10 units necessary to make up the 15 units required for admission may also be made in entrance examinations or may be offered by certificate from any accredited school.

## Number of Units Required

Fifteen units of high-school or other secondary-school work, in acceptable subjects (see Lists A, B, and C below), must be offered by every candidate.

In 1915-16 students were admitted with conditions of not more than one unit; that is, with a minimum of 14 units. All such conditions must be made up before the student can be permitted to register for his second year in the University.

After September I, 19I6, no conditions will be permitted. In other words, every student must offer at the time of admission 15 units in acceptable subjects, including the 6 units specifically prescribed for the undergraduate colleges (see List A below). It is provided, however, that a student who offers 15 acceptable units including the 6 units of List A, but is deficient not to exceed 2 units in subjects prescribed only for the college or curriculum which he wishes to enter, may be admitted in that college or curriculum to courses for which he is fully prepared, subject to the requirement that the deficiencies in question shall be removed before he may register for a second year's work.

A student with deficiencies is not matriculated and must pay a tuition fee of $\$ 7.50$ a semester in addition to the regular incidental fee of $\$ 12.00$ a semester.

[^11]
## Prescribed Subjects <br> Summary

## The 15 units offered for admission must include:

I. Certain subjects prescribed alike for all curriculums (see List A below)..

6 units
II. Certain subjects prescribed in addition for the inditidual curriculum which the student wishes to enter.

1 to 4 units
III. Enough electives in academic subjects (see List B below) to make, with the subjects prescribed for all curriculums (List A) and those pre- scribed for the individual curriculum of the student's choice, 12 units in academic subjects.
IV. Three additional units, which may be chosen either from the list of academic electives (List B) or from the list of additional electives (List C)

3 units
Total
15 units

## Detailed Statement

## I. Units Prescribed for All Curriculums

Of the 15 units required, the following 6 units, constituting List A, are prescribcd for admission to the freshman class in all the undergraduate curriculums of the University, and no substitutes are accepted:

LIST A
English (composition and literature)............................................. 3 units

Plane geometry ................................................................. 1 unit
Physics, or chemistry, or botany, or zoology, or physiology, with laboratory work

1 unit

## Total

6 units

## II. Additional Prescriptions for Individual Curriculums

Of the 9 units that remain, certain others are prescribed for admission to individual curriculums, and in each case no substitutes are accepted for the curriculum in question. These additional prescriptions are as follows:

> For the College of Liberal Arts and Scienccs for the curriculums leading to the Degree of Bachelor of Arts (including the General Curriculum in Libcral Arts and Scicnces, the curriculums in Journalism, Houschold Science, and Mcdicine, and the Curriculum preliminary to LawLatin, Greek, French, German, or Spanish (both units in the same language)

> 2 units

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For the College of Liberal Arts and Scicnces for the curriculum in Gen. cral Science-
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Science
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Science
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For the College of Liberal Arts and Sciences for the curriculum in Chem-istry-

$$
\begin{aligned}
& \text { Science ........................................................................ } 1 \text { unit } \\
& \text { German or French ..................................................... } 2 \text { units }
\end{aligned}
$$

${ }^{1}$ One and one-half units of high-school algebra are prerequi-itc for registration in all university courses in mathematics, and college mathematics is prerequisite for courses in physics and advanced chemistry. It is necessary, therefore, for students who intend to pursue curriculums involving college mathematics, physics, or advanced chemistry, including the curriculums in household science, medicine, chemistry, and chemical engineering, or curriculums in commerce and business administration in which university courses in mathematics are prescribed, to present for admission to the University, or make up after entrance, onchalf unit of advanced algebra in addition to the retquired unit of List A.
For College of Liberal Arts and Sciences for the curriculum in Chemical Enginecring-
Science ..................................................................... 1 unit
German ..... 2 units
For the Collcge of Commerce and Busincss Administration-one of the following options(a) Latin, Greck, French, German, or Spanish (both units in thesame language)2 units
(b) $\left\{\begin{array}{l}\text { Advanced algebra } \ldots \text { ond } \\ \text { Solid and spherical } \begin{array}{l}\text { ond } \\ \text { geonetry }\end{array}\end{array}\right.$ ..... $1 / 2$ unit
(c) Science ..... 1 unit
For the Collese of Enginecring- Advanced algebra ..... $1 / 2$ unit
Solid and spherical geometry ..... $1 / 2$ unit
For the College of Agriculture-
Science ..... 1 unit
For the Sclool of Music-Latin, Greci, French, Cerman, or Spanish (both units in the samelanguage)2 units
Music ..... 2 units
IIJ. Academic ElcctivesEnough electives must be chosen from List B below to make, with thesubjects prescribed for all curriculums (List A) and those prescribed for theindividual curriculum of the student's choice, 12 units in academic subjects.
It will be seen that the number of such electives from List $B$ required for the several curriculums is as follows:
For the Collegc of Liberal Arts and Sciences for the curriculums leading to the degree of Bachelor of Arts (including the General Curriculum in Liberal Arts aitd Sciences, the curriculums in Journalism, Household Science ${ }^{1}$, and Medicinc ${ }^{1}$, and the Curriculum prelininary to Law).... 4 units
For the Collegc of Liberal Arts and Sciences for the curriculum in GeneralScience ${ }^{1}$5 units
For the College of Liberal Arts and Scic:ices for the corriculums in Chemistry ${ }^{1}$ and Chemical Engincering ${ }^{1}$ ..... 3 units
For the College of Commerce and Business Administrationㅁ ..... 4 unitsUnder option (a)
Under option (b)
5 units
Under option (c) ..... 5 units
For the College of Enginecring. ..... 5 units
For the College of Agriculture ..... 5 units
For the School of Music ..... 2 units
LIST B

| Latin | 36 to 144 weeks | 1-4 |
| :---: | :---: | :---: |
| Greek | 36 to 108 weeks | 1-3 |
| French | 36 to 144 weeks | 1-4 |
| German | 36 to 144 wceks | 1-4 |
| Spanish | 36 to 144 weeks | $1-4$ |
| Italian | 36 to 72 weeks | 1-2 |
| Norwegian | 36 to 72 weeks | 1-2 |
| Swedish | 36 to 72 wecks | 1-2 |
| Polish | 36 to 72 weeks | 1-2 |
| English (4th unit) | 36 weeks | 1 |
| ${ }^{1}$ Advanced algebra | 18 weeks | 1/2 |
| Solid geometry | 18 weeks | 1/2 |
| Trigonometry | 18 weeks | 1/2 |
| History | 36 to 108 weeks | 1-3 |
| Civics | 18 or 36 weeks | 3/2-1 |
|  | 18 or 36 weeks | 5/2-1 |

[^12]Admission
Commercial geography 18 or 36 weeks ..... 1/2-1
Astronomy .................................................... 18 weeks ..... 1/2
Geology 18 or 36 weeks ..... 3/2-1
Physiography ................................................ 18 or 36 weeks ..... 1/2-1
Physiology 18 or 36 weeks ..... 1/2-1
Zoology 18 or 36 weeks ..... $1 / 2-1$
Botany 18 or 36 weeks ..... 1/2-1
Physics 36 to 72 weeks ..... 1-2
Chemistry 36 to 72 weeks ..... 1-2
IV. Additional Electives
The remaining 3 units may be chosen either from List B above or fromList C:
LIST C ${ }^{1}$ Units
Agriculture 36 to 72 weeks ..... 1-2
Bookkeeping 36 wceks ..... 1
Busincss law 18 weeks ..... 1/2
Domestic science 36 to 72 weeks ..... 1-2
Drawing, art and design 18 or 36 weeks ..... $1 / 2-1$
Drawing, mechanical 18 or 36 weeks ..... 1/2-1
Manual training ${ }^{2}$ 36 to 72 wecks ..... 1-2
Music 36 to 72 weeks ..... 1-2
Summary by CoursesThe requirements stated above may be summarized by colleges and curric-ulums as follows:
For the College of Liberal Arts and Sciences for the curriculums leading tothe degree of Bachelor of Arts (including the General Curriculum in LiberalArts and Sciences, the curriculums in Journalism, Household Science ${ }^{3}$, andMedicine ${ }^{3}$, and the Curriculum preliminary to Law) :
I. List A (prescribed for all curriculums) ..... 6 units
II. Special prescription for these curriculums-Latin, Greek, French, German, or Spanish (both urits in the samelanguage)2 units
III. Electives from List B ..... 4 units
1V. Electives from either List B or Tist C. ..... 3 units
Total ..... 15 units
For the College of Libcral Arts and Scicnces for the curriculum in GeneralScience ${ }^{3}$ :

1. List A (prescribed for all curriculums) ..... 6 units
II. Special prescription for this curriculum-
Science ..... 1 unit
III. Electives from List B ..... 5 units
IV. Elcetives frum either List B or List C. ..... 15 units
For the College of Liberal Arts and Sciences for the curriculum in Chemistry ${ }^{3}$ :
I. List A (prescribed for all curriculums) ..... 6 units
II. Special p:escriptions for this curriculum-
Science ..... 1 unit
German or French. ..... 2 units
III. Electives from List B. ..... 3 units
1V. Flectives from either list $B$ or List ( ..... 3 mits
Total 15 units

[^13]For the College of Liberal Arts and Sciences for the curriculum in Chemical Engineering ${ }^{1}$ :
I. List A (prescribed for all curriculums) 6 units
II. Special prescriptions for this curriculum-
Science ..... 1 unit
German ..... 2 units
1II. Electives from List B ..... 3 units
1V. Electives from either List B or List C. 3 units
Total 15 units
For the College of Commerce and Business Administration ${ }^{1}$ : OPTION (A)
I. List A (prescribed for all curriculums) ..... 6 units
II. Special prescription for this College under this option-
Latin, Greek, French, German, or Spanish (both units in the same language)2 units
III. Electives from List B ..... 4 units
IV. Electives from either List B or List C. ..... 3 units
Total 15 units
OPTION (B)
I. List A (prescribed for all curriculums) 6 units
II. Special prescriptions for this College under this option-
Advanced algebra ..... z/2 unit
Solid and spherical geometry. ..... $1 / 2$ unit
III. Electives from List B. ..... 5 units
IV. Electives from either List $B$ or List C. ..... 3 units
Total 15 units
OPTION (C)
I. List A (prescribed for all curriculums) ..... 6 units
II. Special prescriptions for this College under this option- Science ..... 1 unit
III. Electives from List B ..... 5 units
IV. Electives from either List B or List C ..... 3 units
Total 15 units
For the College of Engineering:
I. List A (prescribed for all curriculums) ..... 6 units
II. Special prescriptions for this College-
Advanced algebra ..... $1 / 2$ unit
Solid and spherical geometry ..... 1/2 unit
III. Electives from List B ..... 5 units
IV. Electives from either List B or List C. ..... 3 units
Total ..... 15 units
For the College of Agriculture:
I. List A (prescribed for all curriculums) ..... 6 units
II. Special prescription for this College-
Science 1 unit
1II. Electives from List B. ..... 5 units
IV. 1:lectives from either List B or List C. ..... 3 units
Total ..... 15 units
${ }^{1}$ See fontnote, page 73.

## For the School of Music:

I. List A (prescribed for all curriculums) ..... 6 unitsII. Special prescriptions for this School-
Latin, Greek, French, German, or Spanish (both units in the same language) ..... 2 units
Music ..... 2 units
III. Electives from List B ..... 2 units
IV. Electives from either List B or List C ..... 3 units
Total 15 units
METHODS OF ADMISSION

The credits required for admission to the undergraduate departments, as detailed above, may be secured:
(a) By examination.
(b) By certificate from an accredited high school or other secondary school.
(c) By transfer from another university or college of recognized standing.

## (A) ADMISSION BY EXAMINATION

## I. The University Entrance Examinations

The University entrance examinations are given at the University in Urbana (in Room 100 Commerce Building) three times in each year: in September, immediately before the opening of the fall semester; in February, shortly before the opening of the spring semester; and in July, during the Summer Session.

These examinations cover all the subjects required or accepted for admission, as outlined in the "Description of Subjects Accepted for Admission" on page 89 .

For programs of these three sets of examinations for 1916-17, see pages 81-82.

## II. The Examinations of the College Entrance Examination Board

The certificate of the College Entrance Examination Board, showing a grade of 60 per cent. or higher, will be accepted for admission in any subject in the lists on pages 74 and 75 in the amounts there specified as being acceptable. These examinations will be held during the week of June 19-24, 1916.

All applications for examination must be addressed to the Secretary of the College Entrance Examination Board, Post Office Sub-Station 84, New York, N. Y., and must be made upon a blank form to be obtained from the Secretary of the Board upon application.

Applications for examination at points in the United States east of the Mississippi River, and also at Minneapolis, St. Louis, and other points on the Mississippi River, must be received by the Secretary of the Board at least two weeks in advance of the examinations; that is, on or before Monday, June 5, 1916; applications for examination elsewhere in the United States or in Canada must be received at least three weeks in advance of the examinations; that is, on or before Monday, May 29, 1916, and applications for examination outside of the United States and Canada must be received at least five weeks in advance of the examinations; that is, on or before Monday, May 15, 1916.

Applications received later than the dates named will be accepted when it is possible to arrange for the admission of the candidate concerned, but only upon the payment of $\$ 5.00$ in addition to the usual fee.

The examination fee is $\$ 5.00$ for all candidates examined at points in the United States and Canada, and $\$ 15.00$ for all candidates examined outside of the United States and Canada. The fee (which cannot be accepted in advance of the application) should be remitted by postal order, express order, or draft on New York to the order of the College Entrance Examination Board.

A list of the places at which examinations are to be held by the Board in June, 1916, will be published about March 1. Requests that the examinations be held at particular points, to receive proper consideration, should be transmitted to the Secretary of the Board not later than February 1.

## III. The New York Regents' Examinations

Credits will be accepted, also, from the examinations conducted by the Regents of the University of the State of New York.

## (B) ADMISSION BY CERTIFICATE FROM AN ACCREDITED PREPARATORY SCHOOL

Blank certificates for students wishing to enter the University by certificate from an accredited high school or academy may be had of the Registrar. They should be obtained early and should be filled out and sent to the Registrar for approval as soon as possible after the close of the high-school year in June. Certificates received at the University after September 14 (in 1916) will be held until the arrival of the student unless such certificates are accompanied by an addressed envelope with a special delivery stamp.

## Accredited Schools

The High-School Visitor of the University visits and inspects, on request, high schools and other preparatory schools throughout the State. On the basis of his reports, approved by the Committee on Accredited Schools and by the Council of Administration, the University accredits all work which is found to be sufficiently well done. For a list of Accredited Schools, correct to January 1, 1916, see page 83. Not all the schools named in this list, however, are accredited for the same amount of work nor all for the same subjects. A student presenting a certificate from any one of these schools will be given entrance credit for all the subjects named therein for which the school is specifically accredited as shown in the certificate of its accredited relation issued to the school by the University.

Entrance credits will also be accepted on certificate from the following sources:

1. From schools accredited by the North Central Association of Colleges and Secondary Schools.
2. From schools accredited to the state universities which are included in the membership of the North Central Association of Colleges and Secondary Schools.
3. From schools approved by the New England College Entrance Certificate Board.
4. From high schools and academies registered by the Regents of the University of the State of New York.
5. From the state normal schools of Illinois and other state normal schools having equal requirements for graduation.

## Foreign Students

Candidates for admission who come from foreign countries should bring complete official credentials. Certificates from oriental countries should be accompanied by certified translations. Upon arriving at the University foreign students should consult with the Adviser to Foreign Students, Room 153, Administration Building.

## Examinations in Rhetoric I

Those students who show by examination a proficiency in composition sufficient to qualify them for the second semester's work in rhetoric (Rhetoric 2) may be excused from the first semester's work (Rhetoric 1). An examination to test such proficiency will be given at $7: 00 \mathrm{p} . \mathrm{m}$., on the first day of registration (in 1916, September 18). The results of this examination will be announced the following morning. Students who try this examination should defer their registration until they learn whether or not they have passed in the examination.

## (C) ADMISSION BY TRANSFER OF ENTRANCE CREDITS FROM OTHER COLLEGES OR UNIVERSITIES

A person who has been admitted to another college or university of recognized standing will be admitted to this University upon presenting a certificate of honorable dismissal from the institution from which he comes and an official statement of the subjects upon which he was admitted to such institution, provided it appears that the subjects are those required here for admission by examination or real equivalents. No substitutes will be accepted for the subjects prescribed for all colleges or by individual colleges as indicated above (pages 73 to 77).

For admission to advanced standing by transfer of college credits see page 80 below.

Students intending to transfer to the University of Illinois should send an official statement of their college credits, accompanied by a summary of their preparatory work and by a letter of honorable dismissal, to the Registrar as early in the summer as possible.

## ADMISSION AS SPECIAL STUDENTS

Persons over twenty-one ycars of age may be admitted as special students, provided they secure (1) the recommendation of the professor whose work they wish to take, and (2) the approval of the dean of the college concerned. They must give cvidence that they possess the requisite information and ability to pursue profitably, as special students, their chosen subjects, and must meet the special requirements of the particular college in which they wish to enroll, as stated below.

A special student is not matriculated and must pay a tuition fee of $\$ 7.50 \mathrm{a}$ semester in addition to the regular incidental fee of $\$ 12.00$ a semester.

No one may enroll as a special student in any school or college of the University for more than two years, except by special permission, application for which must be made through the dean of the college.

A person registered as a special student in one college and desiring to take a course in another college of the University must obtain the approval of the dean of the latter college.

## Special Requirements of the Colleges and Schools

The College of Liberal Arts and Sciences requires a written application, accompanied by official certificates, indicating the character and extent of the applicant's preparatory work, and showing honorable dismissal from the school last attended. In order that action may be taken on such applications before registration they should be presented at least one week before the beginning of the semester.

The College of Engineering requires that applicants for admission as special students shall satisfy the entrance requirements in mathematics and English (one and one-half years of algebra, one year of plane geometry, one-half year of solid geometry, one year of English composition, and two years of English literature).

The College of Agriculture will receive non-matriculants twenty-one years old or over, provided that if deficient in English as measured by the requirements for matriculation they shall arrange to carry English as one subject until that deficiency is made good; and provided further, in the case of men, that they shall have had at least two years of experience in practical agriculture.

The Library School requires a written application, accompanied by official certificates, indicating the character and extent of the applicant's preparatory and college work and showing honorable dismissal from the institution last attended. In order that action may be taken on such applications before registration day, they should be presented not later September 1.

It is the practise of this School to admit as special students only those persons who, tho unable to meet the formal requirements for entrance, are substantially prepared for thoro and advanced work. Such persons must present evidence of possessing the requisite information and ability to pursue the chosen subjects profitably, and some substitute for the regular requirements for entrance, such as the completion of part of a college curriculum, approved library or teaching experience, or foreign travel. Preference will be given to those already engaged in library work, especially in Illinois libraries. Students thus admitted are expected to take all of the course prescribed for those who are candidates for the degree of Bachelor of Library Science, or failing that, as much of the prescribed work as they are prepared for.

## ADMISSION TO ADVANCED STANDING

After matriculation, an applicant may secure advanced standing either by examination or by transfer of credits.

1. By examination-Advanced standing is granted only by examination unless the applicant is from an approved school.
2. By transfer of credits-Credits may be accepted for advanced standing from another university or college of recognized standing or from a state normal school. An applicant for advanced standing by transfer must present a certified record of work done in the institution from which he comes, accompanied by a letter of honorable dismissal. Students intending to transfer to the University of Illinois should send their credentials to the Registrar as early in the summer as possible.

## PROGRAMS OF UNIVERSITY ENTRANCE EXAMINATIONS

The University entrance examinations are given at the University in Urbana (in Room 100, Commerce Building) three times in each year: in September, immediately before the opening of the fall semester; in February, shortly before the opening of the spring semester; and in July and August, during the Summer Session.

The scope of these examinations is indicated in the "Description of Subjects Accepted for Admission," pages 89 to 96.

Admission to the examinations is by permit. Permits may be obtained of the Registrar, 156 Administration Building.

## Entrance Examinations, July, 1916

*History, 1, 2, or 3 units......................................... July 8, 8:00 a.m.

Civics, $1 / 2$ unit or 1 unit......................................... July 8, 10:00 a.m.
$\dagger$ Physiology, $1 / 2$ unit or 1 unit............................. Sat., July 15, 8:00 a.m.
Commercial geography, $1 / 2$ unit or 1 unit................. Sat., July 15, 8:00 a.m.
$\dagger$ Physical geography, $1 / 2$ unit or 1 unit...................... Sat., July 15, $10: 00$ a.m.
Algebra, 1 unit or $11 / 2$ units................................... Sat., July 22, $8: 00$ a.m.
Plane geometry, 1 unit...................................... Sat., July 22, 8:00 a.m.
Solid and spherical geometry, $1 / 2$ unit..................... Sat., July 22, $10: 00$ a.m.
English literature, 2 units.................................. Sat., July 29, 8:00 a.m.
English composition, 1 unit................................. Sat., July 29, 10:00 a.m.
Latin, 1, 2, 3, or 4 units............................................ July 29, 8:00 a.m.
German, 1, 2, 3, or 4 units................................ Sat., July 29, 8:00 a.m.
The time for examinations in agriculture, astronomy, bookkeeping, botany $\ddagger$, business law, chemistry $\ddagger$, domestic science, drawing (freehand or mechanical), economics and economic history, the fourth unit in English, French, geology, Greek, music, physics $\ddagger$, Spanish, trigonometry, and zoology $\ddagger$, will be arranged with candidates.

## Fall Examinations, September, 1916



[^14]| German, 1st unit, or 2nd unit, or both | 14, 1:00 p.m. |
| :---: | :---: |
| German, 3rd unit, or 4th unit, or b | urs., Sept. 14, 3:30 p.m. |
| French, 1st unit, or 2nd unit, or both. | Thurs., Sept. 14, 1:00 p.m. |
| French, 3rd unit, or 4th unit, or both | Thurs., Sept. 14, 3:30 p.m. |
| Spanish, 1st unit, or 2nd unit, or both | .Thurs., Sept. 14, 1:00 p.m. |
| Business law, $1 / 2$ unit | Thurs., Sept. 14, 1 :00 p.m. |
| Commercial geography, $1 / 2$ unit or 1 un | .Thurs., Sept. 14, 3:30 p.m. |
| Latin, 3rd unit, or 4th unit, or both | Fri., Sept. 15, 8:00 a.m. |
| Bookkeeping, 1 unit. | Fri., Sept. 15, 8:00 a.m. |
| *Botany, $1 / 2$ unit or 1 unit | Sept. 15, 8:00 a.m. |
| *Zoology, 1/2 unit or 1 unt | Sept. 15, 10:30 |

The time for examinations in agriculture, domestic science, manual training, freehand or mechanical drawing, music, Greek, and the fourth unit in English, will be arranged with applicants.

## Mid-Year Examinations, January, 1917

*Chemistry, 1 unit or 2 units.............................Wed., Jan. 24, 8:00 a.m.
Geology, $1 / 2$ unit or 1 unit...................................Wed., Jan. 24, 8:00 a.m.
Astronomy, $1 / 2$ unit...........................................Wed., Jan. 24, 10:30 a.m.
Trigonometry, $1 / 2$ unit. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Wed., Jan. 24, 10:30 a.m.
$\dagger$ History, 1, 2, or 3 units...................................Wed., Jan. 24, $1: 00$ p.m.
English literature, 2 units................................Thurs., Jan. 25, 8:00 a.m.
English composition, 1 unit.............................. Thurs., Jan. 25, 10:30 a.m.
Latin, 1 st unit, or 2nd unit, or both....................Thurs., Jan. 25, 1:00 p.m.
*Physics, 1 unit..............................................Thurs., Jan. 25, $1: 00$ p.m.
$\ddagger$ Physical geography, $1 / 2$ unit or 1 unit..................Thurs., Jan. 25, $3: 30$ p.m.
Algebra, 1 unit or $11 / 2$ units.........................................., Jan. 26, $8: 00$ a.m.
Civics, $1 / 2$ unit or 1 unit................................................ Jan. 26, 10:30 a.m.
Economics and economic history, $1 / 2$ unit or 1 unit...... Fri., Jan. 26, 10:30 a.m.
Geometry, plane, 1 unit.............................................., Jan. 26, $1: 00$ p.m.
Geometry, solid and spherical, $1 / 2$ unit......................Fri., Jan. 26, $3: 30$ p.m.
$\ddagger$ Physiology, I/2 unit or 1 unit...............................Fri., Jan. 26, 3:30 p.m.
German, 1st unit, or 2nd unit, or both....................Sat., Jan. 27, 8:00 a.m.
German, 3rd unit, or 4th unit, or both................... Sat., Jan. 27, 10:30 a.m.
French, 1st unit, or 2nd unit, or both......................Sat., Jan. 27, 8:00 a.m.
French, 3rd unit, or 4th unit, or both...................... Sat., Jan. 27, 10:30 a.m.
Spanish, 1st unit, or 2nd unit, or both.....................Sat., Jan. 27, 8:00 a.m.
Business law, $1 / 2$ unit.......................................Sat., Jan. 27, 8:00 a.m.
Commercial geography, $1 / 2$ unit or 1 unit.................. Sat., Jan. 27, $10: 30$ a.m.
Latin, 3rd unit, or 4th unit, or both......................Sat., Jan. 27, $1: 00$ p.m.
Bookkeeping, 1 unit.......................................... Sat., Jan. 27, $1: 00$ p.m.
*Botany, $1 / 2$ unit or 1 unit.................................Sat., Jan. 27, $1: 00$ p.m.
*Zoology, $1 / 2$ unit or 1 unit...................................Sat., Jan. 27, 3:30 p.m.
The time for examinations in agriculture, domestic science, manual training, frechand or mechanical drawing, music, Greck, and the fourth unit in English, will be arranged with applicants.

[^15]
## LIST OF ACCREDITED SCHOOLS

(Correct to January I, 1916.)
The following high schools, having all the prescribed units, and enough others to make up the required total of 15 units, are in the list of fully accredited schools.

Not all of these schools, however, are accredited for the same amount of work, nor all for the same subjects. A student presenting a certificate from any one of these schools will be given entrance credit for all the subjects named therein for which the said school is specifically accredited, as shown in the certificate of its accredited relation issued by the University.

The High School Visitor of the University inspects high schools not previously accredited upon request, if the request is accompanied by a report of the school which shows that it merits such inspection. The University accredits all work which is thus found to be sufficiently well done. For further particulars address The High School Visitor, in care of the University of Illinois.

FULIY ACCREDITED SCHOOLS

## School

Abingdon
Albion
High School Southern Collegrate Institute

Aledo

High School
Drury Academy
Altamont
Alton
High School
Western Mil. Acad.
Amboy
Anna
High School
Union Academy
Arcola Tp.
Arlington Heights
Armington (Hittle Tp.)
Arther
Ashland
Ashton
Assumption Tp.
Astoria
Atlanta
Atwood
Augusta
Augustana College Academy (Roc
Island)
Aurora
East High School
West High School
Jennings Seminary
Austin High School (Chicago)
Averyville High School (Peoria)
Avon
Barrington
Barry
Batavia
Beardstown
Belleville
Bellflower Tp.
Belvidere
Bement
Benton Tp.
Biggsville Tp.
Bismarck Tp.
Blandinsville
Bloomington
High School
St. Mary's High School
Bloom Tr. (Chicago Heights)
Blue Island Tp.
Bowen

Superintendent
A. C. Butler

Lee V. Matheny
F. N. Taylor

William Harris
R. A. Haicht

George N. Bradley
Charles McGinnis
O. R. Zoll
G. E. Clendenen

Lee M. Blair
O. A. Fackler
II. L. Welker
C. D. Jacobs

Arthur O. Frazier
A. E. Decker

C. M. Bardwell
S. K. McDowell
J. D. Shoop

Harry E. Iler
A. E. Hubbard Erman S. Smith
Vail Cordell
H. A. Bone
H. G. Russell

George FI. Busiek
Lewis A. Reisner
Otto Weedman
J. S. Griffin
J. K. Stableton

Albert A. Holmes

Principal
Ira M. Wricley
M. E. Steele
O. A. Hostetler
G. F. Baumeister

Gladys Eade
B. C. Richardson

George D. Eaton
Myrtle Kenney
C. A. Harper
W. O. Shewmafer
S. R. Allen

Ada R. Kuger
Olga V. Hofacker
Albert Walker
Hazel Wateriouse
L. D. Wyatt
J. O. Stanberry
C. A. Whiteside

Gayle Au
Mary E. Orr
Mabel Garwood

## J. Mauritzson

K. D. Waldo
K. C. Merrick

Bertha Barber
George H. Rociewgod
Hazel Broad
Alice Felt
Jessie Springstead
E. Ruth Tipple
A. A. Rea

Mrs. H. G. Russell
h. W. Brua

Dean M. Inman
J. E. Almon

Lottie B. Cook
C. W. Houk
C. E. Plummer
R. A. Williams

Elza R. Farris
William Wallis
Rev. M. Weldon
E. L. Boyer
J. E. Lemon
L. G. Mcarthur

## School

Bowen High School (Chicago)
Bradford
Bradley Poly. Inst. (Peoria)
Bridgeport Tr.
Buda
Byron
Cairo
High School
Sumner High School
Calumet High School (Chicago)
Cambridge
Camp Point
Canton
Carbondale
So. Ill. Nor. Univ. H. S.
Cablinville
Carl Schurz High School
(Chicago)
Caryle
Carmi Tp.
Carrollton
Carterville
Carthage
High School
Carthage College Academy
Casey
Cantral High School (Peoria)
Centralia Tp.
Champaign
Charleston
Chathay
Chatsworte
Chenoa
Chester
Chicago:
Austin
Bowen
Calumet
Carl Schurz
Crane, R. T. (Tech.)
Englewood
Fengen
Harrison Technical
Hyde Park
Lake
Lake View
Lane Technical
Lucy Flower Tech.
McKinley
Marshall
Medill
Morgan Park
Parker
Phillifs
Senn
Tuley
Waller
Cificago Private Schools
Latin School
Harvard School
F. W. Parker School

Kenwood Institute
Loyola Academy
Morgan Park Preparatory Sciools
North Park College Academy
Starrett School for Girls
University High School
Chicago Heights
Bloom Tp. High School
Chillicothe Tp.
Chrisman Tp.
Cicero
J. Sterling Morton Tp.

Clayton
Clinton
Colfax
Colinnsvile TP.
Crane, R. T. (Tech.) H. S. (Chicago)
Crystal Lare
Curtis High School (Chicago)

## Superintendent

J. D. Shoop
F. W. Dunlap
T. F. McLamarrah
T. W. Everitt
H. V. Lynn
T. C. Clendenen
J. D. Shoor
H. M. Hinkle
J. D. Knight
G. W. Gayler
H. T. White
J. D. Shoop
M. N. Todd
E. A. Doolittle
L. A. Shafer
D. H. Wells
W. G. Thompson
G. T. Smith
W. W. Earnest DeWitt Elwood
G. P. Chapman
L. C. SMITH
A. R. Hiett
S. E. Reecher
J. D. Shoop

## School

Dallas City
Danville
Decatur
Dekalb Tp.
Delavan
Des Plaines (Maine Tp.)
Divernon Tp.
Dixon
High School
North Dixon High School
Downer's Grove
Drury Academy (Aledo)
Drummer Tp. (Gibson City)
Dundee
DuQuoin Tp.
Dwight
Earlyille
East High School (Aurora)
East Moline Tp.
East St. Louis
Edwardsville
Effingham
Eldorado Tp.
Elgin
High School
Elgin Academy
Elmhurst
High School
Evangelical Proseminar
Elmwood
El Paso Union
El Paso Union
Equality Tp.
Eureka
High School
College Prep. School
Evangelical Proseminar (Elmhitrst)
Evanston
Township High School
Evanston Academy
Fairbury Tp.
Fairfield
Farmer City
Moore-Tp
Ferry Hall (Lake Forest)
Fisher F. L. Lowman
Flora
Harter-Stanford Tp.
Forrest
Dean Parrill
Frances Shimer School (Mt. Carroll)
Freeport
Fulton
Galena
Galesburg
Galva
Geneseo Tp.
Geneva
Genoa
Georgetown Tp.
Gibson City
Drummer Tp.
Gilman
Godrrey
Monticello Seminary
Grand Prairie Seminary (Onarga)
Granite City
Grayville
Green pield
Greenup
Green Valley
Greenview
Greenville
Griggsville
Hall Tp. (Spring Valley)
Hamilton
Harlem Consolidated School (Rockford)
Harrisburg Tp.
Harrison Technical Higi School (Chicago)
Harter-Stanford Tp. (Floya)
Harvard
Superintendent
Elsie H. Giese
G. P. Randle
J. O. Englemann
M. R. Staker
IV. R. Snyder
H. H. Hagen
G. C. Butler
J. V. Clark
C. A. Brothers

Lloyd B. Mann
C. M. Bardwell
D. Walter Potts

Charles F. Ford
O. C. Bailey

Robert I. White
A. M. Nichelson
C. C. Condit

Carl B. Moore
)J. D. Siloop
go) J. D. Siloop

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## Principal

Ray Babcocr
A. W. Smalley

Jesse H. Newlon
F. M. Giles
H. V. Porter
C. M. Himel
J. O. Hurf
C. D. Booker

Gladys Gaylord
M. Maude Manley
G. F. Baumeister
H. T. McKinney

Lulu Moulton
I. G. Stull

Ella M. Brown
Nellie Smith
K. D. Waldo
D. B. Hoffman
H. J. Alvis
R. C. Sayre

Charles O. Danneburger
O. E. Barr
W. L. Goble
H. M. Buckley
V. C. Plummer

Daniel Irion, Dir.
Harriet Erlbacher
Paul M. Mulliken
James E. Armstrong
J. B. Boswell
F. D. Thomson

Houta S. Bredin
Daniel Irion, Dir.
W. F. Beardsley
E. W. Marcellus
E. W. Powers
K. O. Holland
H. D. Eickelberg

Marion Coats
Lillian Briscoe
S. J. Curlee
O. T. Marston

William P. McKee, Dean
L. A. Fulwider

Mrs. C. R. Flatt
leslie A. Homrich
A. W. Willis

Margaret Jacobson
F. J. Mabrey
C. E. Bates

Margaret Spraker
O. P. Rees
H. T. McKinney

Martina C. Erickson
Hubert Phillips
W. F. Coolidge

Edwin N. Wright
Isla F. Sutherland
Lula K. Smith
IIenrietta Evans
Hazel Alkire
Alexanda Long
Gertrude Stephens
E. L. Bost

Philena Clarke
Earl M. Pallett
Harry Taylor
Frank L. Morse
S. J. Curlee

Floyd E. Dewhirst

## School

Harvard School (Chicago)
Harvey Thornton Tp.
IIavana
Hebron
Henry
Herkin Tp.
Hyde Park High Schiol
(Chicago)
Heyworth
Higilland
Higilland Park
Township High School
Hillsboro
Hinckley
Hindsboro Union
Ifinsdale Tp.
Ifittle Tr. (Armington)
Homer
Hoopeston
Hume Tp.
Hutsonville Tp.
Illinois Woman's Cohiege. Academy (Jacksonzille)
illiopolis
Industry Tp.
Jacksonville
High School
Illinois Woman's Col. Acad.
Routt College Academy
Whipple Academy
Iennings Seminafy (Aurora)
ferseyville
Jounston City
R. Henry

Joinn Swaney School (McNabb)
Joint Tp. (Tiskilva)
loliet Tp.
J. Sterling Morton Tp.
(Cicero)
Kankakee
Kansas
Keithsburg
KENilworth
New Trier Tp.
Kenwood Institute (Chicago)
Kewanee
Kinmundy
Knoxville
Lacon Union
LaGrange
Lxons Tp.
LaHarpe
Lake Higif School (Chicago)
Lake Forest
Lafe Forest Acaifemy
Ferry Hall.
Lake View High Sciool (Chicago)J. D. Shoop
Lanark
Lane Tecienical Higit School
(Chicago)
La Salle-Peru Tp. (La Salle)
Latin School (Chicago)
Lawrenceville Tp.
Lena F. P. Donner
LeRoy
Lewistown
Lexington
Libertyville
Lincoln
Litchfield
Lockport Tp.
loda
Lovington Tp.
Loyola Academy (Chicago)
Lucy Flower Techinical Hicir
Scroon. (Chicazo)
Iyons Tp. (LaGrange)
Mchenry
McKinley High Schoor. (Chicago) Ella Flagg Young
Miclean W. H. Earnhart
McLeansboro
Louis A. Uire

## Principal

J. J. Schobinger
L. W. Smith

Mrs. Sara E. Pierce
Maybelle Taylor
Emma Ponzer
H. G. Spear

Hiram B. Loomis
Lois White
Adelle Grunewald
R. L. Sandwick
J. M. Avery

Emma B. Richardson
Margaret Gerfin
Olga V. Hofacker
H. P. Pangert
W. R. Lowery
W. F. Wollenhaupt

Harry Thrasiler
Joseph R. Marter, Pres.
Louise Gates
R. H. Malcomson
C. E. Collins

Joseph R. Harker, Pres.
Rev. John W. Crowe, Pres.
C. H. Givan

Bertha A. Barber
C. J. Ramsay
E. D. Lavrence
K. M. Snapp
J. Stanley Brown
iI. V. Church
W. R. Towsley

Ruth Linder
Ethel Stuart
II. E. Brown

Mrs. Stella I)yer-Ioring
I. P. Rinker

Gus A. Spitze
Pearl Harkis
F. W. Davis
G. H. Wilkinson

Jane Robertson
Edward F. Stearns
John W. Richards
Marion Coats
B. Frank Brown

Ellen Louise Stoy
W. J. Bogan
T. J. McCormack
R. P. Bates
F. W. Cox

Elsie English
Bert Reeves
G. E. Round

Leila Renner
F. L. Holch

Bert Hudgins
J. C. Wiedrich

Arvid P. Zetterberg
Ethel L. Chapman
L. W. Chatham

Simon Nicholas, SJ
Dora Wells
G. H. Wilkinson
P. J. Dorr

George M. Clayberg
Belle Fairfield
Helen Hargett

## School

Superintendent
McNabb
John Swaney School.
Macomb

Wigh School
Madison
Magnolia
Maine Tp. (Des Plaines)
Mansfield
Manteno
Manual Training High School (Peoria)
Marengo
Marion Tp.
Marissa Tp.
Maroa L. R. Blohm
Marseilles
Marshall High School (Chicazo E. A. Collins
Marshall Tp.
Martinsville
Mason City
Mattoon
Maywood Proviso Tp.
Mazon Tp.
Medill High School (Chicago)
Mendon
Mendota
Metropolis
Milford Tp.
Minonk
Moline
Momence
Monmouth
Monticello
Monticello Seminary (Godfrey)
Moore Tp. (Farmer City)
Morgan Park High School (Chicago)
Morgan Park Preparatory Schools (Chicago)
Morris
Morrison
Morrisonville
Morton Tp.
Mound City
Mt. Carmel
Mt. Carroll
High School
Frances Shimer School.
Mt. Morris College Academy
Mt. Pulaski Tp.
Mt. Sterling
Mt. Vernon Tp.
Moweaqua
Murphysboro Tp.
Naperville
High School
Northwestern Col. Acad
Nashville
Neoga Tp.
Newman Tp.
Newton
New Trier Tp. (Kenilworth)
Nokomis
Normal
High School
University High School
North High School (Dixon)
North Park College Academy
(Chicago)
Northwestern College Academy
(Naperiille)
Oak Park \& River Forest Tp. (Oak Park)
Oblong Tp.
Olney Tr.
Onarga
High School
Grand Prairie Seminary
Oregon
Ottawa Tp.
Palatine Tp.
Palestine Tr.

## Principal

E. D. Lawrence
B. H. Watt
W. P. Morgan, Pres.
H. H. Janssen

Margaret C. Bailey
C. M. Himel

Ethel A. Ranson
Edna Brand
William N. Brown
Charles O. Haskell
Oren Coleman
M. L. Mcmanus

Erna Reller
Elinore E. Bates
l.ouis J. Block

Lewis Williams
Harry L. Ryan
Nettie C. Jencks
H. B. Black

John E. Witmer
E. C. Shields

Avon S. Hall
Ruth H. Fraser
B. J. Dean

Mrs. Rose Cutting
H. W. McCullocif

Gretchen Schiffeauer
E. P. Nutting
E. E. Wheeler

Mary Findley
Ruby L. Allen
Martina C. Erickson
H. D. Eickelberg

Јонn H. Heil
Harry D. Abells
L. C. Robey

Mary L. Barnes
Matilda I. Pinkerton
T. L. Соок

Mary Roberson
J. T. Dorris

Zella A. Petty
W. P. McKee, Dean
J. S. Noffsinger, Pres.
L. F. Fulwiler

Clara L. Doocy
Silas Echols
Chester F. Lay
G. J. Koons
V. Blanche Grailam
C. J. Attig

Walter Krumsiek
W. L. Hagan
J. H. Trinkle
R. A. Deffenbaugi
H. E. Brown

Bessie Patton
R. W. Pringle

Glanys Gaylord
C. J. Wilson
C. J. Attig
M. R. McDanifi.
V. I. Brown
H. W. Hostettler

Lillian Savage
Hubert Phillips
Sue L. Wilson
Charles H. Kingman
Citarles E. Lowman
D. B. Fager

## School

Superintendent
Pana Tp.
Paris
Parker Higii School (Chicago)
F. W. Parker School (Chicago)

Pawnee Tp.
Paw Paw
Paxton
Perin
Peoria
Academy of Our Lady
Averyville High School
Bradley Polytech. Inst.
Central High School
Manual Training High Scherol
Peotone
Petersburg
Phillips High School (Chicago)
Pittsfield
Plano
Polo
Pontiac Tp.
Princeton Tp.
Princeville
Propiletstow.
Proviso Tp. (Maywood)
QUINCY
High School
St. Mary's Academy
Rantoul
Raymond
Richmond
Ridgefarm Tp.
Riverside Tp.
Robinson Tp.
Rochelee
Rock Falis
Rockford
High School
Harlem Consolidated School
St. Thomas School
Rock Island
High School
Augustana Col. Acad.
Villa de Chantal

Rollo Consolidated
ROODHOUSE
Rosevilee Tp.
Rossvilee
RushVilee
St. Anne
St. Charles
St. Elmo
St. Mary's Academy (Quincy)
St. Mary's High School (Bloomington)
St. Thomas School (Rockford)
Salem
Sandwich
Savanna Tp.
Saybrook
Senn High School (Chicago)
Sheffield
Shelbyville
Sheldon
Sidell Tp.
Southern Collegiate Inst. (Albion)
Southern Illinois Normal Univ.
High School (Carbondalc)
Sparta Tp.
Springfield
High School
UrSuline Academy
Spring Valley
Hall Tp.
Stan ford
Staunton
Sterling Tp.
Stockland Tp.
Stockton
Stonington
Streator Tp.
Stronghurst
Sulirvan
J. G. Moore
J. D. Shoof

IIenry E. Cobb
O. J. Barnum

Robert C. Smitif

IIarry E. Iler
G. T. Smith
G. WV. Lawrence
T. H. Finley
I. D. Shoor
J. C. Reeder
i. L. Tate
C. H. Anderson
IV. M. Loy
V. R. McKnight
E. G. Bauman
E. H. Miller
E. F. Mrtchele

Oswell G. Treadway

Herman Wimmer
E. O. Phares
R. G. Jones
E. C. Fisher

Mother Borgia
J. F. Pursifull
I. A. Smothers
C. E. Knapp
E. L. Kimball
M. F. McAuley

Charles E. Kuechler
I. T. Blue
IV. 'W. Woonblery

George White
J. D. Shoor
J. H. Martin
A. F. Lyle
P. F. Grove
II. S. Magill. In.
C. W. Moore

William E. Eccees
T. C. MyERS
G. E. Lowry
W. S. Pope
B. H. Gault

## Principal

W. E. Andrews
T. J. Beecher

William B. Owen
Flora J. Cooke
W. B. Rose

Grace M. Currier
S. D. Huddleston
F. B. Morgan

Sister Marietta
Hazel Broad
T. C. Burgess, Dir.
A. W. Beasley

Wicliam N. Brown
G. W. Lawrence

Beulah M. Wood
Spencer R. Smith
Nellie A. Moore
Mr. Coble
E. L. Davis

Arthur Verner
W. R. Spurrier

Orfha Johnson
Cecelia Whelpley
John E. Witmer
Zens L. Smith
Mother Mary Petra
Jessie Mcharry
O. B. Wright

Pearl C. Marsden
L. A. Tohill
T. H. Ziegler
T. O. Marberry
R. M. Ladd

Miss Cowing
C. P. Briggs

Earl M. Pallett
Sister M. Gabrielea
A. J. Burton
J. Mauritzson

Sister Mary Agnes
Alfred Tate
S. T. Wallage
M. P. Wilkins
O. H. Worley

Laura L. Knowles
Ruth C. Becker
Mary Langwill
Ernest T. Jackson
Mother Mary Petra
Rev. M. Weldon
Sister M. Gabriella
E. W. Rodgers

Maude Webster
W. F. Martin

Frances Hanson
Benjamin F. Buck
J. H. Martin
I. B. Potter
J. A. Vankirk
V. W. McIntire
F. G. Warren

St. John W. Wilton
I. M. Allen

Mother Antonia
E. L. Bost

Mrs. C. W. Moore
Ellen A. Muir
E. T. Austin

Ottis Hoskinson
Emanuel Halbich
Nell Blodgett
O. A. Rawlins

Lucile White
Olive E. Martin

## School

Sycamore
Taylorville Tp.
Thornton Tpr (Harzey)
Tiskilwa Joint Tp.

## Toluca

Toulon Tp.
Tuley High School (Chicago)
Tuscola
Union A cademy (Anna)
University High School (Chicago)
Urbana
Ursuline Academy (Springfield)
Vandalia
Vermilion Grove
Vermilion Academy
Vienna Tp.
Villa de Cifantal (Rock Island)
Villa Grove
Virden
Virginia
Waller High Scheol (Chicago)
Walnut
Warren
Warsaw
Washburn Tp.
Washington
Waterloo
Watseka
Waukegan Tp.
Waverly Tp.
Wenona
West Chicago
West High School (Aurora)
Western Illinois State Normal Academy (Macomb)
Western Military and Naval Academy (Alton)
Westvile Tp.
Wheaton
High School J. B. Russell
Wheaton Col. Academy
Whipple Academy (Jacksonville)
White Hall
J. B. Hendricks

Guy W. Bedell
Wilmington
Wood River
Woodstock
Wyoming
Yorkville

## Superintendent

O. E. Peterson
J. H. Glaeser
J. D. Shoop
W. D. Waldrip
S. R. Lamb
M. T. Vambleve

Sister Mary Agnes
E. C. Franklin
G. G. Scearce

Laura mason
Oliver S. Westcott
E. A. Lansche

Mary Johnston
L. AdA Kreider
V. G. Catlin

Charles F. Steiner
Mary J. Laycock
W. C. Knoelk
L. W. Ragland
irma M. Bumgarner
Laura G. Whitmire
K. C. Merrick
W. P. Morgan, Pres.

George D. Eaton
Sherman Cass
Ella M. Gregg
William Rice
C. H. Givan

Robert G. Smith
Paul S. Conklin
G. W. Botteron

Jessie E. Jewett
A. Lauder

Elizabeth Hapch

## PARTIALLY ACCREDITED SCHOOLS

East St. Louis
Farmington
E. A. Huff
J. W. Hugres

Rose Hutchins

## DESCRIPTION OF SUBJECTS ACCEPTED FOR ADMISSION

The amount of work in each of the foregoing subjects whiclı corresponds to the minimum number of credits assigned is shown by the description of subjects below.

1. Agriculture.-Courses in agriculture should be arranged for periods of not less than 36 weeks. Such a course may be accepted for one unit of entrance credit, and two such courses may be accepted for two units, provided the work covered by each course is so closely related in its parts as to constitute one of the generally accepted divisions now recognized in agricultural work. At least one-half the time should be devoted to laboratory work, and note-books should be presented.
2. Algebra, One and one-half units.-Fundamental operations, factoring, fractions, simple equations, extraction of roots, radicals, quadratic equations and equations reducible to quadratic form, surds, theory of exponents, proportion and variation, logarithms, and the analysis and solution of problems involving these principles.

Algebra, One unit.-Fundamental operations, factoring, fractions, simple equations, extraction of roots, radicals of second order, fractional exponents, variation and proportion, quadratics, including completing the square and simultaneous equations having one quadratic and one linear equation and quadratic systems of simple form.

See High School Manual for detailed outline of first year of algebra. Students desiring to continue their study of mathematics in the University will need to present one and one-half units of algebra.
3. Astronomy.-In addition to a knowledge of the descriptive matter in a good text-book, there must be some practical familiarity with the geography of the heavens, with the various celestial motions, and with the positions of the conspicuous naked-eye heavenly bodies.
4. Bookkeeping.-The unit of work in bookkeeping for college entrance should consist of a working knowledge of both single and double entry bookkeeping for the usual lines of business. The student should be able to change his books from single to double entry and from individual to proprietorship. At least one set of transactions should be kept by single entry and at least two sets by double entry in which the uses of the ordinary bookkeeping books and commercial papers should be involved. The student should be drilled in the making of profit and loss statements and of balance sheets and should be able to explain the meanings of the items involved in both kinds of instruments. The work should be done under the immediate supervision of a teacher and the student should devote at least ten periods of not less than forty minutes full time in class each week for one acadernic year.
5. Botany.-A familiar acquaintance with the general structure of plants and of the principal organs and their functions, derived to a considerable extent from a study of the objects, is required; also a gencral knowledge of the main groups of plants; and the ability to classify and name the more common species. Laboratory note-books and herbarium collections should be presented.
6. Business Law.-The amount of business law which is accepted is indicated by the ground covered in any of the ordinary text-books on the subject, such as Spencer's Elements of Commercial Law, Burdick's Business Law, and White's Elements of Commercial Law.
7. Chemistry.-The instruction must include both text-book and laboratory work. The work should be so arranged that as least one-half of the time shall be given to the laboratory. The course as is given in the best high schools in one year will satisfy the requirements of the University for the one unit for admission. The laboratory notes, bearing the teacher's indorsement, must be presented as evidence of the actual laboratory work accomplished. Candidates for admission may be required to demonstrate their ability by laboratory tests.
8. Civics.-Such an amount of study of the American Government, its history and interpretation, as is indicated by any of the usual high-school textbooks on civil government, is regarded as sufficient for one term. The work may advantageously be combined with the elements of political economy.
9. Commerclal Geography.-The amount and character of the work accepted in this subject is indicated by the scope of such books as Redway's Commercial Geography, Adam's smaller book on the same subject, the textbooks of Brigham, or Robinson, or Trotter's work.
10. Domestic Science.-(a) An equivalent of 180 hours of prepared work with at least two recitation periods a week in foods. (b) An equivalent of 180 hours of prepared work with at least one recitation period a week in clothing. (c) An equivalent of 180 hours of prepared work with at least two recitation periods a week on the home. (Two periods of laboratory work are considered equivalent to one period of prepared work). Of the foregoing (a) will be accepted as a unit's work; or two half units taken from (a) and (b), or (a) and (c), or (b) and (c) will be accepted as a unit's work. The work is to be done by trained teachers with individual equipement, as determined by inspection.
11. Drawing.--Free-hand or mechanical drawing, or both. Drawing-books or plates must be submitted. The number of credits allowed depends on the quantity and quality of the work submitted.
12. Economics.-The principles of economics, with economic history, as given in any good elementary text-book.
13. English Composition and Rhetoric.-Correct spelling, capitalization, punctuation, paragraphing, idiom and definition; the elements of rhetoric. The candidate will be required to write two paragraphs of about one hundred fifty words each to test his ability to use the English language. This work counts for one unit.
14. English Literature.-(a) Each candidate is expected to have read certain assigned literary masterpieces, and will be subjected to such an examination as will determine whether or not he has done so. With a view to a large freedom of choice, the books provided for reading are arranged in the following groups from which at least ten units are to be selected, two from each group. Each unit is here set off by semicolons.
I. The Old Testament, comprising at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther; the Iliad, with the omission, if desired, of Books XI, XIII, XIV, XV, XVII, XXI; the Odyssey, with the omission, if desired, of Books I, II, III, IV, V, XV, XVI, XVII; Virgil's Aencid. The Iliad, the Odyssey, and the Aencid should be read in English translations of recognized literary excellence.

For any unit of this group a unit from any other group may be substituted.
II. Shakespeare's Merchant of Venice; Midsummer Night's Dream; As You Like It; Twelfth Night; Henry the Fifth; Julius Caesar.
III. Defoe's Robinson Crusoe, Part I; Goldsmith's Vicar of Wakeficld; Scott's Ivanhoe or Quentin Durward; Hawthorne's House of Seven Gables; Dickens' David Copperfield or Tale of Two Cities; Thackeray's Henry Esmond; Mrs. Gaskell's Cranford; George Eliot's Silas Marner; Stevenson's Treasure Island.
IV. Bunyan's Pilgrim's Progress, Part I; The Sir Roger de Coverley Papers in the Spectator; Franklin's Autobiograply (condensed) ; Irving's Sketch Book; Macaulay's Essays on Lord Clive and Warren Hastings; Thackeray's English Humorists; selections from Lincoln, including the two Inaugurals, the Speeches in Independence Hall and at Gettysburg, the Last Public Address, and the Letter to Horace Greeley, with a brief memoir or estimate ; Parkman's Oregon Trail; either Thoreau's Walden or selection from Huxley's Lay Sermons; Stevenson's Inland Voyage and Travels with a Donkey.
V. Palgrave's Golden Treasury (First Series), Books II and III, with especial attention to Dryden, Collins, Gray, Cowper, Burns; Gray's Elegy in a Country Churchyard and Goldsmith's Deserted Village; Coleridge's Ancient Mariner and Lowell's Vision of Sir Launfal; Scott's Lady of the Lake; Byron's Childe Harold, Canto IV, and Prisoner of Chillon; Palgrave's Golden Treasury (First Series) Book IV, with especial attention to Wordsworth, Keats, and Shelley; Poe's Raven, Longfellow's Courtship of Miles Standish, Whittier's Snow Bound; Macaulay's Lays of Ancient Rome and Arnold's Sohrab and Rustum; Tennyson's Gareth and Lynette, Lancelot and Elaine, The Passing of Arthur; Browning's Cavalier Tunes, The Lost Leader, How They Brought the Good News from Ghent to Aix, Home Thoughts from Abroad, Home Thoughts from the Sea, Incident of the French Camp, Hervé Riel, Pheidippides, My Last Duchess, Up at a Villa-Down in the City.
(b) In addition to the foregoing the candidate will be required to present a careful, systematic study, with supplementary reading, of the history of either English or American literature.
(c) The candidate will be examined on the form and substance of certain books in addition to those named under (a). For 1916 the books will be selected from the list below. The examination will be of such a character as to require a minute study of each of the works named in order to pass it successfully. The list is:

Shakespeare's Macbeth; Milton's Comus, L'Allegro, and Il Penseroso; Burke's Speech on Conciliation with America, or Washington's Farewell Address and Webster's First Bunker Hill Oration; Macaulay's Life of Johnson, or Carlyle's Essay on Burns.

The work outlined in (a), (b), and (c) counts for two units.
(d) The three units in English composition, rhetoric, and literature, as described above, are required for all students. A fourth unit may be obtained for one full year's additional work in the study of English and American authors.
15. French, First year's work.-Elementary grammar, with the more common irregular verbs. Careful training in pronunciation. About 100 pages of easy prose should be read.

Second year's z'ork.-Advanced grammar, with all the irregular verbs. Elementary composition, and conversation. About 300 pages of modern French should be read.

Third year's zork.-Intermediate composition, and conversation. About 500 pages of standard authors should be read, including a few classics.

Fourth year's work.-Advanced composition, and conversation. Standard modern and classical authors should be read and studied to the extent of 700 pages.
16. Geology.-The student must show familiarity with the principles of dynamic and structural geology, and some acquaintance with the facts of historical geology as presented in Scott's Introduction to Geology, Brigham's Text-book of Geology, or an equivalent, together with at least an equal amount of time spent in laboratory and field work. The laboratory work should follow one or more of the lines indicated below, and note-books should be presented showing the character and amount of work done. (a) Studies of natural phenomena occurring in the neighborhood which illustrate the principles of dynamic geology. Each study should include a careful drawing of the object and a written description of the way in which it was produced. (b) Studies of well-
marked types of crystalline, metamorphic, and sedimentary rocks which will enable the student to recognize each type and state clearly the conditions under which it was formed. (c) Studies of minerals of economic value, including the characteristics of each, its origin, and the uses to which it is put. (d) Studies of the types of soil occurring in the neighborhood, including the origin of each and the cause of differences in appearance and fertility.
17. Geometry.-(a) Plane Geometry. Special emphasis is placed on the ability to use propositions in the solution of original numerical exercises and of supplementary theorems.
(b) Solid and Spherical Geometry. Applications to the solution of original exercises are emphasized.
18. German.-It is recommended that pupils be trained to understand spoken German and to reproduce freely in writing and orally what has been read. Whatever method of teaching is used, however, a thoro knowledge of grammar is expected. No attempt is made in what follows to give more than a general outline for the work of successive years, but the German department welcomes inquiries from teachers who wish further suggestions in the planning of courses.

First Year's Work.-At the end of the year pupils should be able to read intelligently and with accurate pronounciation simple German prose, to translate it into idiomatic English, and to answer in German easy questions on the passage read. A few short poems may well be memorized. Elementary grammar should be mastered up to the subjunctive as arranged in most books for beginners. Easy prose composition rather than the writing of forms will be the test of this grammatical work in entrance examinations given by the University.

Second Year's Work.-Only modern writers should be read, preference being given to material which has a distinctly German atmosphere and which lends itself readily to conversational treatment in the class room. The regular recitations should afford constant oral and written drill on the elementary grammar of the previous year. In addition, the beginner's book should be completed, but more importance is attached to accuracy and facility in simple modes of expression than to a theoretical knowledge of advanced syntax.

Third Year's Work.-Most of the time should still be devoted to good modern prose. There should be some work in advanced prose composition-based on German models-and the daily recitations should continue to afford abundant oral practise. Pupils ought by this time to understand spoken German fairly well.

Fourth Year's Work.-At the end of this year a pupil should be able to read at sight any prose or verse of moderate difficulty. He should also be able to express himself orally or in writing with considerable readiness and a high degree of accuracy. It is recommended that work in composition take the form of free reproduction of portions of the texts studied rather than translation of English selections. The reading should be divided about equally between modern and classical authors.
19. Greek, First Year's Work.-The exercises in any of the beginning books, and one book of the Anabasis or its equivalent.

Second Year's Work.-Two additional books of the Anabasis and three of Homer, or their equivalents, together with an amount of Greek prose composition equal to one exercise a week for one year.

Third Year's Work.-Three additional books of the Iliad, three of the Odyssey, and Books VI, VII, VIII of Herodotus, or an equivalent from other authors.
20. History.-One, two, or three units may be presented, to be chosen from the following list:

Ancient history to 800 A . D., one unit.
Medieval and modern history; one unit.
English history, one-half or one unit.
American history; one-half or one unit.
Examinations for entrance will be given in all these subjects. The examination for each unit is intended to cover one full year of high-school work.
21. Latin, First Year's Work.-Such knowledge of inflections and syntax as is given in any good preparatory Latin book, together with the ability to read simple fables and stories.

Sccond Ycar's Work.--Four books of Caesar's Gallic War, or its equivalent in Latin of equal difficulty; the ability to write simple Latin based on the text.

Third Year's Work.-Six orations of Cicero; the ability to write simple Latin based on the text; the simpler historical references and the fundamental facts of Latin syntax.

Fourth Year's Work.-Six books of Virgil's Aeneid, with history and mythology; the scansion of hexameter verse.
22. Mastal Training.-The requirement for one unit is the equivalent of 360 forty-minute periods in manual training following the syllabus prepared by the manual-training section of the High School Conference.
23. Music. - $\mathrm{P}_{2}$ t the present time, no high schools are accredited in music, and credit is therefore given only by examination at the University. As fast as possible, schools offering acceptable work in music will be accredited therefor. In the examination for two units in piano, students are required to play the following or the equivalent: Simple scales and arpeggios at fairly rapid tempo; scales in double octaves at a moderate speed; Bach, two-part invention; Czerny, Op. 229; an easy sonata of Haydn, Mozart, or Beethoven. In the examination for two units in voice, students are required to sing the following or the equivalent: Simple scales and arpeggios; studies selected from Concone, Sieber, Panofka, and Panseron; songs selected from Schubert, Schumann, and Mendelssohn. In the examination for two units in riolin, students are required to play the following or the equivalent: Gordon's Fountain Studies; Hermann's Scale Studies; Wahlfahrt's Etudes, Book I; Kayser's Etudes; Pleyel, Duet; selections from Weiss and Blumenstengel; miscellaneous pieces by Daucla, Papini, Weidig, Sitt, etc.
24. Physics.-One year's high-school work covering the elements of physical science as presented in the best of the current high-school text-books of physics. Laboratory practise in elcmentary quantitative experiments should accompany the text-book work. The candidate's laboratory note-book will be considered as part of the examination.
25. Physical Geography.-The amount and character of the work required may be seen by referring to the texts of Tarr; Salisbury, Barrows and Tower; Gilbert and Brigham; or Davis; the recitations must be supplemented by at least an equal amount of time devoted to laboratory work. The laboratory
exercises should follow one or more lines such as are indicated below. Each student should present a note-book showing what he has done.
(a) Studies in mathematical geography in which map and scale only are used. These should embrace such topics as length of a degree in longitude in various latitudes; length and breadth of continents, etc., in degrees and miles; relative latitudes of places; distances between cities, etc., in degrees and miles; difference in length of parallels and meridians; problems in time; location of time belts, etc.
(b) Studies of local topographic features which illustrate the various phases of stream work. Each study should include a drawing or topographic map of the object, and a full, clear description of the way in which it was formed.
(c) Studies of glacial deposits as shown in terminal and ground moraines, kames, eskers, etc., distribution of dark and light colored soils; occurrences of lakes, ponds, gravel beds, clay banks, and waterbearing strips of sand and gravel.
(d) Studies of stream work as shown in the topographical sheets which may be obtained from the United States Geological Survey at a nominal cost.
(e) Studies of the form, size, direction and rate of movement of high and low barometer areas, and the relation of these to direction of wind, character of cloud, distribution of heat, and amount of moisture in the air, as shown in the daily weather maps. Later these studies should lead to the making of weather maps from the data furnished by the daily papers, and to local prediction of weather changes based on the student's own observation.
(f) Studies of the climate of various countries compared with our own, the necessary data being derived from such topographic, rainfall, wind, current, and temperature maps as are found in Sydow-Wagner's or Longman's atlases.
26. Physiology.-For one-half unit: The anatomy, histology, and physiology of the human body and the essentials of hygiene, tauglt with the aid of charts and models to the extent shown in Martin's Human Body (Briefer Course). For more than one-half unit, the course must include practical laboratory work.
27. Spanish, First Year's Work.-Elementary grammar, including thorough drill in the irregular verbs; careful training in pronunciation, and translation of simple Spanish when spoken; reading of about 100 pages of easy prose; simple composition and dictation.

Second Year's Work.-In addition to the foregoing, about 300 pages of modern prose; elementary syntax; dictation, composition, and translation of spoken Spanish continued.
28. Trigonometry.-The work should cover the field of plane trigonometry, as given in standard text-books, including the solution of right and oblique triangles. Special emphasis is placed upon the solution of practical problems, trigonometric identities, and trigonometric equations.
29. Zoology.-The instruction must include laboratory work equivalent to four periods a week for a half-year, besides the time required for text-book and recitation work. Note-books and drawings must be presented to show the character of work done and the types of animals studied. The drawings are to be made from the objects themselves, not copied from illustrations, and the notes are to be a record of the student's own observations of the animals examined. The amount of equipment and the character of the surroundings must, of course, determine the nature of the work done and the kind of animals studied; but in
any case the student should have at least a fairly accurate knowledge of the external anatomy of each of eight or ten animals distributed among several larger divisions of the animal kingdom, and should know something of their life histories and of their more obvious adaptations to environment. It is recommended that special attention be given to such facts as can be gained from a careful study of the living animal. The names of the largest divisions of the animal kingdom, with their most important distinguishing characters, and with illustrative examples selected, when practicable, from familiar forms, ought also to be known.

## GRADUATION---FIRST DEGREES

## THE BACHELOR'S DEGREE

A bachelor's degree is conferred upon any student who satisfactorily completes the curriculum described under one of the various colleges and schools, doing either the first three years, or the last year, of his work in residence at the University.

## Residence Requirement

If the student is in residence at the University for one year only, that year's work must be taken in the college from which the degree is expected. No person will be recommended for a degree by the faculty of any college in the University unless he has been a regularly registered student in that college for at least one year.

## Number of Hours Required

A candidate for a bachelor's degree must pass in the subjects marked prescribed in his chosen curriculum, and must conform to the directions given in connection with that curriculum in regard to electives. In the College of Liberal Arts and Sciences, the College of Commerce and Business Administration, and the College of Agriculture, credit for 130 hours is required for graduation. In the College of Engineering, in the College of Law, in the Library School, and in the School of Music, the candidate must complete the curriculum as laid down.

In order to receive his bachelor's degree a student must have secured grades of not less than 75 in subjects aggregating at least three-fourths of the work, prescribed or elective, required for such degree.

## Military Science and Physical Training

The number of hours required includes, for men, five in military drill and tactics and two in physical training; and for women, three in physical training. Men excused from the military requirements, and women who do not take the course in physical training, must elect instead an equivalent number of hours in other subjects.

## Thesis

In all cases in which a thesis is required*, the subject must be announced not later than the first Monday in November, and the completed thesis must be submitted to the dean of the proper college by June 1. The work must be done under the direction of the professor in whose department the subject belongs, and must be in the line of the curriculum for which a degree is expected. The thesis must be presented upon regulation paper; it is deposited in the library of the University.

## Second Bachelor's Degree

A student who has already received one bachelor's degree may receive a second bachelor's degree, provided that all specified requirements for both degrees be fully met, and provided also that the curriculum offered for the second degree include at least 30 semester hours not counted for the first degree.

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## LIST OF FIRST DEGREES

1. The degree of Bachelor of Arts is conferred on those who complete a curriculum in literature and arts, or certain curriculums in science, in the College of Liberal Arts and Sciences.
2. The degree of Bachelor of Science is conferred on those who complete a curriculum in the College of Engineering, in the College of Commerce and Business Administration, or in the College of Agriculture. This degree is conferred on a graduate of the College of Liberal Arts and Sciences who completes a curriculum in chemistry and may be conferred on graduates from other curriculums in this College on recommendation of the faculty. It may also be conferred upon students who offer two years of acceptable college work for admission to the College of Medicine and complete the two years of scientific work in medical subjects and subjects preparatory to medicine which are offered in the Junior College; on the completion of the two additional years in clinical work offered in the Senior College, such students may receive the degree of Doctor of Medicine.
3. The degree of Bachelor of Laws is conferred on those who complete the curriculum in the College of Law.
4. The degree of Doctor of Law is conferred on those who complete the curriculum in the College of Law, satisfying certain special requirements additional to those for the degree of Bachelor of Laws.
5. The degree of Bachelor of Library Science is conferred on those who complete the curriculum in the Library School.
6. The degree of Bachelor of Music is conferred on those who complete one of the curriculums in the School of Music.
7. The degree of Doctor of Medicine is conferred on those who complete the curriculum in the College of Medicine.
8. The degree of Doctor of Dental Surgery is conferred on those who complete the curriculum in the College of Dentistry.

9, 10. The degree of Graduate in Pharmacy, or of Pharmaceutical Chemist, is conferred on those who complete the shorter and the longer curriculums, respectively, in the School of Pharmacy.

## HONORS AND COMPETITIONS

## UNIVERSITY HONORS

The University gives public official recognition to such students as attain a high grade of scholarship by the following system of honors.

## Preliminary Honors

Preliminary Honors are assigned at the completion of the sophomore year on the basis of the average of the grades received during the freshman and sophomore years in all studies except military and physical training. The number of persons to whom honors are awarded may not exceed one-tenth of the membership of the sophomore class. A failure in any subject disqualifies a student from receiving these honors. Preliminary Honors afford an opportunity for sophomores to secure recognition for high scholarship without waiting for graduation.

## Final and Special Honors

(Candidates for the Degrees of B.S., B.Mus., LL.B., and B.L.S.)
Final Honors are assigned on graduation on the basis of the average grades received during the junior and senior years. The number of persons to whom final honors are awarded may not exceed one-tenth of the membership of the senior class. A failure in any subject during the junior and senior years disqualifies a student from receiving these honors. Final honors are designed especially to favor students whose preparatory education has been so imperfect as to prevent them from receiving preliminary honors.

Special Honors are awarded at the close of the senior year. No student may receive such honors who has not completed, before the beginning of his senior year, at least twenty hours' work in the subject, or group of allied subjects, in which the honors are proposed; he must complete thirty hours' work in the same subject, or group of allied subjects, by the end of his senior year, must do such other work as the professor in charge may assign, and must prepare an acceptable thesis. No student is eligible for special honors who, during the senior year, has received a grade of less than eighty per cent. in any subject. Special honors are planned for especially brilliant students who prefer to concentrate their efforts upon a special course. A student may be a recipient of both final and special honors.

## The Degree of Bachelor of Arts with Honors

The faculty of the College of Liberal Arts and Sciences have been authorized to recommend candidates for the degree of Bachelor of Arts with honors in a particular subject. Candidates for the degree with honors will be recommended by the faculty under the following conditions:
(1) The student must have completed the work offered for his major with an average of not less than 90.
(2) He must have completed the work offered for his minor with an average of not less than 85 .
(3) Each candidate is required to present a thesis in his major subject.
(4) Especially poor or careless work in any other subject may, by vote of the faculty, cause the honor degree to be withheld.

The purpose of these honors is not to encourage premature specialization, but to give special recognition to students who have pursued with success correlated courses of study, and to emphasize the importance, for scholarship in any subject, of thoro training in other related subjects. Candidates should announce their intention as early as possible in their college course and consult freely with the head of the department concerned in regard to the selection of their studies.

Candidates for the degree of Bachelor of Science in the College of Liberal Arts and Sciences an eligible for final and special honors under the regulations stated on page 99.

## Freshman Honors

## (College of Liberal Arts and Sciences)

At the close of each year a list is prepared of those members of the freshman class in the College of Liberal Arts and Sciences who have made an especially good record in scholarship. The names of such students are announced at an assembly of the College; notice is also sent in each case to the parent or guardian, and to the principal of the high school of which the student is a graduate.

## List of Honors

The names of the students who received honors under the foregoing regulations during the academic year 1914-15 are published in Part VI of this Register.

## DEBATING AND ORATORY

The University engages yearly in four intercollegiate debates, the teams for which are chosen in a series of competitive preliminaries to which all students are eligible. Through the generosity of Hon. William B. McKinley a gold watch-fob is presented to every speaker who represents the University, either in debate or in oratory.

The I. M. I. Debating League consists of the Universities of Illinois, Minnesota, and Iowa. It holds a debate at each university on the first Friday in December.

The Midwest Debating League consists of the Universities of Illinois, Michigan, and Wisconsin. It holds a debate at each university on the third Friday in March.

The Northern Oratorical League, consisting of Northwestern University, Oberlin College, and the state Universities of Illinois, Iowa, Michigan, Minnesota, and Wisconsin, holds an annual contest on the first Friday evening in May. The contest for 1916 will be held on May 5, at the University of Illinois. The winner receives the Lowden testimonial of one hundred dollars, and the speaker awarded second place, fifty dollars. The Illinois representative is selected in competitive contests open to all undergraduates.

The Intercollegiate Peace Association holds annual state and inter-state oratorical contests to which representatives of this University are eligible. Orations must be upon some phase of the peace question. Cash prizes are offered in both contests.

A Freshman-Sophomore Debate and an Inter-Society Declamation ConTEST are held yearly.

The names of students who represented the University in debate and oratory in 1914-15 are given in the list of honors at the end of this volume.

## The Interscholastic Oratorical Prize

A medal of the value of twenty dollars, and two medals of the value of ten dollars each, are offered annually by the University to the high schools of the State for the best orations delivered in a competitive contest between their representatives. This contest takes place in the spring at the time of the interscholastic athletic meet-in 1916, on May 12.

## THE BRYAN PRIZE

In 1908 Mr . William Jennings Bryan gave to the University the sum of two hundred fifty dollars, from the interest on which a prize of twenty-five dollars is offered biennially for the best essay on the science of government. The contest is open to all matriculated undergraduate students. The essays may not be less than three thousand, nor more than six thousand words in length, and must be left at the President's office not later than the second Wednesday in May. The prize was offered for the first time in 1901. It will be offered next in 1917.

## B'NAI B'RITH PRIZES

The Champaign and Urbana lodge of the Independent Order of B'nai B'rith has donated to the University the sum of fifty dollars, to be awarded in prizes to students of the University for essays on Jewish subjects. The sum named is the third of five annual contributions to be given for this purpose. For information in regard to the conditions governing the awarding of the prizes, address the Registrar, University of Illinois, Urbana, Illinois.

## ARCHITECTURE

## The Francis J. Plym Fellowship in Architecture

By the generosity of Mr. Francis J. Plym, of Niles, Michigan, a graduate of the University of Illinois of the class of 1897, the Trustees have been enabled to establish a fellowship for the advanced study of architecture. The stipend attached to this fellowship is $\$ 1,000$, awarded annually by competition in Architectural Design. The holder of the fellowship is required to spend a year in study and travel abroad. For further information address the Department of Architecture.

## The Joseph C. Llewellyn Prize in Architectural Engineering

In June, 1913, Mr. Joseph C. Llewellyn, of Chicago, a graduate of the University of the class of 1877, established, for a period of four years, a prize of fifty dollars per annum for a problem in design, the competition being limited to students in architectural engineering.

## The American Institute of Architects Medal

Beginning with the class of 1915, the American Institute of Architects offer annually a medal for award to the senior in the department of architecture whose development during the four years' course is the most consistent and best. In making the award the scholarship in all work is considered.

## The Scarab Medal in Architecture

In order to stimulate interest in the work in architecture, the Scarab Society of the department of architecture offers annually a bronze medal to be awarded
during the second semester for the best solution of a problem in architectural design, the competition being limited to students in architecture.

The Prize in Architecture of the American Academy in Rome is open for competition among qualified undergraduates and graduates of certain American architectural schools, including that of the University of Illinois. This prize grants three years of residence and travel abroad for the study of classic and renaissance architecture.

## MILITARY CONTESTS AND PRIZES

## The University Bronze Medals

Bronze medals typical of the University and its Military Department are awarded by the University to the members of the infantry companies and artillery and signal detachments which shall score the greatest number of points at the annual competitive drill, held at some time between May 15 and May 31. The members of the company rifle team making the highest score at gallery target practice are also awarded medals. The medals so awarded become the permanent property of the recipients. A complete roster of the winning organizations is published in the Annual Register of the University for the following year. (See Part VI.)

## The University Gold Medal

The Board of Trustees provides annually a gold medal which is to be awarded, at the annual competitive drill held near the close of the year, to the best drilled student, whose property the medal becomes. Each student must have matriculated in the University and must have completed one semester's work in Military 1 with a grade of not less than 85 , and three semesters' work in Military 2 with a grade of not less than 90 ; and he must have an average standing of not less than 80 per cent. in all of his other studies for the preceding semester, which standing shall be determined by the Registrar. The name of the winner is published in the Annual Register of the University for the following year. The reward is made for excellence in the same details as in the Hazelton contest.

## The Hazelton Prize Medal

Captain W. C. Hazelton provided in 1890 a medal, which is awarded, at a competitive drill held at some time between May 15 and May 31, to the best drilled student. Each competitor must have been in attendance at the University at least sixteen weeks of the current college year; must have had less than five unexcused absences from drill; and must present himself for competition in full uniform.

The award is made for excellence in:

1. Erectness of carriage, military appearance, and neatness
2. Execution of the school of the soldier, without arms
3. Manual of arms, with and without numbers

The name of the successful competitor is published in the Annual Register of the University for the following year. He is given a certificate setting forth the fact, and may wear the medal until the fifteenth day of the May following, when he must return it for the next competition.

## LECTURES AND OTHER GENERAL EXERCISES

A part of the instruction afforded by the University to its students is given through the medium of lectures by distinguished men and women from outside the University faculty and by means of exhibitions, recitals, and other exercises distinct from the regular courses of instruction. A partial list of these exercises for the calendar year 1915 follows. Lectures by members of the University faculty are excluded from this list.

## general university exercises

Convocations
Feb. 22. University Convocation: Address by Professor E. B. Greene and Professor J. W. Garner.
Feb. 24. University Convocation: Address by Dr. Graham Taylor
April 15. University Convocation: Fiftieth anniversary of the death of Abraham Lincoln. Address by Professor D. K. Dodge.
Sept. 22. Annual Convocation for Freshmen.
Dec. 3. University Convocation: Addresses by Dean K. C. Babcock and Professor C. W. Alvord.

## General University Lectures

Feb. 6. Hon. August Schian, Chamberlain to the King of Sweden: "The Lessons of the European War for All Nations."
Feb. 15-19. Professor Luther Anderson, Yale University: "American Trade Interests in the Far East." "The Introduction of Western Methods and Ideals in the Far East," "America's Unsolved Problems in the Philippines," "President Yuan Shih Kai and the Political Reconstruction of China" (Illustrated), "Chinese Architecture" (Illustrated).
May 4. Director George Otis Smith: "Practical Idealism" (under the Auspices of Phi Beta Kappa and Sigma Xi).
May 7. Dr. Jenkin Lloyd Jones: "Above All Nations is Humanity."
May 17. Mr. J. E. MacDougal: "From Ocean to Ocean across the Canadian Rockies" (Illustrated by motion pictures).
June 13. Rev. Joseph W. Cochran: Baccalaureate Address.
Nov. 12. Mr. Gilbert McClurg: "Panoramic Colorado" (Illustrated).
Dec. 4-6. Mr. W. A. Hunsberger: "Racing with Death in Antarctic Blizzards," "The Passing of War," "Montessori and her System."
The Star Lecture Course
Jan. 22. Madame Alma Gluck.
Oct. 16. Madame Olive Fremstad.
Nov. 17. Ben Greet Players.

University Orchestral Concerts
Jan. 19. The New York Symphony Orchestra.
March 23. The Chicago Symphony Orchestra.
May 10. The Minneapolis Symphony Orchestra.
Nov. 22. The St. Louis Symphony Orchestra.
Exhibitions
Jan. 10-26. Art Exhibit. Original paintings by American artists, exhibited by the department of art and design.
Jan. 18-22. Architectural Exhibition. Drawings exhibited at Washington, D. C., in connection with the annual convention of the American Institute of Architects.
March 2-3. Exhibition of Illinois State Florists' Association.
April 18. Exhibition of Floral Arrangements. Held by the class in floral decoration.
April 8-10. Fifth Electrical Show. An exhibit of electrical apparatus and appliances under the management of the Electrical Engineering Society.
May 11-13. Art Exhibit: Student work in landscape gardening.
May 14-15. Public School Art Exhibit.
May 12-15. Architectural Exhibition: Winning drawings submitted for the Scarab Medal in architecture.
May 24-28. Architectural Exhibition: Winning drawings submitted for the Plym Fellowship in architecture.
May 26-28. Architectural Exhibition: Photographs and water color sketches made at the Panama Pacific Exposition.
Sept. 27-30. Architectural Exhibition: Photographs and water color sketches made at the Panama Pacific Exposition.
Nov. 19-21. Architectural Exhibition: Work done by freshmen in the department of architecture.
Nov. 7. Chrysanthemum Show.
Dec. 7-21. Art Exhibit: A collection of paintings exhibited by the Chicago Society of Artists.
Dec. 15-17. Fruit Exhibit: Held in connection with the sixtieth annual convention of the Illinois Horticultural Society.
Entertainments
March 2. Choral Society Concert: Hiawatha's Wedding Feast.
March 6. University Band Concert.
April 12. Chicago Little Theater Company: "The Trojan Women," by Euripides.
April 23-24. Illinois Union Opera: "A Maid and a Myth."
April 29. Concert, the University Choristers.
May 8. Philomathean and Alethenai Societies: "Ralph Roister Doister."
May 13. May Day Festival and Girls’ Stunt Show.
May 14. Interscholastic Oratorical Contest. Glee and Mandolin Club Concert.
May 15. Interscholastic Circus.
May 24. Mr. C. D. Coburn : "The Modern Drama."
June 14. Mask and Bauble: "Milestones."
Oct. 9. Dramatic Reading: Miss Mannheimer (under the auspices of the Drama League).

Oct. 29-30. Mask and Bauble: "Green Stockings."
Nov. 8. Dramatic Reading: "Change," by Mme. Harriet Labadie (under the auspices of the Drama League).
Nov. 10. Concert, United States Marine Band.
Nov. 15. The Kneisel Quartet (under the auspices of the School of Music).
Dec. 3. Illinois-Iowa Debate.
Dec. 10. Der Deutsche Verein: "Alt Heidelberg."
Dec. 14. Annual Concert, Choral and Orchestral Society: "The Creation."

## Lecture Under the Auspices of the University Christian Associations

Jan. 17. Mr. David Caldwell, Louisville, Kentucky: "Can We Still be Christians?"
The Annual Bondurant Bible Lectures
Mar. 14-19. Dr. W. M. Forrest, University of Virginia: "What is Doubt?", "What is Faith?", "Is the Bible Inspired?", "Is God Good?", "Did Jesus of Nazareth Live?", "Is Christ Divine?".

## Woman's League Vocational Conference

Feb. 23. Mrs. Caroline Bartlett Crane: "Municipal Work for Women."
Feb. 22. Professor Abby S. Marlatt, University of Wisconsin: "Opportunities for Women Trained in Household Science".
The School of Religion
Mar. 22. Rt. Rev. Peter J. O'Callaghan: "Relation and Revelation of God to Man".
Mar. 28. Dr. Gerald B. Smith, University of Chicago: "What is Religion?"
April 5. Dean L. B. Fisher, Ryder Divinity School: "Conceptions of the Reality of Heaven and Hell."
April 12. Miss Georgia Chamberlain, University of Chicago: "Teaching the Gospels and Epistles to Young Pupils." Dr. Jenkin Lloyd Jones: "The Universality of Religious Experience."
April 19. Rev. C. W. Gilkey, Hyde Park: "Firsthand Religion."
April 26. Rabbi Leon Harrison, St. Louis, Missouri.

## THE COLLEGE OF LIBERAL ARTS AND SCIENCES

College Assemblies
Jan. 14. Dr. Ozora S. Davis, President, Chicago Theological Seminary: "The Christian Ministry in the Twentieth Century."
Feb. 11. Miss Jane Addams, Head of Hull House Settlement: "Civic and Social Service in its Professional Aspects."
March 11. Dr. Charles P. Emerson, Dean, Indiana University School of Medicine: "The Physician of Yesterday and Today."
April 22. Dr. Charles H. Judd, Director of the School of Education, University of Chicago: "The Modern Educator".
Dec. 9. Mr. Lorado Taft, University of Chicago: "Art as a Career of Public Service".

## Botany

Jan. 26-27. Professor Jagadis Chunder Bose, Presidency College, Calcutta, India: "Plant Autographs and their Revelations", "The Curve of Life and Death".

## Business Administration

Feb. 1-6. Short Course in Business Administration.

## Chemistry

Feb. 18. Dr. Arthur L. Day, Director of the Geophysical Laboratory of the Carnegic Institution, Washington, D. C.: "The Work of the Geophysical Laboratory".
April 23-24. F. W. Kressman, United States Forest Products Laboratory, Madison, Wis.: "The Forest Products Laboratory and its Chemical Problems" (under the auspices of the American Chemical Society), "The Manufacture of Linoleum".
May 21. Professor J. W. Nef, University of Chicago: "The Chemistry of Enzyme Action".
Dec. 14. Dr. P. H. Bates, U. S. Bureau of Standards, Pittsburg, Pa.: "The Constitution of Portland Cement" (under the auspices of the American Chemical Society).
Jan. 15. Dr. David Klein, State Analyst of Illincis, Chicago, Ill.: "Science and Food Legislation" (under the auspices of Phi Lambda Upsilon).

## Education

March 24. Dr. T. W. Galloway: "Constructive Use of the Facts of Sex in the Education of Youth" (under the auspices of Kappa Delta Pi).
Oct. 27. Mr. T. J. McCormack, Principal, LaSalle-Peru Township High School: "Education for the Appreciation of Art", "The Public School and Community Welfare Work".
English
March 15. Mr. F. W. C. Hersey, Harvard University: "The Art of the Theater".
March 30. Dr. Frank Wadleigh Chandler, Dean of the College of Liberal Arts, University of Cincinnati: "Sensibility and Sentimentalism".
Nov. 3-5. Mr. Nicholas Vachel Lindsay, Springfield, Illinois: "The Gospel of Beauty", "Poetry and Democracy".

German
Jan. 14. Mr. Martin Drescher, German-American Poet, Chicago: "Ibsen's Volksfeind" (under the auspices of the Deutscher Verein).

## Zoology

Feb. 23. Dr. Charles W. Stiles, Professor of Zoology, U. S. Public Health and Marine Hospital Service: "Hookworm".

> THE COLLEGE OF ENGINEERING

## College Assemblies

Dec. 7. Mr. Willard Beahan, First Assistant Engineer, Lake Shore \& Michigan Southern Railway, Cleveland, Ohio: "The Engineering of Men".
Jan. 8. Mr. Wharton Clay, Representative, United States Gypsum Company, Chicago, Illinois: "The Gypsum Inclustry".
Jan. 12. Mr. Edward Orton, Dean of the College of Engineering, Ohio State University, Columbus, Ohio: "The Engincer as a Social Force".

Jan. 18. President Henry S. Drinker, Lehigh University, South Bethlehem, Pennsylvania: "Proper Conservation and Development of Our Natural Resources".
Jan. 20. Mr. C. J. Hicks, Welfare Department, International Harvester Company, Chicago, Illinois: "Industrial Betterment and Good Business".
Jan. 21. Mr. A. D. Bailey, Commonwealth Edison Company, Chicago, Illinois: "The Increasing Importance of Coal in the Manufacture of Electrical Energy".
Jan. 24. Mr. W. K. Hatt, Professor of Civil Engineering, Purdue University, Lafayette, Indiana: "Flood Protection in Indiana".
Feb. 27. Mr. Card Wendell, Illinois Steel Company, Joliet, Illinois: "Coal Washing".
March 1. Mr. Seth Temple, Davenport, Iowa: "The Architect as a Business Man".
March 3. Mr. E. C. Lof, General Electric Company, Schenectady, New York: "The Panama Canal and its Electrical Equipment" (illustrated with motion pictures).
March 17. Mr. Daniel W. Mead, Professor of Hydraulic and Sanitary Engineering, University of Wisconsin, Madison, Wisconsin: "Past and Present Engineering in China".
March 22. Mr. Franklin H. Wentworth, Secretary, National Fire Protection Association, Boston, Massachusetts: "Economic Significance of the Fire Waste".
March 24. Mr. F. H. Newell, Consulting Engineer, U. S. Reclamation Service, Washington, D. C.: "Engineering and Economic Results of Reclamation Work".
March 26. Mr. Walter Measday, United Shoe Machinery, Boston, Massachusetts: "Evolution of Footwear" (illustrated with motion pictures),
April 8-10. Electrical Show.
April 15. Mr. H. A. Wheeler, Vice-President, Union Trust Company : "Relation of the Engineer to Business".
April 21-23. Mr. F. H. Newell, Consulting Engineer, U. S. Reclamation Service, Washington, D. C.: "Reconnaissance and Selection of Engineering Projects", "Organization of the Work", "Methods and Results".
May 17. Mr. J. E. MacDougall, Canadian Pacific Railway Company: "Ocean to Ocean Across the Canadian Rockies" (illustrated with motion pictures).
May 20. Mr. R. C. Lanphier, Sangamon Electric Company, Springfield, Illinois: "Electrical Recording Meters".
May 29. Mr. E. P. Merrill, Sales Department, Cadillac Motor Car Company, Detroit, Michigan: "Automobile Design and Construction".
Nov. 16. Professor Alfred Still, Purdue University: "The Present Day Industrial Criterions in England".
Dec. 15. Mr. H. A. Wheeler, Vice-President, Union Trust Company: "The Engineer's Profession Viewed from the Banker's Standpoint".

## Addresses Before the Freshmen Class

Nov. 18. Major J. B. Caughey, Elgin National Watch Company, Chicago, Illinois: "Processes of Manufacture of the Elgin Watch" (illustrated with motion pictures).

Nov. 25. Mr. R. Y. Williams, Director of the Miners' and Mechanics' Institutes: "Alaskan Coal Inspection Trip".
Feb. 17. Mr. R. Y. Williams, Director of the Miners' and Mechanics' Institutes: "Safe and Unsafe Methods of Bituminous Coal Mining".
March 3. Mr. E. A. Lof, General Electric Company, Schenectady, New York: "Construction and Operation of the Panama Canal".

## Architecture

Feb. 25. Mr. Seth J. Temple, Architect, Davenport, Iowa: "The Architect and the Business Man" (under the auspices of the Architectural Club).
Oct. 14-15. Building Association League of Illinois.

## Ceramic Engineering

Jan. I1-23. Industrial Course in Ceramics.

## Civil Engineering

Nov. 20. Mr. E. K. Burton, Resident Engineer of the Trussed Concrete Steel Company, San Juan, Porto Rico: "Engineering Construction in Porto Rico" (under the auspices of the Civil Engineering Society).

## Electrical Engineering

Jan. 21. Mr. A. D. Bailey, Commonwealth Edison Company, Chicago: "The Increasing Importance of Coal in the Manufacture of Electrical Energy".
March 3. Mr. E. C. Lof, General Electric Company, Schenectady, New York: "The Panama Canal and its Electrical Equipment".

Highway Engineering
Jan. 11-22. Short Course in Highway Engineering.
Mechanical Engineering
March 25. Mr. Frank Rasmussen, Link-Belt Company, Chicago: "Modern Conveyor Machinery".

Mining Engineering
Feb. 26. Mr. Carl Wendell, Special Engineer, Illinois Steel Company, Joliet, Illinois: "Coal Washing".

## THE COLLEGE OF AGRICULTURE

Agricultural Extension
April 16. Mr. W. H. Leavitt: "Student Life in the Latin Quarter".
April 23. Mr. J. V. Stevenson: "The Farm of the Future".
Oct. 30. Mr. B. F. Harris, Champaign, Illinois: "Business and Money for Students".
Sept. 29. Mr. Carl Vrooman, Assistant Secretary of Agriculture: "Work of the Department of Agriculture".
Nov. 17. Mr. J. C. Thorpe, President, Illinois Motor Company, Urbana, Illinois: "Safety First in Handling Automobiles".

## Agronomy

Jan. 19-23. Mr. J. C. Thorpe, B.S., President, Illinois Motor Company, Urbana, Illinois: "A Factor in American Industry", "The Construction of the Modern Automobile", "Care and Operation of the Automobile", "Electric Equipment in the Modern Automobile".
Aug. 3. Mr. Frank J. Mann, Gilman, Illinois: "Plowing and Tillage from the Farmer's Standpoint".
Aug. 4. Mr. Raymond Olney, Tractor Expert for the Thresherman's Review: "Tractor Operation".
Aug. 5. Mr. F. M. White, University of Wisconsin: "Traction Economics".
Nov. 12. Mr. Lee Cline, District Sales Manager, Lawson Engine Company, New Holstein, Wisconsin: "Farm Lighting Plants".
Dec. 7. Dean H. G. Knight, A.M., College of Agriculture, Laramie, Wyoming: "Influence of Altitude on Crop Production".
Animal Husbandry
April 20-21 and May 5. Mr. Lours E. Dallenbach, Champaign, Illinois: "Poultry Management".
April 28. Mr. David M. Fyffe, Superintendent of Live Stock at Ohio State University: "Draft Horses".
May 5. Mr. Wayne Dinsmore, Secretary of the Percberon Society of America: "The Future of Pure-bred Draft Horse Breeding".
May 14. Mr. A. J. Lovejoy, Roscoe, Illinois: "Starting in Pure-bred Swine".

## Household Science

Jan. 18-30. Short Course in Household Science.

## Addresses Before the School for Housekeepers

Jan. 20-21. Mrs. John C. Hessler, Decatur: "Making a Home Beautiful", "The Dress Question Illustrated".
Jan. 22. Mrs. H. W. Dunlap, Savoy: "Difficulties to Overcome in Building a Country Home".
Jan. 25-26. Mr. W. H. Harrison, State Pure Food Commission, Chicago: "What a Man Learned", "The Life of the Fly".
Jan. 27-29. Mrs. C. F. Baker, Chicago: "Draping and Design", "Selection of Furniture for the Complete Home".
Jan. 27-29. Mrs. F. L. Stevens, Urbana: "Breads", "Tasteful Interiors".
Jan. 27. Mrs. H. A. McKeene, Springfield: "Report of the Household Science Department of the Farmers' Institute".
Jan. 28. Mrs. H. A. McKeene, Springfield; Mrs. George Spates, Willey; Mrs. V. Vanniman, Virden; Mrs. J. P. Stout, Chatham: Symposium"Improving the Farm Home".
Jan. 29. Mr. D. M. Compton, Chicago: "Heating and Ventilating the Farm Home".
Jan. 29. Mr. R. D. Heller, Chicago: "Processes in Textile Manufacture".
March 23-7. Miss Anna Barrows, Boston: Series of three lectures and four demonstrations on foods.
April 27-30. Mr. Fred E. Rice, Professional Baker, Chicago: Series of four baking demonstrations.
Sept. 27-30. Mrs. Harriet L. B. Darling, New York: Series of four demonstrations in foods.

Nov. 5. Miss Helen Louise Johnson, Chairman Home Economics Section of the National Federation of Woman's Clubs: "Home Economics Students and the Woman's Club".

## Landscape Gardening

Nov. 18. Mr. O. G. S. Schaffer: "Practical Landscape Gardening".
Dec. 16-17. Professor F. A. Waugh, Head of the Department of Landscape Gardening, Massachusetts Agricultural College: "Scope and Purposes of Landscape Art", "The Native Landscape", "Technical Design in Naturalistic Landscape", "The Musical versus the Architectural Spirit in Landscape Art", "Scope, Motives, and Criteria in Rural Improvement", "Road Problems", "Public Reservations", "Organization, Methods, and Finance", "Art, Order, and the Landscape in Daily Life", "Civic Art" (illustrated).

## THE LIBRARY SCHOOL

March 11-12. Miss Ione Armstrong: "What Training for Librarianship Means", "A Day's Work in the Council Bluffs Public Library".
April 22-23. Miss Margaret Mann, Carnegie Library, Pittsburgh: "Library Printing", "The Catalog Department of a Large Public Library".
May 12. Mr. Adam Strohn, Detroit Public Library: "Good Library Service".
Nov. 3-5. Meeting of the Illinois Library Association.
Nov. 10-12. Exhibit: The Voynich Collection of MSS. and Rare Books.
Dec. 2-3. Mr. Geo. B. Utley, Secretary, American Library Association: "The Work of the American Library Association", "Recent Tendencies in Library Work".
Dec. 10. Miss Alice L. Tyler, Director, Western Reserve Library School: "The Library and Social Welfare".

## THE SCHOOL OF MUSIC

Feb. 17. The Kneisel Quartet.
March 18. Mrs. E. A. McDowell: Lecture-recital.

## THE SUMMER SESSION, I915

## Lectures and Demonstrations

June 24. Summer School Convocation.
July 1. Dr. L. T. Jones: "Liquid Air".
July 1-2. Mr. Henry Oldys: "Bird Notes", "The Music of Man and Bird", "The Songs of Birds".
July 6-9. Mr. W. T. Bawden, Specialist in Industrial Education, Bureau of Education, Washington, D. C.: "The Relation of the Hand to the Expression of Ideas", "Vocational Guidance and the Public Schools", "The Industrial Education Survey of Richmond, Virginia", "Recent Progress in Vocational Education".
July 6 to Aug. 5, Tues., Wed., and Thurs. evenings during the Summer Session. Dr. George A. L. Sarton, University of Ghent: "The History of Science".

July 15. Mr. O. A. Randolph: "X-Rays".
July 23-24. Professor Vaughan McCaughey: Hawaiian Trails and Mountains", "The Lore of the Ancient Hawaiians", "The Schools of the Tropics".

Entertainments
July 17. Ben Greet Players: "Twelfth Night", "The Tempest".
Aug. 6. Summer Session Play: "Much Ado About Nothing".

## ASSOCIATIONS, SOCIETIES, AND CLUBS

## GENERAL ORGANIZATIONS

## The Alumni Association

The Alumni Association is the general organization of the alumni of the University. The Association maintains an office at the University and publishes a periodical, the Alumni Quarterly and Fortnightly Notes. The alumni of the College of Medicine, the College of Dentistry, the School of Pharmacy, and the Library School have formed departmental organizations. Forty-one local alumni associations have been organized: thirteen in Illinois, two each in California, Missouri, New York, Ohio, and Wisconsin, one each in Colorado, the District of Columbia, Idaho, Indiana, Iowa, Massachusetts, Michigan, Minnesota, North Dakota, Oregon, Pennsylvania, Tennessee, Texas, Utah, Washington, Brazil, India, and Japan. Regular University of Illinois alumni luncheons are held in fifteen cities. (See the Directory of Alumni Associations at the end of this volume.)

## University of Illinois Union

The University of Illinois Union is an association of the men of the University, having for its general object the promotion of college spirit and good fellowship. All male students are eligible to active membership in the Union; alumni and members of the faculty may become associate members.

## The Student Council

The Student Council, consisting of eight seniors and seven juniors, elected annually, has charge of certain undergraduate student activities.

## The Woman's League

The Woman's League was organized to further the spirit of unity among the women of the University and to be a medium for the maintenance of high social standards. The administrative power is vested in an Advisory Board and an Executive Committee composed of representatives from the various women's organizations. Every woman in the University is, by virtue of her registration, a member of the League. The League manages a loan fund, supports a room in the Burnham Hospital, and provides the magazines for the Woman's Building.

## Hospital Organization

1. The Students' Mutual Benefit Hospital Fund is a fund made up of contributions from students (persons connected with the University in any other way than as students are not eligible for membership).
2. The amount of contribution from each student is $\$ 1.00$ a semester.
3. The payment of $\$ 1.00$ is due at the opening of each semester, and members are not received later than three weeks after the first day of registration in any semester. Payment confers benefits to the end of the semester in which payment is made.
4. By consent of each member, which consent is acknowledged by the payment of a semester contribution, the fund is paid to the Dean of Men as
trustee. This trustee is liable to the members for the proper disbursement of the fund for the purpose for which it is collected, and only to the amount collected.
5. The purpose of the fund is to provide ward hospital care at the rate of $\$ 2.00$ a day for members who become ill and need such care for a period of time not to exceed four weeks during any semester. No payment is made for the expense of a special nurse, or for a physician's bill. The obligation of the trustee is to the contributors to the fund, and not to the hospital. Payment is made only if the beneficiary is in good health when he makes his contribution, and persons paying within the period of the incubation of an infectious disease are not entitled to the benefits of the fund.
6. The trustee has custody of the fund and makes all payments.
7. The trustee reports annually on the operation of the fund, and renders an accounting to the Council of Administration at the first regular meeting of that body in September of each year. The Council of Administration receives this report and asks the Comptroller of the University to audit the accounts for presentation at its first meeting in September, spreads the report on its records so that the proceedings of the trustee may be permanently preserved, and publishes the essential facts of the annual report in the Daily Illini.

## Literary Societies

The Adelphic, Ionian, and Philomathean societies for men, and the Alethenai, Athenian, Illiola, and Gregorian societies for women, meet weekly, on Fridays, and the Jamesonian Society (for women) on Tuesdays, throughout term time.

## The Christian Associations

The present membership of the Young Men's Christian Association is 1,114. The Association building furnishes free, for the use of all students, lounging room and library, game rooms, parlors, organization rooms for committee meetings, correspondence tables, and check room. The building also contains dormitories to accommodate ninety men. A cafeteria, whose manager is on the pay roll of the Association, serves 450 to 500 persons daily. Religious meetings for men are held occasionally on Sunday afternoon. Thursday evening meetings are addressed by prominent faculty members on ethical topics. Student-led classes in Bible Study are promoted, the teachers receiving training in normal groups. In 1914-15 there were 1,030 men enrolled in voluntary Bible Study. An employment bureau managed by a special secretary, who maintains office hours every afternoon in the Association building, endeavors to help students to find work.

The Y. W. C. A. is housed in the Hannah McKinley building. Dormitory space is provided for fifty young women. There are parlors on the first floor for use of the women rooming in the house, a large assembly room, pianos, organization rooms, and correspondence tables. A bowling alley and modern dining room are in the basement. There are 446 members of the Y. W. C. A. In 1914-15 there were 446 young women enrolled in voluntary Bible Study. An employment bureau is maintained at the Y. W. C. A. to help University women to find employment.

At the opening of the college year the Associations endeavor to help new students to find desirable rooming and boarding places. A copy of the Students' Handbook, giving information about Urbana and Champaign, the University,
and the various college organizations and activities will be sent free to prospective students. For this handbook or for further information address the general secretary of either Association.

## The Cosmopolitan Club

The Cosmopolitan Club is an organization devoted to the promotion of social and intellectual intercourse among persons of different nationalities at the University. Public meetings are held in University buildings, to afford the University community information about the customs peculiar to the various countries of the world. The clubhouse on Daniel street affords a home to many foreign students and to a limited number of native students.

## Ma-Wan-Da

$M a-W a n-D a$ is a senior society formed by the consolidation of two former senior societies, Shield and Trident, and Phenix.

## HONORARY SOCIETIES

The honorary societies or fraternities named below are private intercollegiate organizations of students and graduates, having for their primary purpose the recognition and encouragement of excellence in scholarship in various departments of study. Election is in all cases made by the societies themselves in accordance with their own rules. The University assumes no responsibility for their elections.

## Phi Beta Kappa

Each year a certain number of the ranking students of the senior class in the College of Liberal Arts and Sciences are elected to membership in the Phi Beta Kappa Society. The number is ordinarily limited to one-fifth of the total membership of the graduating class.

## The Phi Beta Kappa Prize

Gamma of Illinois chapter of Phi Beta Kappa offers annually a prize of $\$ 25.00$ to that member of Gamma Chapter who at his graduation from the College of Liberal Arts and Sciences gives evidence of greatest promise as a scholar in the domain of liberal arts. The award is based on the following considerations: (a) Class room records; (b) other literary and scholarly activities in the University; (c) an essay, which may be a senior thesis or a term paper. At the discretion of the committee in charge, the award may be withheld if none of the essays appears worthy of the prize. Essays submitted in competition and all correspondence with reference to this prize should be addressed to the Secretary of the Phi Beta Kappa Society, University of Illinois. The committee will not be limited in its award to those who have submitted papers specifically for this purpose or have otherwise given formal notice of candidacy. Special consideration will be given to theses deposited in the College Office by candidates for honors in the various departments.

## Sigma Xi

Members of the senior class who give "promise of marked ability" in scientific investigations are eligible to membership in the Sigma Xi Society, which was founded to encourage research in pure and applied science.

## Other Honorary Societies

Alpha Chi Sigma (Chemical) ; Alpha Delta Sigma (Advertising) ; Alpha Gamma Rho (Agricultural); Alpha Rho Chi (Architectural); Alpha Zeta
(Agricultural) ; Beta Gamma Sigma (Commercial) ; Delta Sigma Rho (Oratorical) ; Eta Kappa Nu (Electrical Engineering); Gamma Alpha (Scientific) ; Kappa Delta Pi (Educational) ; Order of the Coif (Law); Phi Alpha Delta (Law); Phi Delta Phi (Law); Phi Lambda Upsilon (Chemical); Pi Tau Sigma (Mechanical Engineering); Psi Mu (Architectural); Scabbard and Blade (Military) ; Scarab (Architectural); Sigma Delta Chi (Journalistic); Sigma Mu Rho (Medical) ; Sigma Tau (Engineering) ; Tau Beta Pi (Engineering) ; Triangle (Civil Engineering) ; U. L. A. S. (Landscape Architecture).

## CLUBS AUXILIARY TO COURSES OF STUDY

In addition to the associations and societies of a general character described above, there are in each college a number of societies and clubs devoted to outside work of a literary, scientific, or technical nature auxiliary to the work of various departments of that college. Among these are the following:

In the College of Liberal Arts and Sciences: The Botanical Club, the Ceramic Club, le Cercle Francais, el Circulo Español, the Chemical Club, the University of Illinois Section of the American Chemical Society, the Classical Club, der Deutsche Verein, the English Journal Club, the Geological Journal Club, Graphomen (journalistic), the History Club, the Mathematical Club, Medui (pre-medical), the Oratorical Association, the Pen and Brush Club, the Philological Club, the Political Science Club, the Romance Journal Club, the Scandinavian Club, the Zoological Club.

In the College of Commerce and Business Administration: The Commercial Club.

In the Coliege of Engineering: The Architectural Club, the Ceramic Club, the Civil Engineering Society, the Electrical Engineering Society, the Urbana Section of the American Institute of Electrical Engineers, the Student Branch of the American Society of Mechanical Engineers, the Student Branch of the American Institute of Mining Engineers, the Physics Colloquium, the Railway Club.

In the College of Agriculture: The Agricultural Club, the Horticultural Club, the Household Science Club, the Landscape Gardeners' Club.

In the School of Music: The University Choral and Orchestral Society, the University Glee and Mandolin Club, the University Military Band.

In the Library Schcol: The Libraty Club.
In the Law School: Inns of Court.

## FRATERNITIES, SOCIETIES, AND CLUBS

National Fraternities.-Acacia (Masonic) ; Alpha Delta Phi; Alpha Kappa Psi; Alpha Sigma Phi; Alpha Tau Omega; Beta Theta Pi; Chi Phi; Chi Psi; Delta Kappa Epsilon; Delta Tau Delta; Delta Upsilon; Kappa Sigma; Lambda Chi Alpha; Phi Delta Theta; Phi Eta; Phi Gamma Delta; Phi Kappa; Phi Kappa Psi; Phi Kappa Sigma; Phi Sigma Kappa; Psi Upsilon; Sigma Alpha Epsilon; Sigma Chi ; Sigma Nu; Sigma Pi; Tau Kappa Epsilon; Theta Delta Chi ; Zeta Beta Tau; Zeta Psi.

Sororities.-Achoth (Eastern Star); Alpha Chi Omega; Alpha Delta Pi; Alpha Omicron Pi; Alpha Xi Delta; Chi Omega; Delta Gamma; Gamma Phi Beta; Kappa Alpha Theta; Kappa Kappa Gamma; Pi Beta Phi; Sigma Kappa.

Local Clubs.-Chi Beta; Chi Delta; Ilus; Iris; Pi Omicron; Psi Delta.
Interfraternity Organizations.-Men's Pan Hellenic Council; Girls' Pan Hellenic Association; Helmet; Yo Ma; Phi Delta Psi; Ku Klux Klan.

## OTHER ORGANIZATIONS

Other students' societies include the following: Arkansas Club; Bushnell Guild; Chinese Students' Club; Beta Upsilon (Congregational guild); Culver Club; Dixie Club; Easteners' Club; Egyptian Club; H. H. Club; Hindusthani Association; Illinois Drama Federation; Inter-Collegiate Prohibition Association; Ivrim; Japanese Students' Club; Kansas Club; Komenian Society; Lambda Epsilon Phi (Republican club); Lambkins' Club (interfraternity dramatic club) ; Lincoln League; Mask and Bauble (dramatic); Motorcycle Club; Scribblers' Club; Sewanee Circle; Shomeez (interfraternity Missouri club); Sigma Delta Theta (M. E.) ; Student Council.

## UNDERGRADUATE SCHOLARSHIPS

(For circulars giving more detailed information concerning scholarships, apply to the Registrar of the University.)

## COUNTY SCHOLARSHIPS

A law passed by the General Assembly of the State of Illinois at the session of 1905 and embodied in the General School Law of 1909 provides that one scholarship may be awarded annually to each county of the State. The holder thereof must be at least sixteen years of age, and a resident of the county to which he is accredited. No student who has attended the University of Illinois is eligible for a scholarship. The holder of a scholarship is relieved of payment of the matriculation fee ( $\$ 10.00$, payable once, on entrance) and the incidental fee ( $\$ 24.00$ a year) for four years in any department of the University other than the professional schools. The term "professional schools," as here used, includes the College of Law, the Library School, the College of Medicine, the College of Dentistry, and the School of Pharmacy.

A competitive examination, under the direction of the President of the University, and upon such branches of study as the President may select, is held upon the first Saturday in June of each year, at the county court house in each county by the County Superintendent of Schools. Questions for the examinations are furnished in advance to the County Superintendents.

The successful candidates in the examinations must then meet in full, either by certificate from an accredited high school or by passing entrance examinations at the University, the requirements for admission to the freshman class, and must register the following September.

In case the scholarship in any county is not claimed by a resident of that county, the President of the University may fill the same by assigning to that county from some other county the student found to possess the next highest qualifications.

A student holding a scholarship who shall make it appear to the satisfaction of the President of the University that he requires leave of absence for the purpose of earning funds to defray his expenses while in attendance, may, in the discretion of the President, be granted such leave of absence, and may be allowed an extension of his scholarship for not more than two years (making not more than six years in all from the beginning of the scholarship). Such extension will not be granted unless the student has been in attendance at the University for at least one full semester, nor unless the student's average grade during the period of his attendance has been at least 80 per cent, exclusive of grades in military science and physical training.

## GENERAL ASSEMBLY SCHOLARSHIPS

The same act by which the county scholarships described above were established also provides that each member of the General Assembly may nominate annually one eligible person from his district for a scholarship in the University, granting the same privileges as the county scholarships.

A member of the General Assembly who wishes to nominate a candidate for a scholarship should file the name and address of his nominee as early in the spring as practicable and not later than June 1, with the President of the University and also with the County Supcrintendent of the county in which the nominee resides.

The nominee is then required, under the statute, (1) to pass the scholarship examination-the same that is given to competitors for the county scholarships on the first Saturday in June, under the County Superintendent; (2) to meet in full, either by certificate from an accredited high school or by passing entrance examinations at the University, the requirements for admission to the freshman class; and (3) to register in the University the following September.

If a nominee fails to make a passing grade (70) in the scholarship examination he may not receive the scholarship. In this case notice will be sent to the member of the General Assembly who made the nomination, who is then entitled to nominate a second candidate. This second candidate is subject to all the requirements stated above; the scholarship examination will be given him at the University on the Wednesday preceding the fall registration days (in 1916, September 13).

A General Assembly scholarship may be extended under the same conditions as a county scholarship.

## SCHOLARSHIPS IN CERAMIC ENGINEERING

The University offers annually to each county in the State one scholarship, awarded on the nomination of the Illinois Clay Workers' Association, to applicants who intend to follow the curriculum in Ceramic Engineering. These scholarships are good for four years and relieve the student from the payment of the matriculation fee ( $\$ 10.00$, payable once, on entrance) and the incidental fee ( $\$ 24.00$ a year).

The candidate must be at least sixteen years of age, must be a resident of the county for which he is nominated, and must meet in full, before entering, by certificate from an accredited high school or by passing entrance examinations at the University, the requirements for admission to the freshman class.

## SCHOLARSHIPS IN AGRICULTURE AND HOUSEHOLD SCIENCE

The University offers every year to each county in the State, except Cook and Lake, and to each of the first ten congressional districts, one scholarship for prospective students of agriculture in the College of Agriculture and one for prospective students of household science in the College of Liberal Arts and Sciences or the College of Agriculture.

Appointments to scholarships in agriculture are made by the Trustees of the University upon the recommendation of the Executive Committee of the Illinois Farmers' Institute; and to scholarships in household science upon the recommendation of the County Domestic Science Associations, or, for counties and districts in which there are no domestic science associations, on the recommendation of the Illinois Farmers' Institute. Persons who have already attended the University are not eligible.

Candidates who are able to meet in full the requirements for admission to the freshman class are eligible to appointment at 16 years of age. Candidates who cannot meet these entrance requirements are eligible to appointment as special students (in the College of Agriculture) at 21 years of age.

Acceptable candidates, residents of counties or districts for which appointments have been made, not exceeding five in number from any one county or district, may be assigned to counties or districts for which no recommendations are made. The first nominee from each county or district, if duly qualified, is awarded the scholarship at the time of registration. Other nominees must pay the regular fees on registration. Assignments to counties and districts for which there are no nominees registered are made on October 15, at which time the nominees so assigned to counties or districts other than their own receive rebates of the full amount of the matriculation and incidental fees paid.

The scholarships are good for two years and relieve the holders from the payment of the matriculation fee ( $\$ 10.00$, payable once, on matriculation), the incidental fee ( $\$ 24.00$ a year), and (in the case of special students) the tuition fee ( $\$ 15.00$ a year). If, before a scholarship expires, the holder satisfies in full the requirements for admission to the freshman class of the college in which he or she is enrolled the term of the scholarship may be exterded to four years from the date of the student's matriculation.

## MILITARY SCHOLARSHIPS

Students who have had three semesters of class instruction in military science and four semesters of drill practise are eligible for appointment as commissioned officers of the University Corps of Cadets. To those attaining this rank, special military scholarships, good for one year, and equal in value to the university incidental fees for the year, are open. The amount of these scholarships is paid the holders at the close of the academic year. Appointments in the Corps of Cadets are made on the recommendation of the Commandant of Cadets, confirmed by the Council of Administration.

## OTHER SCHOLARSHIPS

[^17]
## BENEFICIARY AID

## EDWARD SNYDER DEPARTMENT OF STUDENTS' AID

In 1899 Edward Snyder, Professor of the German Language and Literature, Emeritus, gave the University the sum of $\$ 12,000$, to be lent to worthy students to enable them to finish their courses in the University.

This fund is available for junior, senior, and graduate students who need aid to remain and complete their work. The minimum loan made is fifty dollars ( $\$ 50$ ) ; the maximum loan is one hundred and fifty dollars ( $\$ 150$ ) to a junior, and two hundred dollars (\$200) to a senior or graduate student. Notes of hand are taken for the amount of the loans, with 5 per cent interest. The maximum time limit is for juniors three years and for seniors and graduates two years from the ensuing thirtieth of June.

Loans are made only to matriculated students who have attained at least the full rank of junior, who have been in residence at the University at least one year, who are at the time students in residence at the University, and who have declared their intention to graduate.

In recommending loans, preference is given to those students who are most advanced in their university work, who have shown themselves most assiduous and successful in their studies, and have shown habitual economy in living. No distinction is made on account of sex or course of study. A loan will not be recommended for any student who is believed to have been financially or morally delinquent in any respect.

Applications for loans must be made in writing and addressed to the Chairman of the Loan Fund Committee.

## CLASS OF 1895 LOAN FUND

A fund of $\$ 100.00$ was established by the class of 1905 , to be lent to needy and deserving students. According to the conditions of the gift, the sum of fifty dollars is to be lent annually, and the benefit of the fund is open only to students who, at the time of application, are members of the freshman class. The loan bears interest from the time the recipient leaves the University, and is due one-half in five years and one-half in six years after matriculation. The fund is in charge of the Loan Fund Committee of the Council of Administration. Applications should be made in writing and should be addressed to the Chairman of the Committee.

## GRADUATE CLUB LOAN FUND

A fund of $\$ 75$ was established by the members of the Graduate Club in 1907-1908, for the benefit of graduate students. Its administration is in the hands of the Loan Fund Committee of the Council of Administration. Applications should be made in writing and should be addressed to the Chairman of the Committee.

## WOMAN'S LEAGUE LOAN FUND

In December, 1910, the Woman's League of the University gave to the University the sum of $\$ 409.44$ to be known as the Woman's League Loan Fund. This fund is available for any woman matriculated in the University and is administered in the same way as the Snyder Loan Fund.

## WILLIAM B. M'KINLEY LOAN FUND

In September, 1912, the Hon. William B. McKinley of Champaign, Illinois, turned over to the University notes aggregating something more than $\$ 12,000$, this amount as it is collected to be used as a loan fund for undergraduate men. In making the donation, Mr. McKinley stipulated that loans should be made to students upon their own personal notes, and that a preference should be shown in making these loans to upperclassmen. The notes draw interest at 5 per cent and become due two years after the student's graduation. Applications for loans should be made in writing and should be addressed to the Chairman of the Loan Fund Committee.

## HENRY STRONG LOAN FUND

Mr. Gordon Strong, of Chicago, trustee of the Henry Strong Educational Fund, has for 1915-16 offered the University $\$ 500$ to be loaned to self-supporting students of high scholastic attainments. The loan bears interest at 4 per cent and is payable within one year after graduation. The fund has been loaned to four students, each of whom received $\$ 125$.

## MARGARET LANGE JAMES LOAN FUND

In 1915 President Edmund J. James established the Margaret Lange James Loan Fund in memory of his wife. The original fund ( $\$ 5000$ ) given by President James has been supplemented by gifts from other persons, and the fund now amounts to about $\$ 5650$.

Loans from this fund may be made to matriculated students, preferably women, who have been in residence at the University at least one year, who have attained at least junior standing, and who are at the time of application students in residence, who have declared their intention to graduate. In recommending loans, only students of promise and good scholastic standing are considered, and, other things being equal, preference is given to those who are the farthest along in their University work. A loan is not recommended for any student who is believed to be financially or morally delinquent in any respect.

Applicants for loans are required to offer security other than their own signatures, and no member of the faculty or other person directly connected with the University is accepted as security for any student loan.

Loans bear interest until maturity at 5 per cent, payable semi-annually. The maximum time for which notes may be drawn is two years from the thirtieth day of June next following the student's regular time of graduation. Bank discount is charged for the time until the thirtieth day of June next following the date of the note. Interest at 7 per cent is charged on all notes not paid at maturity.

Applications for loans must be made in writing and addressed to the Chairman of the Loan Fund Committee.

# FEES AND EXPENSES 

GENERAL FEES
All University fees are payable each semester in advance.
Colleges of Liberal Arts and Sciences, Commerce and Business Adminis- tration, Engineering, and Agriculture, and Library School
Matriculation Fee. Each student not holding a scholarship, upon satis- fying the requirements for admission to the University, pays the ma- triculation fee of ..... $\$ 10.00$
Incidental Fee. All students, excepting those holding scholarships, pay each semester, an incidental fee of ..... 12.00
Tuition Fee. Students conditioned on entrance requirements, and special students, except special students (in agriculture or household science) holding scholarships, pay each semester, a tuition fee of ..... 7.50
Laboratory Fecs. Each student working in laboratories, or in the draft- ing or engineering classes, is required to pay a fee varying from $\$ 0.50$ to $\$ 10.00$, to cover materials and apparatus used and breakages or damages. (For a list of Laboratory Fees, see page 124.)
Deposit for Military Uniform. Male students, citizens of the United States, under 25 years of age, entering the University as freshmen or sophomores, make a deposit to cover the cost of the required mili- tary uniform* of. ..... 14.20
Listener's Fee. Persons not connected with the University who attend classes as listeners, pay for each course, each semester. ..... 7.50
Late Registration Fee. A former student who enters after the Registra- tion Days in either semester must pay a late registration fee of. ..... 1.00
Change Fee. For every change of study-list made later than the tenth day of instruction of either semester a fee of $\$ 1.00$ is charged, except that the total charge for the rearrangement authorized on any one change- slip shall not exceed $\$ 2.00$ ..... 1.00
Special Examination Fee. For any special examination, except examina- tions for advanced standing taken within sixty days after matricu- lation, the fee is. ..... 5.00
Diploma Fee ..... 5.00
School of Music
College Courses
Matriculated students, residents of Illinois, pay, each semester, theincidental fee $\$ 12.00$
Non-matriculated students, residents of Illinois, registered for thecourse in Public School Methods, as outlined on page 200, pay, each semester:
(1) The incidental fee ..... $\$ 12.00$
(2) The tuition fee ..... 7.50

[^18]All other students (including matriculated students not residents of Illinois and all conditioned and special students), pay, each semester:

If they take music only, special music fees, as follows:
For two lessons a week. 32.50
For one lesson a week. ..... 19.50
For harmony, counterpoint, fugue, etc ..... 9.00
If they take, in addition to music, subjects in other departments:
(1) The incidental fee ..... \$12.00
(2) Unless matriculated, the tuition fee ..... 7.50
(3) Special music fees, as follows:
For two lessons a week. .....  25.00
For one lesson a week. ..... 15.00
(4) For harmony, counterpoint, fugue, etc. ..... 9.00
Preparatory Courses
Students taking music only pay, each semester, special music fees ..... as fol- lows:
For two lessons a week. .....  19.50
For one lesson a week. ..... 11.00
Students taking, in addition to music, subjects in other departments pay,each semester:
(1) The incidental fee. .....  12.00
(2) Unless matriculated, the tuition fee ..... 7.50
(3) Special music fees, as follows:
For two lessons a week .....  $\$ 15.00$
For one lesson a week. ..... 8.50
Additional
Use of a piano for practise one hour a day, each semester. ..... $\$ 3.00$
Additional hours at the same rate.
Special students, taking music only, may enter classes in physical training
on paying, each semester ..... 7.50
Diploma fee ..... 5.00
College of Law
Matriculation fee, payable upon satisfying the entrance requiremens. ..... \$ 10.00
Tuition fee, each semester ..... 25.00
Students conditioned on entrance requirements pay, each semester, an additional fee of. ..... 7.50
Students not enrolled in the College of Law, pay, each semester, for each law course ..... 5.00
Diploma fee ..... 5.00
College of Medicine
Freshman Year
Matriculation ..... $\$ 5.00$
Laboratory ..... 30.00
General Tuition ..... 120.00
Total ..... $\$ 155.00$

## Sophomore Year

Registration ..... $\$ 5.00$
Laboratory ..... 35.00
General Tuition ..... 120.00
Total ..... 160.00
Junior Year
Registration ..... \$ 5.00
Laboratory ..... 5.00
General Tuition ..... 140.00
Total .....  $\$ 150.00$
Senior Year
Registration ..... \$ 5.00
General Tuition ..... 155.00
Diploma fee ..... 5.00
Total ..... $\$ 165.00$
College of Dentistry
Matriculation fee, paid but once, first year. ..... $\$ 5.00$
Registration fee, second and third years ..... 5.00
Tuition, each year (including laboratory and dissection fees) ..... 150.00
Diploma fee ..... 5.00
School of Pharmacy
Matriculation fee, paid but once .....  5.00
Tuition fee, shorter course, each year ..... 75.00
Tuition fee, longer course, each year ..... 125.00
Laboratory deposit, shorter course, each year ..... 10.00
Laboratory deposit, longer course, each year ..... 15.00
Diploma fee ..... 5.00
LABORATORY FEES (FOR MATERIALS) 1915-16
(The fees given below are in each case for one semester only; where a course runs through both semesters, the fee named is to be paid each semester.)



| pal | Sanitary | Engineering 3 | 1.00 | Physiology | 5b |  | 3.50 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Municipal and | Sanitary | Engineering 6a | 1.00 | Physiology | 103 |  | 3.50 |
| Photography |  |  | 8.00 | Psychology |  |  | 2.00 |
| Physics 3a |  |  | 2.00 | Psychology |  |  | 2.00 |
| Physics 3b |  |  | 2.00 | Railway En | gineering 63 |  | 3.00 |
| Physics 4a |  |  | 2.00 | Theoretical | and Applied | nics 10 | 1.00 |
| Physics 4b |  |  | 2.00 | Theoretical | and Applied | Mechanics 15 | 1.00 |
| Physics 8a |  |  | 2.00 | Theoretical | and Applied | Mechanics 16 | 1.00 |
| Physics 8b |  |  | 2.00 | Theoretical | and Applied | Mechanics 25 | 2.00 |
| Physics 10a |  |  | 2.00 | Theoretical | and Applied | Mechanics 26 | 1.00 |
| Physics 10b |  |  | 2.00 | Theoretical | and Applied | Mechanics 29 | 2.00 |
| Physics 15 |  |  | 2.00 | Zoology 1 |  |  | 2.50 |
| Physics 16 |  |  | 2.00 | Zoology 2 |  |  | 3.50 |
| Physics 17 |  |  | 2.00 | Zoology 3 |  |  | 3.00 |
| Physics 18 |  |  | 2.00 | Zoology 4 |  |  | 2.50 |
| Physics 22 |  |  | 2.00 | Zoology 6 |  |  | 3.00 |
| Physics 24 |  |  | 2.00 | Zoology 7 |  |  | 1.00 |
| Physics 25 |  |  | 2.00 | Zoology 9 |  |  | 2.00 |
| Physics 31a |  |  |  | Z,oology 11 |  |  |  |
| Physics 31b |  |  | 2.00 | Zoology 14a | (per hr.) |  | 1.00 |
| Physics 32 |  |  | 2.00 | Zoology 14b | (per hr.) |  | 1.00 |
| Physiology |  |  | 3.50 | Zoology, 15a | ( per hr ) |  | 1.00 |
| Physiology |  |  | 3.50 | Zoology 15b | (per hr.) |  | 1.00 |
| Physiology |  |  | 3.50 | Zoology 17 |  |  | 1.00 |
| Physiology 4 | 4 a |  | 3.50 | Zoology 18 |  |  | 1.00 |
| Physiology | 4 b |  | 3.50 | Zoology 22 |  |  | 2.00 |
| Physiology | 5 |  | 3.50 | Zoology 23 |  |  | 2.00 |

## AVERAGE ANNUAL EXPENSES

The following are estimated average annual expenses for undergraduate students attending at Urbana, exclusive of books, clothing, railroad fare, laboratory fees, if any, and small miscellaneous needs:

| mester fee | 24.00 to \$ 24.00 |
| :---: | :---: |
| Room rent for each student (two in room) | 72.00 to 80.00 |
| Table board in boarding houses and clubs. | 162.00 to 200.00 |
| Washing | 20.00 to 30.00 |

Total .............................................................. $\$ 272.00$ to $\$ 334.00$
Board and room in private house, a week....................... $\$ 5.50$ to $\$ 6.50$
In addition to the foregoing, freshmen pay a matriculation fee of $\$ 10.00$, and the men are required to buy a cadet uniform and equipment, which costs $\$ 20.95$. Freshmen engineering students will need to buy a set of drawing instruments at a cost of about $\$ 18.00$.

Other necessary expenses will need to be taken into consideration. For all the necessary expenses of the year the average student is likely to need not less than $\$ 375.00$ to $\$ 500.00$. Most students spend more than this amount.

For information in regard to scholarships which cover the matriculation and incidental fee, see page 117.

## Board and Rooms

The University does not provide dormitories nor furnish board, but the numerous rooming and boarding houses near the campus are to a certain extent under the supervision of the University. The Young Men's and Young Women's Christian Associations of the University will aid new students in securing rooms and board.

Prospective women students and their parents are invited to correspond with the Dean of Women in regard to suitable places.

[^19]
## PART II <br> THE COLLEGES AND SCHOOLS

## THE COLLEGE OF LIBERAL ARTS AND SCIENCES

For a description of the buildings used by this College, see page 51; for museums and collections belonging to it (classical art and archeology, education, European culture, botany, entomology, geology, and zoology), see pages 62-64; for a summary of its courses, see page 68; for clubs and societies auxiliary to its curriculums, see page 115; for fees, see page 122.

## ORGANIZATION

The organization of the College of Liberal Arts and Sciences, in which are merged the former College of Literature and Arts and College of Science, became fully effective on July 1, 1913, following an action of the Board of Trustees taken on July 5, 1912. During the period of transition from the old order of two Colleges to the new single College, various temporary adjustments are necessary; procedure according to the regulations of the former Colleges, especially in matters like requirements for graduation, elective subjects, honors, and combined courses, must continue for certain groups of students already registered. Beginning in September, 1916, a new schedule of requirements for admission to the College of Liberal Arts and Sciences will go into full operation. Changes in the requirements for graduation with the degree of Bachelor of Arts have been worked out by the Faculty and approved by the Board of Trustees. These are described as the "New Requirements" and are effective for classes entering in 1913 and later. Students in other classes may proceed under the old or the new requirements. The requirements of the former Colleges are printed in separate paragraphs wherever necessary.

## PURPOSE

The purpose of the College of Liberal Arts and Sciences is, first, to secure to its students a liberal education including both the humanities and the sciences; second, to furnish especially arranged curriculums preparatory to later professional and technical studies by which good students may ordinarily obtain in six years both the degree in arts and a professional degree in law or medicine, or a technical degree in engineering; and, third, to provide certain highly specialized curriculums in applied science (particularly chemistry), journalism, and household science. The degree of Bachelor of Arts is conferred upon the completion of all these curriculums, except those in applied science, for which the degree of Bachelor of Science is given.

Under the modified elective system a student who desires to prepare for teaching may specialize to a considerable extent in the subject which he wishes to teach and may also find time for courses in education and related subjects of interest to teachers. Such students should, as a rule, continue their preparation in the Graduate School.

Students who desire to devote a considerable part of their undergraduate study to specific preparation for some calling other than teaching may select courses in (1) journalism; or (2) applied chemistry; or (3) household administration.

## ADMISSION

See the statement of the entrance requirements of the University, pages 71-96.

## SPECIAL STUDENTS

For a statement of the regulations of the University in regard to special students, see page 79.

It is the policy of this College to admit as special students only a select group of mature and serious persons who, though unable to meet the formal requirements for entrance, are substantially prepared for work of college grade, and have a specific and clearly defined purpose in their study.

## GENERAL REQUIREMENTS FOR GRADUATION

Since the merger of the College of Literature and Arts and the College of Science in July, 1913, the faculty of the new College of Liberal Arts and Sciences has adopted a unified curriculum leading to the degree of Bachelor of Arts. The present seniors, however, will as a rule conform their courses to the old requirements, while the juniors, sophomores, and freshmen must foliow the new requirements. These are printed separately for convenience of reference.

## I. Old Requirements for the Degree of Bachelor of Arts

The following general requirements apply to all candidates for the degree of Bachelor of Arts who were admitted before 1913.
A. University Requirements.-Each candidate must meet the general University requirements as to residence and registration. He must also secure credit in approved courses (see pages 130-135 below) amounting to 130 hours. An hour is one class period a week for one semester, each class period presupposing two hours' preparation by the student, or the equivalent in laboratory or drawing room.
B. Prescribed Studies.-Subjects specifically prescribed for all students: Rhetoric r-2* (6 hours); Physical Training, $1-2$ and ra for men; $7 a-j b$ and 9 for women; Military Science I and 2 for men. In addition, students who purpose to make a science their major subject, are required to have Chemistry i, and Physics $7 a, 7 b$ (or $1 a, 1 b$ ) unless they have had one-year courses in these subjects in an accredited high school or acceptable equivalent courses elsewhere.
C. (1) Group Requirements for the degree according to the schedule of the former College of Literature and Arts.-Every candidate must offer a minimum of 8 hours in each of the following groups:
I. English, including literature and rhetoric.
II. Ancient and modern languages other than English, including Greek, Latin, the Germanic languages, and the Romance languages. Only courses which require the use of a foreign language may be counted in this group, and the 8 hours offered must be in one language.
III. The social sciences, including history, economics, political science, and sociology.
IV. Mathematics and philosophy, including mathematics, education, philosophy, and psychology. A candidate who elects mathematics must take at least five hours. If a student does not elect mathematics, his elections in this

[^20]group must include work, in at least two of the other departments of the group. That is, if he does not take mathematics, he must take either philosophy and psychology, or philosophy and education, or education and psychology. With the exception of mathematics, no subject of this group is open to freshmen.
V. The natural sciences, including astronomy, botany, chemistry, entomology, geology, physiology, physics, and zoology. Zoology 16 may not be counted toward this group requirement.
C. (2) Group Requirements for the degree according to the schedule of the former College of Science.-Each candidate must offer 8 hours in each of the following groups: $1,2,3$, and 5 . In group 4, 16 hours must be offered, provided that students who have had three years of work in foreign language in an accredited high school, or an equivalent course elsewhere, will be relieved from the requirement of Group 4, and similarly, those who have had one year or two years of foreign language may be relieved from 4 hours or 8 hours respectively of this requirement. The physics and chemistry of the prescribed list may be applied on the requirements of groups 1 and 2.

Group 1.-Mathematics, physics, astronomy, logic (Philosophy 1), mineralogy (Geology 5).

Group 2.-Chemistry, geology, household science, bacteriology.
Group 3.-Botany, zoology, physiology, psychology, entomology.
Group 4.-Foreign language.
Group 5.-English literature, history, political science, economics, philosophy, education.
D. (1) Major Subjects according to the former College of Literature and Arts.-Each candidate must select some one subject to be designated as his major, and secure credit in that subject to the amount of 24 hours. The courses selected for the last two years should include some distinctly advanced work. The subjects which are recognized as majors at present are as follows: Classics ${ }^{1}$; economics; education; English ${ }^{2}$ (including English literature and rhetoric); French ${ }^{3}$; German ${ }^{4}$; Greek ${ }^{5}$; history; household science; Latin ${ }^{3}$; mathematics; philosophy; political science; psychology; sociology.

Suggestions for students in household science are indicated below, on page 138. Students holding scholarships in household science must make that subject their major, and take one of the courses outlined on pages 139 and 140 below.
D. (2) Major Subjects according to the former College of Science.-A total credit of at least 20 hours must be secured in some one of the divisions of the following major elective list. Not more than 40 hours' work (exclusive of thesis) in any one of these divisions may be applied toward graduation. In arranging the subjects to be counted toward the major requirement the student is advised to consult with the head of the department in which the major is taken.

Major electives are: Astronomy, botany, chemistry, education, entomology, geology (including mineralogy and physical geography), household science, library science, mathematics, physics, physiology, psychology, and zoology.

[^21]E. Elective Subjects.-The remainder of the course is made up of electives chosen under defined conditions.

1. Credit is regularly given for courses properly announced in the following subjects: Art and design (the total credit in this department is limited to 20 hours), astronomy, bacteriology, botany, business organization and operation, chemistry, the classics, comparative literature, comparative philology, economics (including accountancy and commercial law), education, English (including rhetoric and public speaking), entomology, geology (including geography and mineralogy). Germanic languages, history, household science, library science, mathematics, philosophy, physical training, physics, physiology, political science, psychology, Romance languages, sociology, zoology.
2. Not more than 40 hours in any one subject may be counted for graduation, except when the student is writing a thesis. In this case he may count, in addition to the 40 hours, the hours of the seminar course in which he does his thesis work. In the department of English a student may take 40 hours in addition to Rhetoric 1 and 2.
3. No credit is granted in any subject unless the student pursues it for the full time required in the shortest course offered in that subject. For example, if the student elects a course which yields two hours of credit for one semester, he must stay in the class during the semester in order to get any credit at all. In order to secure any credit in a beginning course in a foreign language, a full year's work must be completed.
4. Seniors graduating under the schedule of the former College of Literature and Arts who register in courses open to freshmen may receive only onehalf of the credit regularly assigned to such courses. For the year 1915-1916 the following courses are included in this list: Art and Design 1 and 2; Botany 1, 4d; Chemistry 1; English 10-11, 20; Entomology 1a-1b, 4, 15, 16; French 1a-1b; Geology 3, 14; German 1, 3; Greek 1a-1b; History 1a-1b, 2a-2b; Household Science 2, 7a-7b; Latin 1a-1b, 6; Library Science 12; Mathematics 2, 4; Rhetoric 1-2; Spanish 1a-1b; Zoology 1, 16.
5. A limited amount of credit toward the degree of Bachelor of Arts is ordinarily given for courses offered in other colleges and schools of this University. Students who continue under the schedule of the former College of Science may select, with the approval of the Dean, approximately one-third of the work to be counted toward a degree, from subjects given in other colleges of the University. Students who continue under the schedule of the former College of Literature and Arts will ordinarily confine their elections of work in other colleges and schools to the following courses:

Physical Training.-Not to exceed 5 semester hours.
Military Science and Tactics.-Military Science 1 and 2.
Law.-See page 138.
Engineering.-General Engineering Drawing 1 and 2 (Mechanical Drawing and Descriptive Geometry) ; Theoretical and Applied Mechanics 20 and 21 (Analytical Mechanics) ; Mechanical Engineering 12 or 11 (Thermodynamics); Civil Engineering 96 or 27 (Surveying); Architecture 31, 32 (Architectural Drawing) ; Architecture 13, 14, 15, 16 (History of Architecture) ; Electrical Engineering 4 and 64 , or 8 and 68.

Agriculture.-Agricultural Extension (Elementary Agriculture for teachers) ; Agronomy 25 (Seeds); Agronomy 9 (Soil Physics); Agronomy 22 (Plant Breeding) ; Animal Husbandry 7 (Principles of Animal Nutrition); Animal Husbandry 30 (Genetics) ; Farm Management 1; Horticulture 9 (Forestry) ; Horticulture 10a (Landscape Gardening) ; Horticulture 12 (Evolution of Horticultural Plants) ; Horticulture 19 (Amateur Floriculture), for household science students only. The total credit allowed in these agricultural courses will not ordinarily exceed 14 hours.

Library Science.-Library 3a-3b (Selection of Books); 7 (History of Libraries) ; 9 (History of Books and Printing) ; 2a-2b or 12 (General Reference); 13a-13b (Public Documents). The total credit allowed in Library Science will not ordinarily exceed 14 hours. The course in General Reference (Library 12) is of special value to underclassmen in the courses in Literature and Arts.

Music.-1-2, 3-4, 5-6, 7-8, 9-10, and 12-13 (courses in history and theory of music).

Courses not listed under paragraphs 1 to 5 above may not be counted for the degree of Bachelor of Arts, except by special permission of the Dean of the College.
F. Bachelors' Theses.-A bachelor's thesis is not generally required in this College. Students of high standing are, however, encouraged to write theses in connection with their major studies. Credit toward the degree is given for thesis work only as a part of the work in some course for which the student is registered. Students desiring to take a thesis course in geology or mineralogy may add to their credits in those subjects the credits received for chemistry; and students in physiology may add to their credits in that subject those in zoology and bacteriology. Only students graduating with a thesis will, as a rule, be selected for fellowships, scholarships, and other similar university honors. Candidates for honors or the honor degree are required by the general regulations of the University to write a thesis. See above, page 99.

## II. New Requirements for the Degree of Bachelor of Arts

Students who were admitted in 1913 and later will conform to the following requirements for the degree of Bachelor of Arts.
A. University Requirements.-Each candidate must meet the general university requirements with respect to registration and residence. He must also secure credit in approved courses amounting to one hundred thirty hours, an hour being one class period a week for one semester. Each class period presupposes two hours preparation by the student, or the equivalent in the laboratory or drawing room.
B. Prescribed Subjects.-Rhetoric 1-2; Physical Training 1-2 and la for men; Physical Training 7a-7b and 9 for women; Military Science 1 and 2 for men.
C. Group Requirements.-Every candidate must offer the minimum of work specified in each of the following groups:
I. English.-The offering in this group must include at least a onesemester course in literature.
II. Foreign Languages and Literatures (exclusive of courses in translation).
If a student has offered but two units of a foreign language for entrance to the University, he must pursue the study of foreign language through two year-courses or the equivalent. If he has offered for entrance three or more units of foreign language, he must continue the study of foreign language through one year of his college course.
Note: Candidates for the degree who have not offered Greck or Latin or French or German for entrance must offer one of these languages for graduation.
III. History, Political and Social Science.-History, economics, political science, sociology: 8 hours.
IV. Mathenatics and Physical Science.-Mathematics, astronomy (courses with college mathematics as prerequisites), physics, chemistry: 8 hours.
V. Botany, entomology, geology, physiology, zoology: 8 hours.
VI. Education, philosophy, psychology: 6 hours, of which 3 shall be in philosophy or psychology.
D. Major Subjects.-Each candidate must select some subject as his major. A major consists of courses amounting to 20 hours chosen from among those designated by a department and approved by the faculty of the college. Such courses are to be exclusive of those elementary or beginning courses which are open to freshmen, and inclusive of some distinctly advanced work. See the statements regarding majors under departmental announcements in Part III.

The subjects at present recognized as majors in this college are: Astronomy, bacteriology, botany, chemistry, classics, education, economics, English, entomology, French, geology, German, Germanic languages, Greek, history, household science, Latin, mathematics, philosophy, physiology, physics, political science, psychology, Romance languages, sociology, zoology.
E. Minor Subjects.-Each candidate must offer, in addition to his major, a minor of 20 hours in one or more allied subjects designated by the major department and approved by the faculty of the college. At least 8 hours must be offered in one subject. See the statements regarding minors under departmental announcements in Part III.

## F. Elective Subjects.-

1. Not more than 40 hours in any one subject may be counted for graduation, except: (a) in special curriculums approved by the faculty of the college; (b) when a student is writing a thesis, he may count, in addition to the 40 hours, the hours of the course in which he does his thesis work; (c) in the department of English a student may take 40 hours in addition to Rhetoric 1-2.

Note: The total credit in art and design is limited to 20 hours.
2. No credit is granted in any subject unless the student pursues it for the full time required in the shortest course offered in that subject. For example, if the student elects a course which yields two hours for one semester, he must stay in the class during one semester in order to get any credit at all. In order to secure any credit in a beginning course in a foreign language, a full year's work must be completed.
3. A limited amount of credit toward the degree of Bachelor of Arts is ordinarily given for courses offered in other colleges and schools of this University, as follows:
Physical Training: Not to exceed 5 semester hours.
Military Science and Tactics: Military Science 1 and 2.
Law: See page 138.
Engineering: General Engineering Drawing 1 and 2 (Mechanical Drawing and Descriptive Geometry) ; Theoretical and Applied Mechanics 20 and 21 (Analytical Mechanics) ; Mechanical Engineering 12 and 11 (Thermodynamics) : Civil Engineering 96 or 27 (Surveying); Architecture 31, 32 (Architectural Drawing) ; Architecture 13, 14, 15, 16 (History of Architecture) ; Electrical Engineering 4 and 64 , or 8 and 68 . The total credit allowed in these engineering courses will not ordinarily exceed 24 hours.

Agriculture: Agricultural Extension 1 (Elementary Agriculture for Teachers) ; Agronomy 12 (Soil Fertility), Agronomy 25 (Seeds), Agronomy 9 (Soil Physics) ; Farm Management 1; Agronomy 22 (Plant Breeding) ; Animal Husbandry 7 (Principles of Animal Nutrition) ; Animal Husbandry 30 (Genetics); Horticulture 9 (Forestry); Horticulture 10a (Landscape Gardening); Horticulture 12 (Evolution of Horticultural Plants) ; Horticulture 19 (Amateur Floriculture), for household science students only. The total credit allowed in these agricultural courses will not ordinarily exceed 14 hours.

Library Science: Library 7 (History of Libraries); 9 (History of Books and Printing) ; 2a-2b or 12 (General Reference); 13a-13b (Public Documents). The course in General Reference (Library 12) is of special value to students in the College of Liberal Arts and Sciences.

Music: Music 1-2, 3-4, 5-6, 7-8, 9-10, and 12-13 (courses in the history and theory of music).

Courses not listed under paragraphs 1 to 5 above may not be counted for the degree of Bachelor of Arts, except by special permission of the Dean of the College.
G. Bachelors' Theses: A bachelor's thesis is not generally required in this College. Students of high standing are, however, encouraged to write theses in connection with their major studies. Credit toward the degree is given for thesis work only as part of the work in some course for which the student is registered. The presentation of a thesis is specifically required of all candidates for the honor degree.

## Requirements for the Degree of Bachelor of Scicnce

Pending further action by the College of Liberal Arts and Sciences and by the Senate, students admitted to work leading to the degree of Bachelor of Science in the General Science Curriculum [see under "The Old Requirements," especially paragraphs $C(2)$ and $D(2)]$, who have completed that curriculum
including a major in Groups 4 or 5 , together with two year-courses or their equivalent in foreign language, will be graduated with the degree of Bachelor of Science.

## ARRANGEMENT OF COURSES <br> First Year <br> Subjects Prescribed for Freshmen

The following subjects must be taken during the freshman year: Rhetoric 1-2*, three hours each semester; Military 2, one hour each semester, and Military 1, one hour second semester (for men) ; Physical Training (Physical Training 1-2 and la for men; $7 \mathrm{a}-7 \mathrm{~b}$ and 9 for women). Students who enter for the General Science Curriculum should take Chemistry 1, unless chemistry has been accepted for admission.

## Freshman Electives

The following subjects are open to freshmen. The total amount taken in any semester is limited to eighteen hours, and should not be less than fifteen.

## First Semester

I. English $10^{1}(3)^{2}$; Rhetoric 1 (3).
II. French la (4) or 2 a (4); German 1 (4) or 2 (4) or 4 (4) or 5 (4) ; Greek la (4) or 7 (3) ; Latin 6 (4), la (4) or 2a (4); Spanish 1a (4) or 2 a (3) or 3 a (2); Italian la (3).
III. Mathematics 2 (3) and 4 (2).
IV. Economics 7 (3) and 26 (3); History la (4) or 2a (3).
V. Botany $1^{3}$ (5), 4d (3) ; Chemistry $1^{4}$ (5) or $\mathrm{la}^{4}$ (3) ; Entomology la (2), 4 (3), 15 (3); Geology $3^{4}$ (5), 14 (3); Physics $7 \mathrm{a}^{5}$ and $8 \mathrm{a}^{5}$ (5) ; Zoology $1^{4}$ (5).

Household Science 2 (2) or 7a (2).
Library Science 12 (2).
Art and Design 1 (3).
Second Semester
I. English $11^{1}(3)^{2}$; Rhetoric 2 (3).
II. French 1 b (4) or 2 b (4); German 3 (4) or 4 (4) or 5 (4) or 6 (4) or 7 (4) or 12 (4); Greek 1 b (4), 4 (4), or 6 (3); Latin 1 b (4), or 2 b (4) ; Spanish lb (4) or 2 b (3) or 3 b (2) ; Italian 1 b (3).
III. Mathematics 6 (5).
IV. Economics 22 (3) and 27 (3) ; History 1 b (4) or 2 b (3).
V. Astronomy 4 (5) ; Botany $1^{3}$ (5), 2b (5), 3b (5), 4 (3), 4a (5), 4 b (5), 4 c (5) ; Chemistry $\mathrm{l}^{4}$ (5) or $1 \mathrm{a}^{4}$ (3) or 2 a (5) ; Entomology lb (2), 4 (3), 16 (2); Geology $3^{4}$ (5) 12 (5), 23 (5); Physics $7 \mathrm{~b}^{5}$ and $8 \mathrm{~b}^{5}$ (5) ; Physiology 4 (5); Zoology 2 (5), $1^{4}$ (5), or 16 (2).
Household Science 1 (3).
Art and Design 1 (3).

[^22]
## Second Year

Male students must continue Military 2 throughout the year. Students who have failed to secure credit for any of the prescribed subjects of the freshman year must make up such deficiencies at this time.

## Election

Aside from the subjects prescribed for the first two years, each student selects, with the advice of the Dean or other college advisers, such courses as will enable him to meet the requirements for graduation as stated above.

## CURRICULUM IN JOURNALISM

Students who are preparing for reportorial, literary, or editorial work in journalism should take their major work in English, and make up their study schedules from the following suggested curriculum. With the consent of the adviser, other studies may, for purposes of specialization, be substituted for those suggested. A program which satisfies the group and major requirements may, for instance, be so modified in the third and fourth years as to lay emphasis on any one of the social sciences.

Students in journalism with major in English are subject to the requirements of the General Curriculum in Liberal Arts and Sciences.

## Suggested Curriculum in Journalism (Major in English) <br> FIRST YEAR

| first semester | SECOND SEMESTER |
| :---: | :---: |
| Prescribed Subjects Hours ${ }^{1}$ | Prescribed Subjects Hours ${ }^{1}$ |
| Military 2a-Military Drill. | Mil. 1-Drill Regulations. |
| Phys. Tr. 1 and la-Gymnasium and | Mi1. 2b-Military Drill. |
| Hygiene . .............................. | Phys. Tr. 2-Gymnasium |
| Rhet. 1-Rhetoric and Themes........... 3 | Rhet. 2-Rhetoric and Ther |
| Total ................................ 5 | Total |
| Suggested Electives | Suggested Electives |
| Eng. 10-Introduction to Literature- | Eng. 11 - Introduction to Literature- |
| Foreign language ....................... 4 | Foreign language ..... |
| Hist. la-Continental European History. 4 | Hist. 1b-Continental European History. . 4 |
| Lib. 12-General Reference.............. 2 |  |
| SECOND | YEAR |
| Prescribed Subjects | Prescribed Subjects |
| Mil. 2c-Military Drill................... 1 | Mil. 1-Drill Regulations Mil 2d-Military Drill |
| Suggested Electives |  |
| Eng. 1-Survey of English Literature-or | Suggested Electives |
| Eng. 12-American Literature........... 2 | Pol. Sc. 3-State and Local Government |
| Foreign language continued ............ 4 | or Econ. 3-Money and Banking....... 3 |
| Hist. 3a-History of United States...... 3 | Eng. 23-Shakespeare, or English 13, |
| Pol. Sc. 1-American National Govern- | American Literature . ............. 3 or 2 |
| ment or Econ.1-Principles of Economics 5 | Foreign language continued........... 4 |
| Rhet. 12-News Writing ............... 3 | Hist. 3b-History of United States........ ${ }^{3}$ |

THIRD AND FOURTH YEARS
Study lists for these years should be selected from the following list with regard to proper sequence.


Econ. 11, or 13, or 21-Industrial Consoli-
dation, or Econ. Hist. of Europe, or Socialism and Social Reform....... 3 or 2 English 28 and 24 or 3 or 5-Hist. of Tournalism, Victorian Period, Milton,
Shakespeare ......................... 2 or 3
History 17, 27, 29-Hist. of Illinois, Latin
America, The Far East............... 3 or 2
Language $\cdot$.................................... 4
Philosophy 2-Introd. to Phil............ 3
Pol. Sci. 18, or 28-Contemporary Poli-
tics .................................. 3 or 2
Psychology i-Introd. to Psychology.... 3
Rhet. 16, 17, 27, 29-Editorials and Special
Articles, Advanced Composition, Editor-
ial Practise, Making a Country News-
paper ................................. 2 or 3
Sociology 9—Criminology .................. 3

## CURRICULUM PRELIMINARY TO LAW

In accordance with the principle, that professional studies in law should be preceded by a thoro course in the humanities and the sciences, the College of Law requires for admission the completion of two years of work in the liberal arts and sciences with special emphasis upon work in English, public speaking, Latin, French, logic, and studies in the social science group. On page 215 will be found suggestions for a combination of these subjects to make up a schedule covering two years of a curriculum preparatory to the study of law.

This College offers, in addition to the two years of preparatory work, a curriculum in liberal arts and law by which a student may take both the degree of Bachelor of Arts and the degree of Bachelor of Laws (LL.B.) or of Doctor of Law (J.D.) in six years. A student who has senior standing in this College may take and count the first full year of law work for thirty hours of credit toward the degree of Bachelor of Arts, but if he takes, or successfully carries, less than full work in law it shall be counted only hour for hour toward the degree of Bachelor of Arts. Students in this College are not permitted to take any work in laze until their senior year. Students who take this combined curriculum should file their study lists during the fourth year with the adviser for seniors in this College in addition to their registration in the College of Law. This College will not recommend for the degree of Bachelor of Arts any student who has not completed in residence at least thirty hours' work in subjects offered by this College.

Courses in law may not be counted as a major in this college but may be offered as a minor by a student whose major is in political science or history, according to regulations stated in the departmental announcements.

The former requirement that candidates for the degree of Doctor of Law (J.D.) must take certain work in history, economics, political science, or sociology in this College during the fourth year of the curriculum, has been abrogated.

## HOUSEHOLD SCIENCE

The courses of instruction given in this department are planned to meet the needs of four classes of students: (a) those students who desire a knowledge of the general principles and facts of household science; (b) those students who wish to make a specialty of household science for the purpose of teaching
the subject in secondary schools and colleges; (c) those students who wish some knowledge of the principles underlying household administration and institutional management; (d) those students who are interested in the work of dietitians.

The suggested curriculums for teachers and for institutional workers are outlined below. The first three years of the curriculum as outlined for teachers give a scientific basis for the work of the dietitian.

Students who hold scholarships in household science must make this subject their major along one of the lines indicated above and take each semester at least four hours in household science or in subjects required for admission to courses in household science.

Students who major in household science must also satisfy the requirements of the General Curriculum in the College of Liberal Arts and Sciences in so far as these are not covered in the curriculums given below.

## Suggested Curriculum for Teachers of Household Science FIRST YEAR




[^23]
## Suggested Curriculum in Household Administration

FIRST YEAR

| FIRST SEMESTER | SECOND SEMESTER |
| :---: | :---: |
| Chenr. 1-Inorganic Chemistry or........ 5 | Chem. 2a-Inorg, Chem, and Qual. Anal 5 |
| ${ }^{2}$ Chem. 1a-Inorganic Chemistry.......... 3 | Foreign language ...................... 4 |
| Foreign language ...................... 4 | ${ }^{3} \mathrm{H}$. Sci. 1-Principles of the Selection and |
| H. Sci. 2-Home Arch. and Sanitation. 2 | Preparation of Food.................. 3 |
| Phys. Tr. 7-Physical Training ........ 1 | Phys. Tr. 7-Physical Training......... 1 |
| Phys. Tr. 9-Hygiene................... 1 | Rhet, 2-Rhetoric and Themes.......... 3 |
| Rhet. 1-Rhetoric and Themes .......... 3 |  |
| Total .......................... 14 or 16 | Total . . . . . . . . . . . . . . . . . . . . . . . . . . 16 |
| SECOND | YEAR |
| A. \& D. 1-Free Hand Drawing......... 3 | A. \& D. 12-Applied Design............. 2 |
| Foreign language or English 1.......... ${ }^{4}$ | Bot. 1-General Botany or |
| H. Sci. 6-Economic Uses of Food..... 3 | Zool. 1-General Zoology ............. 5 |
| H. Sci. 7-Textiles. . . . . . . . . . . . . . . . . . . 2 | Foreign language or English 2........... 4 |
| Total . . . . . . . . . . . . . . . . . . . . . . . . . 12 | Total . . . . . . . . . . . . . . . . . . . . . . . . 11 |
| Electives | Electives |
| A. \& D. 19-History of the Fine Arts... 2 | A. \& D. 19-History of the Fine Arts... 2 |
| ${ }^{4}$ Chenı. 13a-Agricultural Analysis or | ${ }^{4} \mathrm{Ch}$ em. 9-Organic Chemistry and......... 3 |
| ${ }^{4}$ Econ. 26-Economic Resources.... 5 or 3 | Chem. 9c-Organic Synthesis or |
| Hist. 1a-Continental European Hist. or | ${ }^{4}$ Econ. 22-Econ. Hist. of U. S.... 2 or 3 |
| Hist. 3a-History of the U. S..... 3 or 4 | Hist. 1b-Continental European Hist. or |
| Lib. Sci. 12-General Reference......... 2 | Hist. 3 b -History of the U. S...... 3 or 4 |
| THIRD | YEAR |
| Econ. 1-Principles of Economics....... 5 | H. Sci. 3-Home Decoration............ 2 |
| H. Sci. 19-Dress Design.............. 2 | H. Sci. 5-Dietetics ..................... 3 |
| Physiol. 4-General Physiology......... 5 | H. Sci. 12-Clothing .................. 3 |
| Psychol. 1-Introduction to Psychology. 3 | Psychol. 2-General Psychology or Edu. 1-Introd. to Education...... 3 or 4 |
| Total . . . . . . . . . . . . . . . . . . . . . . . . . 15 | Total . . . . . . . . . . . . . . . . . . . . 11 or 12 |
| Electives | Electives |
| English | Bact. 5-Introduction to Bacteriology.... 5 |
| H. Sci. 14-Problems in the Preparation and Service of Food. | H. Sci. 10 -Homne Management. ......... 2 |
| Sociol. 1-Principles of Sociology....... 3 | Pol. Sci. 3-State and Local Government. 3 <br> Pol. Sci. 16-Government of Illinois..... 2 |
| FOURTH | YEAR |
| Suggested Electives | Suggested Electives |
| Edu. 1-Introduction to Education....... 4 | Edu. 10-Observation and Technic....... 3 |
| English, Advanced | English, Advanced |
| H. Sci. 4-Food and Nutrition.......... 5 | H. Sci. 9-Seminar . ................... 3 |
| H. Sci. 13-History of Home Economics. 2 | H. Sci. 11-Teachers' Course............ 3 |
| H. Sci. $15-$ Economics of the Family | H. Sci. 17-Problems in the Study of tex- |
| Group . ............................. 3 | tiles . . . . . . . . . . . . . . . . . . . . . . . . . . . 3 |
| H. Sci. 18-Lunch Room Management.. 5 |  |

## SIX-YEAR AND SEVEN-YEAR MEDICAL CURRICULUMS

The requirement for admission to the four-year medical curriculum (whether the first year of the curriculum is taken at Urbana or in the College of Medicine in Chicago) is as follows: 60 semester hours of college work, including 8 in chemistry, 8 in physics, 8 in biology, 6 in French or German, and 30 elective.

The University offers a six-year and a seven-year medical curriculum. The six-year curriculum includes three years given at Urbana and three years in the College of Medicine in Chicago. The third of the three years given at Urbana is technically described as a one-year medical college curriculum. The

[^24]seven-year curriculum includes four years of collegiate work at Urbana and three years in the College of Medicine in Chicago. One of the four years at Urbana is devoted to the work of the one-year medical college curriculum. The work given at Urbana includes substantially in both curriculums the work of the first year of a standard curriculum in medicine, together with two years or three years in liberal arts and sciences. Students who have completed the work of the first two years and are taking the work of the third year are registered in both the one-year medical college curriculum and the College of Liberal Arts and Sciences.

A student who has completed the curriculum outlined below, covering two years of premedical work and the one-year medical college curriculum at Urbana, may receive credit by transfer for one year of work in the College of Medicine of the University of lllinois or other standard colleges of medicine, and upon the completion of the second year's work in such a college of medicine may receive the degree of Bachelor of Science on the recommendation of the faculty of the College of Liberal Arts and Sciences in the University of Illinois. Under this plan the student may receive the degrees of Bachelor of Science and Doctor of Medicine with six years of work.

Students who wish to take the fourth year in the College of Liberal Arts and Sciences, including the one-year medical college curriculum, are not held to the group requirements prescribed for students taking the regular degree of Bachelor of Arts. The curriculum must be made up with the approval of the adviser for seniors and of the Dean of the College. It is recommended that selection be made from the following courses: Bacteriology ; Chemistry 5b, 5c, 9a, 9b, 14a-14b, 21, 22, 31, 105, and 106; Entomology 2, 3; Physiology 5; Zoology $4,5,8 \mathrm{a}-8 \mathrm{~b}, 21 \mathrm{a}-21 \mathrm{~b}, 22,23,25-26$; modern languages; and studies included in Group 5 of the general curriculum in science, page 131. On the completion of this fourth year, the student takes the degree of Bachelor of Arts before going to the College of Medicine.

FIRST YEAR


[^25]
## CURRICULUM IN CHEMISTRY

Students who follow the General Curriculum in the College of Liberal Arts and Sciences with chemistry as a major subject are eligible for the degree of Bachelor of Arts.

For the more specialized training of the chemist the following curriculum, largely prescribed, has been arranged. It requires a maximum total of 136 hours, and leads to the degree of Bachelor of Science in chemistry.

Preliminary preparation in German or French equivalent to two years of high school work or one ycar of university work is prescribed. The total language requirement for graduation in the curriculum in chemistry, including courses offered for entrance, must be equivalent to two years of university German and one year of university French.

In the following schedule of courses, effective in 1915-16, after the second year there are offcred certain prescribed subjects required of all students and in addition five group options, the last four of which are outlined for the purpose of affording systematic training along certain important lines of applied chemistry. The first option, A, is intended for those students who wish to place chief emphasis upon the fundamental branches of chemistry as a science and for those students who desire a combination of subjects not outlined in the other four groups. Students in option A must submit to their adviser at the beginning of the junior year an outline of their proposed program for the junior and senior years. Approval of such an outline must be secured from the adviser before registering. At least 12 hours of the electives under option A must be in chemistry and it is recommended that they be selected as far as possible from more advanced courses in inorganic, analytical, organic, and physical chemistry. In all groups, except $B, 10$ hours of the electives must be taken outside of the department and must include a course in economics.

The groups provided for, with the letter used to designate each group, are as follows:
A. General
B. Electrochemical
C. Industrial
D. Food and sanitation
E. Physiological

## Curriculum in Chemistry FIRST YEAR

| first semester Hours ${ }^{1}$ | second semester Hours ${ }^{\text {a }}$ |
| :---: | :---: |
| Chem. 1 or 1a-Inorganic Chemistry. 5 or 3 | Chem. 3a-Inorganic Chemistry and Quali- |
| German or French..................... 4 | tative Analysis......................... 6 |
| Math. 2-College Algebra.............. 3 | German or French..................... ${ }^{4}$ |
| Math. 4-Plane Trigonometry........... ${ }^{2}$ | Math. 6-Analytical Geometry............ 5 |
| Mil. 2a-Military Drill.................. ${ }^{1}$ | Mil. ${ }_{\text {Mil }}^{1-D r i l l ~ R e g u l a t i o n s . . . . . . . . . . . . . . . . . ~} 1$ |
| Phys. Tr. 1 and 1a-Gymnasium and Hygiene ....................................... 1 | Mil. 2b-Military Drill........................ 1 <br> Phys. Tr. 2-Gymnasium. |
| Rhet. 1-Rhetoric and Themes.......... 3 |  |
| Total ............................ 19 or 17 | Total .................................. 18 |
| SECOND | YEAR |
| Chem. 5a-Quantitative Analysis......... 5 | Chem. 5b-Advanced Analytical Chemistry 5 |
| French or German...i................... 4 | French or German....................... 4 |
| Mil. 2c-Military Drill.................... 1 | History 2 or 3 or English 20.............. 3 |
| Phys. 1a-General Plysics............... 3 | Mil. 2d-Military Drill....................... $\frac{1}{2}$ |
| Phys. 3a-Physical Measurements........ 2 | Phys. 1b-General Physics............... 2 |
| Rhet. 2-Rhetoric and Themes........... 3 | Phys. 3b-Physical Measurements........ 2 |
| Total ................................... . . 18 | Total .................................... 17 |

[^26]
## THIRD YEAR



FOURTH YEAR

Prescribed for all Groups
Chem. 11-Research........................... 3
Chem. 93a-Journal Meeting................. 1
Chem. 95-History of Chemistry......... . 2
Total
.$\overline{6}$

## Group Options

A.-General

Electives . . . . . . . . . . . . . . . . . . . . . . . . . . . 11
B. - Electrochemical

Chem. 35-Electrochemistry............ 3
Chem. 37-Experimental Problems in Physical and Electrochemistry....... 4
Electives ................................... ${ }^{\text {Plectrical }}$
Phys. 4a-Electrical and Magnetic
Measurements.................... 2
C. -Industrial

Chem. 7-Metallurgy ................. 3
Chem. 35-Electrochemistry ............ 3
Chem. 69 - Metallurgical Laboratory and Assaying .......................................... ${ }^{2}$
D.-Food and Sanitation

Chem. 5c-Food Analysis. ............. 5
Chem. 21-Qualitative Organic Analysis . ................................... 2
Electives …............................................
E.-Physiological

Chem. 15 a or Chem. 22............... 5
Electives
$4-10$

## Prescribed for all Groups

Chem. 9b-Organic Synthesis and Qualita-
tive Analysis............................... 2

Chem. 31-Principles of Physical Chem-

Chem. 33--Physical Chemistry Laboratory 2
Chem. 92b-Journal Meeting............. 1
Total ......................................... 11
Group Options
A.-Gencral
B.-Electrochemical
E. E. 8-Electric Currents and Ap-
E. E. 68-Electrical Engineering Lab-
oratory $. . . . . . . . . . . . . . . . . . . . . . . . . . . .1-7$
Industrial
Elective . . . . . . . . . . . . . . . . . . . . . . . . $2-6$ One inspection trip
E. Electric Currents and Ap-
. E. 68-Electrical Engineering Laboratory ................................

Chem. 15-Physiological Chemistry.. 5
Elective ....................................2-7

Prescribed for all Groups
Chem. 6—Chemical Technology........... ${ }_{7}^{3}$
Chem. 11-Research Me...................... ${ }^{7}$
Total ......................................... 11
Group Options
A.-General

Electives ................................... 5
B.-Electrochemical

Electives .................................. . . 2-5
Philos. 1-Logic............................... 3
C. - Industrial

Chem. 61-Industrial Laboratory..... 3
Electives ..................................... 3 One inspection trip
D. and E.-Food and Physiological Electives

## Curriculum in Chemical Engineering

 FIRST YEAR
## FIRST SEMESTER

Hours ${ }^{1}$

Chem. 1 or 1a-Inorganic Chemistry. . 5 or 3
German 4-Prose Reading
Math. 2-College Algebra...............................
Math. 4.-Plane Trigonometry
3
Mil. 2a-Military Drill.......................... 1
Phys. Tr. 1 and $1 \mathrm{a}-\mathrm{Gym}$ asium and $\mathrm{H} y-$
giene
Total . . . . . . . . . . . . . . . . . . . . . . . . 16 or 14

Chem. 3a-Inorganic Chemistry and Quali-
tative Analysis. ............................... 6
German 6-Scientific German.................. 4
Math. 6-Analytical Geometry ........... 5
Mil. 1-Drill Regulations................. 1
Mil. 2b-Military Drill............................
Phys. Tr. 2-Gyınnasium1

Total

[^27]

## THE COLLEGE OF COMMERCE AND BUSINESS ADMINISTRATION

For a description of the building used by this College, see page 52, for museum and collections belonging to it, see page 64; for societies and clubs auxiliary to its curriculums, see page 115; for fees, see page 122.

## ORGANIZATION

The College of Commerce and Business Administration was established oy the Board of Trustees in April, 1915, and opened the following September. The new college was given control of all the work formerly conducted by the department of economics, including the courses in business administration. The work of the college is divided into three separate departments as follows: economics, including finance and statistics; business organization and operation, including accountancy and business law; and transportation.

## PURPOSE

The purpose of the College of Commerce and Business Administration is to give its students a knowledge of the principles underlying all lines of business with special training for particular business callings. The College does not attempt to prepare students for clerical and similar occupations as employees, but does endeavor to lay a broad foundation on which successful careers in managerial and administrative positions and as proprietors may be built. To this end courses in economics, accountancy, business organization and operation, banking, commerce, railway administration, and industry are offered in combination with courses in language and literature, the social sciences, law, mathematics, and the natural sciences.

## ADMISSION

See the statement of the entrance requirements of the University, pages 71 to 96.

## SPECIAL STUDENTS

See the statement of the general regulations of the University in regard to special students, page 79.

## REQUIREMENTS FOR GRADUATION

## 1. The New Requirements-Degree of Bachelor of Science

Students who entered the College of Commerce and Business Administration with the class of 1919 and subsequent classes will be given the degree of Bachelor of Science.

The requirements for this degree are as follows:

1. A candidate must comply with the University requirements as to residence and registration and secure credit amounting to 130 hours including the general University requirements of Rhetoric $I$ and 2, 6 hours; and Physical Training, I, Ia, and 2, 2 hours, for men, and $7 a-7 b$ and 9,3 hours, for women; and Military Science $1,2 a-2 b$, and ac-2d, 5 hours, for men.
2. A candidate must secure credit in the subjects listed as prescribed in his chosen curriculum.
3. Of the electives allowed, 8 hours must be in either English literature or foreign language in all curriculums except the Curriculum in Foreign Commerce and the Curriculum for Commercial Teachers, in which foreign language is prescribed.
4. In the General Business Curriculum, the Curriculum in Banking, the Curriculum in Insurance, the Curriculum in Accountancy, the Curriculum in Railway Administration, and the Curriculum for Commercial and Civic Secretaries, 12 hours must be elected in the following group of subjects: history, political science, philosophy, psychology, and sociology, provided that not less than six hours in any one subject may be counted in fulfilling the requirement.
5. In all curriculums in which less than 10 hours of mathematics is prescribed in the first year, 10 hours must be elected in the following group of subjects: chemistry, geology, mathematics, and physics, provided that not less than 5 hours in any one subject may be counted in fulfilling the requirement.
Students are advised to take the subjects required in paragraphs 3,4 , and 5 as early as possible in their course in order to leave more opportunity for free electives in the last years. In choosing free electives students must secure the advice and approval of the Dean of the College or of the official adviser for the curriculums they are pursuing.

## II. The Old Requirements-Degree of Bachelor of Arts

The graduation requirements for former students in the Courses in Business Administration enrolled in the College of Commerce and Business Administration will remain as they have been in the past and such students will be given the degree of Bachelor of Arts.

The requirements are as follows:

1. Credit amounting to 130 hours, including the prescribed rhetoric, physical training, and military.
2. At least 8 hours in each of the following groups of subjects:
I. English language and literature, including rhetoric.
II. Latin, Greek, French, German, Italian, Spanish.
III. History, economics, sociology, political science.
IV. Mathematics, education, philosophy, psychology.
V. Astronomy, botany, chemistry, entomology, geology, physiology, physics, zoology.
3. Credit in the following subjects:
I. Six hours of freshman economics (Economics 7, 22, 26, and 27). In case of students transferring from other colleges with advanced standing this requirement may be modified to suit individual needs.
II. Principles of Economics (Economics 1).
III. Business Writing (Rhetoric 10), Senior Conference on Written Work (Rhetoric 25-26).
IV. Principles of Accounting (Accountancy 1a-1b).
V. Commercial Law (Business Law la-1b).
4. A Major of 24 hours in economics, but not more than six hours of freshman economics (Economics 7, 22, 26, and 27) may be counted towards the major. Courses in accountancy and business law may not be counted towards the major.
This statement of requirements for the degree of Bachelor of Arts is an abbreviation of the "old requirements" for graduation from the College of Liberal Arts and Sciences. For the details of these requirements, see pages 130-133. The outlines of curriculums on the following pages for the second, third and fourth years must also be used in connection with the above statement of requirements and attention must be given to the additional subjects prescribed in different curriculums.

## THE CURRICULUMS

The curriculums offered in the College and outlined in the following pages furnish training for (1) general business, (2) commercial and civic secretaries, (3) banking, (4) insurance, (5) accountancy, (6) general railway administration, (7) railway transportation, (8) commercial teachers, (9) foreign commerce. The curriculums are now in process of transition owing to the recent reorganization of the work in commerce and business administration and the adoption of new requirements for graduation. The outlines which follow are, therefore, arranged to show the work of each year as the curriculums are taught in 1915-16.

## General Business Curriculum as Taught in 1915-16

The subjects listed for the first year are prescribed for students of the class of 1919. An option is allowed between Economics 26 and 7 the first semester, and between Economics 22 and 27 the second semester. In addition to prescribed subjects students must take sufficient electives to make a minimum of 15 hours, but not to exceed a maximum of 18 hours, of work each semester.

| FIRST YEAR FOR first SEMESTER | E CLASS OF 1919 SECOND SEmester |
| :---: | :---: |
| Acc'y 1a-Principles of Accounting..... 3 | Acc'y 1b-Principles of Accounting..... 3 |
| Econ. 26-Economic Resources or | Econ. 22-Economic History of United |
| Econ. 7-English Economic History... 3 | States or |
| Electives : ${ }^{\text {a }}$.................. 4 to 7 | Econ. 27-Modern Industries ......... 3 |
| Mil. 2a-Military Drill ................. | Electives . . . . ..................... 3 to 6 |
| Phys. Tr. 1 and 1a-Gymnasium and | Mil. 1-Drill Regulations................ 1 |
| Hygiene $\ldots$....................... $\frac{1}{3}$ | Mil. 2b-Military Drill.................. 1 |
| Rhet. 1-Rhetoric and Themes......... 3 | Phys. Tr. 2-Gymnasium.................. 1 <br> Rhet. 2-Rhetoric and Themes.......... 3 |
| Total ............................ 15 to 18 | Total .......................... 15 to 18 |

[^28]
## SECOND YEAR FOR THE CLASS OF 1918

Prescribed Subjects
Econ. 1-Principles of Economics....... 5
Hist. 3a-History of United States or
Hist. 2a-English History or
Hist. 1a-European History.......... 3 or 4
Mil. 2c-Military Drill....................... 1
Pol. Sci. 1-American Government........ 3
Total ............................... 12 or 13
Suggested Electives
Foreign language continued.
Mathematics
Phil. 1-Logic $. . ., \ldots, \ldots, \ldots, \ldots, \ldots, \ldots,{ }^{2} 3$
Science
THIRD YEAR FOR THE CLASS OF 1917
Prescribed Subjects
$\begin{array}{lll}\text { Acc'y } & \text { 1a-Principles of Accounting..... } & 3 \\ \text { Econ. } & 10 \text { Corporation Management..... } & 3 \\ \text { Econ. } & 28 \text {-Domestic Commerce......... } 3\end{array}$

Prescribed Subjects
Econ. 3-Money and Banking........... 3
Hist. 3b-History of United States or
Hist. 2b-English History or
Hist. 1 b -European History......... 4 or 3
Mil. 2d-Military Drill....................... 1
Pol. Sci. 3-State and Local Government 3
Rhet. 10-Business Writing............... 2
Total ................................ 13 or 12

## Suggested Electives

Foreign language continued
Mathematics
Phil. 1-Logic. 3
${ }_{\text {Phil. }}{ }^{1}$

Acc'y ib-Prescribed Subjects $\begin{gathered}\text { Priples of Accounting..... } 3\end{gathered}$
Bus. Org. and Op. 2-Organization and
Control of Mercantile Distribution.... 3
Econ. 29-Foreign Commerce or
Econ. 31-Organization of Foreign Commerce
Trans. 12-Freight Shipment.................. 2
Total ........................................ 11
Suggested Electives
Econ. 11-Industrial Consolidations...... 3
History ........................................
Psych. 2-Psychology............................ 3
Trans. 2-Transportation Policy........... 3 3

Bus. Org. and Op. 1-Business Organiza.
tion and Operation.........................
Econ. 5-Public Finance....................... 3
History
Psych. ${ }_{2}$ 1-Psychology............................ 32
Rhet. 22 Summarizing and Abstracting 2
Rhet. 22-Summarizing and Abstracting 2
Trans. 1 -Transportation System....... 3
FOURTH YEAR FOR THE CLASS OF 1916
Prescribed Subjects
Bus. Law 1a-Commercial Law......... 3
Bus. Org. and Op. 7-Salesmanship..... ${ }^{3}$
Rhet. 25-Conference on Written Work.
Total ....................................... 7
Suggested Electives
Acc'y 2a-Advanced Accounting and Aud-
iting............................................ ${ }^{3}$
Bus. Org. and Op. 3 -Business Procedure 2
Econ. 4-Financial History of U. S........ 3
Econ. 12a-Labor Problems............... 3
Phil. 9-Political Ethics

Prescribed Subjects
Bus. Law 1b-Commercial Law............ 3
Bus. Org. and Op. 8-Advertising........ 3
Rhet. 26-Conference on Written Work.. 1
Total . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 7
Suggested Electives
Acc'y 2b-Advanced Accounting and Aud-
iting ........................................ 3
Bus. Org. and Op. 4-Industrial Organi-
zation and Management................. 2
Bus. Org. and Op. 9-Commercial and
Civic Organization .......................... 1
Econ. 12b-Labor Problems................. 3
Econ. 13 - Economic Development of
Europe ....................................... 3

## Curriculum for Commercial and Civic Secretaries as Taught in 1915-16

The subjects listed for the first year are prescribed for students of the class of 1919. An option is allowed between Economics 26 and 7 the first semester, and between Economics 22 and 27 the second semester. In addition to prescribed subjects students must take sufficient electives to make a minimum of 15 hours, but not to exceed a maximum of 18 hours, of work each semester.

FIRST YEAR FOR THE CLASS OF 1919
tirst semester Hours ${ }^{1}$
Acc'y 1a-Principles of Accounting...... 3
Econ. 26-Economic Resources or
Econ. 7-English Economic History.... 3
Electives .............................. 4 to 7
Mil. 2a-Military Drili.............................. 1
Phys. Tr. 1 and la-Gymnasium and Hy-

Total ................................ 15 to $\overline{18}$

SECOND SEMESTER


Econ 22-Principles of Accounting..... ${ }^{3}$ con. 22 - Economic History of United
States or
Eon. 27-Modern Industries. ............... 3
Mil. 2b-Military Drill............................... 1
Mil. $1-$ Drill Regulations. ...................... 1
Phys. Tr. 2-Gymnasium..................... 1
Rhet. 2-Rhetoric and Themes............ 3
Total
18

[^29]
## SECOND YEAR FOR THE CLASS OF 1918

| Prescribed Subjects Hours ${ }^{1}$ | Prescribed Subjects Hours ${ }^{2}$ |
| :---: | :---: |
| Econ. 1-Principles of Economics....... 5 | Econ. 3-Money and Banking........... 3 |
| Hist. 3a-History of United States or | Hist. 3b-History of United States or |
| Hist. 2a-English History or | Hist. 2b-English History or |
| Hist. 1a-European History......... 3 or 4 | Hist. 1b-European History.........3 3 or |
| Mil. 2c-Military Drill................... 1 | Mil. 2d-Military Drill................... 1 |
| Pol. Sci. 1-American Government...... 3 | Pol. Sci. 3-State and Local Government 3 Rhet. 10-Business Writing................ 2 |
| Total ........................... 12 or 13 | Total ........................... 12 or 13 |
| Suggested Electives | Suggested Electives |
| Foreign language continued. | Foreign language continued. |
| Mathematics | Mathematics |
| Phil. 1-Logic............................ . 3 | Phil. 1-Logic............................ 3 |
| Science | Science |

## THIRD YEAR FOR THE CLASS OF 1917



## Prescribed Subjects

Acc'y 1b-Principles of Accounting..... 3
Bus. Org. and Op. 2-Organization and
Control of Mercantile Distribution..... 3
Econ. 31-Organization of Foreign Commerce or
Econ. 29-Foreign Commerce............ 3
Sociology 8-Charities............................ 3
Total ......................................... 12
Suggested Electives
Econ. 11-Industrial Consolidation....... 3
Econ. 34-Property Insurance............ 2
Pol. Sci. 12-National Administration.... 3
Pol. Sci 16-Government of Illinois...... 2

## FOURTH YEAR FOR THE CLASS OF 1916

Prescribed Subjects
Bus. Law la-Commercial Law......... 3
Bus. Org. and Op. 3-Business Procedure 2
Bus. Org. and Op. 7-Salesmanship.... 3
Rhet. 25-Conference on Written Work.. 1

Total
$-9$

Suggested Electives
Econ. 12a-Labor Problems
3
Econ. 51-Public Utilities................... 3
Sociology 10-Population...................... 3
Trans. 1-Transportation System.

## Prescribed Subjects

Bus. Law 1b-Commercial Law.......... 3
Bus. Org. and Op. 4-Industrial Organization and Management................. 2 Bus. Org. and Op. 9-Commercial and Civic Organizations......................... 1 Bus. Org. and Op. 8-Advertising........ 3 Rhet. 26-Conference on Written Work. 1 Trans. 12-Freight Shipment ............... 2
Total ...................................... 12
Suggested Electives
Econ. 21-Socialism and Economic Reform 2
Econ. 12b-Labor Problems................. 3
Sociology 9-Criminology ...................... 3

## Curriculum in Banking as Taught in 1915-16

The subjects listed for the first year are prescribed for students of the class of 1919. An option is allowed between Economics 26 and 7 the first semester, and between Economics 22 and 27 the second semester. In addition to prescribed subjects, students must take sufficient electives to make a mini-
mum of 15 hours, but not to exceed a maximum of 18 hours, of work each semester. Banking students must elect advanced algebra (Math. 2) in either the first or the second year as a prerequisite for the mathematics of investment (Math. 23) in the third year.

FIRST YEAR FOR THE CLASS OF 1919

| first semester Hours ${ }^{\text {1 }}$ | second semester Hours ${ }^{1}$ |
| :---: | :---: |
| Acc'y 1a-Principles of Accounting. | Acc'y 1b-Principles of Accounting...... ${ }^{3}$ |
| Econ. 26-Economic Resources or | Econ. 22 - Economic History of United |
| Econ. 7-English Economic History.... 3 | States or |
|  |  |
| Phys. Tr. 1 and la-Gymnasium and Hy- | Mil. 2b-Military Drill. ................... 1 |
| giene ............................... | Mil. 1-Drill Regulations................. 1 |
| het. 1-Rhetoric and Themes | Phys. Tr. 2-Gymnasium. Rhet 2-Rheteric and Themes............ $\frac{1}{3}$ |
| Total ......................... 15 to 18 | Total ........................... 15 to 18 |
| SECOND YEAR FOR | THE CLASS OF 1918 |
| Prescribed Subjects | Prescribed Subjects |
| Econ. 1-Principles of Economics. | Econ. 3-Money and Banking. .......... 3 |
| Hist. 3a-History of United States or | Hist. 3b-History of United States or |
| Hist. 2a-English History or | Hist. 2b-English History or |
| Hist. 1a-European History........ 3 or 4 | Hist. 1b-European History........ 3 or 4 |
| Mil. 2c-Military Drill. | Mil. 2d-Military Drill. ................. $\frac{1}{1}$ |
| Pol. Sci. 1-American Government. | Pol. Sci. 3-State and Local Government 3 Rhet. 10-Business Writing................ 2 |
| Total .......................... 12 or 13 | Total ........................... 12 or 13 |
| Suggested Electives | Suggested Electives |
| Foreign language continued | Foreign language continued |
| Phil. 1-Logic.......................... 3 | Phil. 1-Logic............................ 3 |
| Science | Science |

## THIRD YEAR FOR THE CLASS OF 1917



## FOURTH YEAR FOR THE CLASS OF 1916

Bus. Law 1a-Commercial Law........... ${ }^{3}$ Bus. Law 1b-Commercial Law ..... 3
Econ. 4 - Financial History of United States Econ. 8-The Money Market............. ..... 2
1
Rhet. 26-Conference on Written Work.
3
2
Econ. 9-Practical Banking.
Rhet. 25-Conference on Written Work. . 1
Total-
Suggested Electives
Acc'y 2a-Advanced Accounting and Aud-iting
Total ..... $\overline{6}$
Suggested Electives
Acc'y 2b-Advanced Accounting and Aud-
iting3
Bus. Org. and Öp. 4 -Industrial Organiza
tion and Management.2
Bus. Org. and Op. 3 -Business Procedure
Econ. 12a-Labor Problems.Econ. 12b-Labor Probiems.2
3
Econ. 33-Economics of Insurance.2
Prescribed Subjects
Acc'y 1b-Principles of Accounting.......
Bus. Org. and Op. 2-Organization and
Or. and Op. 2 Organization and
Math. 23-Mathematics of Investment.2
Total ..... -
Suggested Electives
Econ. 11-Industrial Consolidations or
Econ. 29 -Foreign Commerce ......... ..... 3
merce ..... 3
History

## Curriculum in Insurance as Taught in 1915-16

The subjects listed for the first year are prescribed for the class of 1919. An option is allowed between Economics 26 and 7 the first semester, and between Economics 22 and 27 the second semester.

FIRST YEAR FOR THE CLASS OF 1919

| irst semester | SECOND SEMEster |
| :---: | :---: |
| Hours ${ }^{1}$ | Hours ${ }^{\text {l }}$ |
| Acc'y 1a-Principles of Accounting. | Acc'y 1b-Principles of Accounting.... |
| Econ. 26-Economic Resources or | Econ. 22-Economic History of United |
| Econ. 7-English Economic History.... 3 | States or |
| Math. 2-Advanced Algebra.............. 3 | Econ. 27-Modern Industries. |
| Math. 4-Trigonometry....................... 2 <br> Mil. 2a-Military Drill......................... 1 | Math. 6-Analytical Geometry Mil. 1-Drill Regulations.... |
| Phys. Tr. 1 and 1a-Gymnasium and Hy- | Mil. 2b-Military Drill. |
|  | Phys. Tr. 2-Gymnasium |
| Rhet. 1-Rhetoric and Themes.......... 3 | Rhet. 2-Rhetoric and Themes |
| Tota | Total |

SECOND YEAR FOR THE CLASS OF 1918

## Prescribed Subjects

Econ. 1-Principles of Economics......... 5
Math. 8-Calculus............................. 5
Mil. 2c-Military Drill...................... 1
Pol. Sci. 1-American Government....... 3
Science- .................................... 5
Total .$\overline{19}$

## Prescribed Subjects

Econ. 3-Money and Banking............ 3 Math. 23-Mathematics of Investment.... 3 Mil. 2d-Military Drill...................... 1
Pol. Sci. 3-State and Local Government 3
Rhet. 10-Business Writing................ 2
Science- ....................................... 5
Total ........................................ $\overline{17}$

THIRD YEAR FOR THE CLASS OF 1917


## Prescribed Subjects

Acc'y 1b-Principles of Accounting...... 3
Bus. Org. and Op. 2-Organization and
Control of Mercantile Distribution..... 3
Total ......................................... 6
Suggested Electives
Foreign language continued.
Hist. 3b-History of United States....... 3
Hist. $1 \mathrm{~b}-E$ European History. ............... 4
Phil. 1-Logic.................................. 3

Hist. 3a-History of United States........ 3
Rhet. 22-Summarizing and Abstracting.. 2

## FOURTI YEAR FOR THE CLASS OF 1916

## Prescribed Subjects

Bus. Law 1a-Commercial Law............ 3
Econ. 33-Economics of Insurance...... 2
Rhet. 25-Conference on Written Work..
Total

## Suggested Electives

Bus. Org. and Op. 3-Business Procedure 2
Bus. Org. and Op. 7-Salesmanship..... 3
Econ. 4-Financial History of United
States

Econ. 12a-Labor Problems.
2
-3
Phil. 9-Political Ethics

## Prescribed Subjects

Bus. Law 1b-Commercial Law.......... 3
Econ. 34-Property Insurance............. 2
Rhet. 26-Conference on Written Work.. 1
Total ......................................... 6
Suggested Electives
Bus. Org. and Op. 4-Industrial Organization and Management.................
Bus. Org. and Op. 8-Advertising ....... 3
Econ. 8b-Money Market.................. 2
Econ. 12b-Labor Problems.................. 33

## Curriculum in Accountancy as Taught in 1915-16

The subjects listed for the first year are prescribed for the students of the class of 1919. An option is allowed between Economics 26 and 7 the first semester and between Economics 22 and 27 the second semester. In addition

[^30]to prescribed subjects students must take sufficient electives to make a minimum of 15 hours, but not to exceed a maximum of 18 hours, of work each semester. Accountancy students must elect advanced algebra (Math. 2) in either the first or the second year as a prerequisite for mathematics of investment (Math. 23 ) in the third year.

## FIRST YEAR FOR THE CLASS OF 1919

| first semester Hours ${ }^{1}$ | SECOND SEMESTER Hours ${ }^{\text {I }}$ |
| :---: | :---: |
| Acc'y 1a-Principles of Accounting. . . . 3 | Acc'y 1b-Principles of Accounting. .... 3 |
| Econ. 26-Economic Resources or | Econ. 22-Economic History of United |
| Econ. 7-English Economic History.... 3 | States or |
| Electives ........................... 4 to 7 | Econ. 27-Modern Industries............ 3 |
| Mil. 2c-Military Drill. . . . . . . . . . . . . . . . 1 | Electives . . . . . . . . . . . . . . . . . . . . . . . 3 to 6 |
| Phys. Tr. 1 and la-Gymnasium and Hy- | Mil. 1-Drill Regulations................. 1 |
|  | Mil. 2b-Military Drill. . . . . . . . . . . . . . . . . . 1 |
| Rhet. 1-Rhetoric and Themes.......... 3 | Phys. Tr. 2-Gymnasium.................... $\frac{1}{3}$ Rhet. 2-Rhetoric and Themes.......... 3 |
| Total ........................... 15 to 18 | Total . . . . . . . . . . . . . . . . . . . . . . . 15 to 18 |

## SECOND YEAR FOR THE CLASS OF 1918



## Prescribed Subjects

Acc'y 1b-Principles of Accounting. . . . . . 3
Econ. 3-Money and Banking............. 3
Mil. 2d-Military Drill....................... 1
Rhet. 10-Business Writing. . . . . . . . . . . . . . . 2
Science . . .......................................... 5
Total . . . . . . . . . . . . . . . . . . . . . . . . . . . . 14
Suggested Electives
Foreign language continued.
Hist. 1b-European History............... . 4
Hist. 3b-History of United States........ 3
Pol. Sci. 3-State and Local Government 3

## THIRD YEAR FOR THE CLASS OF 1917



## Prescribed Subjects

Acc'y 2b-Advanced Accounting and Aud-
iting ................................................ ${ }^{3}$
Bus. Org. and Op. 2-Organization and Control of Mercantile Distribution..... 3
Math. 23-Mathematics of Investment... 3
Total ...................................... 9
Suggested Electives
Acc'y 4b-Cost Accounting. . . . . . . . . . . . . . . 3
Econ. 29-Foreign Commerce or
Econ. 31-Organization of Foreign Com-

Econ. 11-Industrial Consolidation .......... 3

## FOURTH YEAR FOR THE CLASS OF 1916

Prescribed Subjects
Acc'y 3a-Accounting Problems and Aud-
iting . ......................................... 3
Bus. Law 1a-Commercial Law........................ 3
Rhet. 25-Conference on Written Work. . 1
Total ........................................ 7
Suggested Electives
Bus. Org. and Op. 3-Business Procedure 2
Econ. 9-Practical Banking............. 2
Econ. 12a-Labor Problems................... 3
Econ. 51-Public Utilities.
Phil. 9-Political Ethics.

Prescribed Subjects
Acc'y 3b-Accounting Problems and Aud-
iting ..................................................
Bus. Law 1b-Commercial Law................. 3
Rhet. 26 -Conference on Written Work.. 1
Total . . . ....................................... 7
Suggested Electives
Bus. Org. and Op. 4-Industrial Organiza-
tion and Management.....................
Econ. 8-Money Market............................ 2
Econ. 12b-Labor Problems...................

## Curriculum in Railway Administration as Taught in 1915-16

All junior and senior students in railway administration are required to take part in the annual inspection trip of four days' duration, commencing on the morning of the Tuesday before the Easter recess. The expenses of each member of the party need not exceed $\$ 12$ to $\$ 15$.

## Curriculum in Railway Administration

(Hitherto called Course in Railway Traffic and Accounting)
The subjects listed for the first year are prescribed for students of the class of 1919.

FIRST YEAR FOR THE CLASS OF 1919

## FIRST SEMESTER

## Hours ${ }^{1}$

Acc'y 1a-Principles of Accounting...... 3
Econ. 26-Economic Resources............ 3
Math. 2-Advanced Algebra..................... 3
Math. 4-Trigonometry .............................. 2
Mil. 2a-Military Drill........................
Phys. Tr. 1 and 1 a-Gymasium and
Phys. Tr. 1 and la-Gymnasium and Hy giene
Rhet. 1-Rhetoric and Themes............. 3
Total ...................................... 16

SECOND SEMESTER

Acc'y 1b-Principles of Accounting. ...... 3
Econ. 22-Economic History of the United
States ........................................ 3
Math. 6-Analytic Geometry............ 5
Mil. 1-Drill Regulations................... 1
Mil. 2b-Military Drill ....................... 1
Phys. Tr. 2-Gymnasium....................... 1
Rhet. 2-Rhetoric and Themes............ 3
Total . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 17

SECOND YEAR FOR THE CLASS OF 1918

| Prescribed Subjects | Prescribed Subjects |
| :---: | :---: |
| Acc'y 1a-Principles of Accounting..... 3 | Acc'y 1b-Principles of Accounting...... 3 |
| Econ. 1-Principles of Economics....... 5 | Econ. 3-Money and Banking........... 3 |
| Mil. 2c-Military Drill................... 1 | Mil. 2d-Military Drill. |
| Phys. 1a and 3a-Physics................ 5 | Phys. 1b and 3b-Physi |
| Pol. Sci. 1-American Government...... 3 | Rhet. 10-Business Writing. ............. 2 |
| Trans. 7-Railway Organization.......... 2 | Trans. 12-Freight Shipment............ 2 |
| Total .................................. 19 | Total |

## THIRD YEAR FOR THE CLASS OF 1917

| Prescribed Subjects <br> Acc'y 2a-Advanced Accounting and Auditing <br> Econ. 10-Corporation Management......... <br> Electives .............................. 3 to <br> Trans. 1-Transportation System....... <br> Trans. 17-Railway Terminal Manageinent or <br> Trans. 13-Railway Traffic Administration |
| :---: |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Total
15 to $\overline{18}$

## Prescribed Subjects

Acc'y 2b-Advanced Accounting and Aud-
iting .......................................... 3
Bus. Org. and Op. 2-Organization and Control of Mercantile Distribution.... 3
Math. 23-Mathematics of Investment... 3
Trans. 26-Economics of Railway Location and Maintenance or
Trans. 22-Railway Train Service....... 3
Trans. 2-Transportation Policy in Europe and United States............... 3
Total . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 15

## FOURTH YEAR FOR THE CLASS OF 1916

| Prescribed Subjects |  |  |
| :---: | :---: | :---: |
| Acc'y 3a-Accounting Problems and Auditing |  |  |
|  |  |  |
| Electives ................................. 3 to Rhet. 25-Conference on Written Work. . |  |  |
|  |  |  |
| Trans. 13-Railway Traffic Administration |  |  |
| Trans. 17-Railway ment | Terminal | Manage- |
| Trans. 35a-Thesis |  |  |
| Total |  | 15 to |

## Prescribed Subjects

Acc'y 3b-Accounting Problems and Aud-
iting ......................................... 3
Bus. Law 1b-Commercial Law.......... 3
Electives ................................ 3 to 6
Rhet. 26-Conference on Written Work.. 1
Trans. 26-Economics of Railway Location and Maintenance or
Trans. 22-Railway Train Service........ 3
Trans. 35b-Thesis ......................... 2

Total

[^31]
## Curriculum in Railway Transportation

The subjects listed for the first year are prescribed for students of the class of 1919. In choosing additional courses in the second, third, and fourth years as described below, in order to make up the 130 hours of credit, six hours must be taken in history, political science, advanced language, or philosophy.

## FIRST YEAR FOR THE CLASS OF 1919

## FIRST SEMESTER

SECOND SEMESTER
Hours ${ }^{1}$
Acc'y 1a-Principles of Accounting....... 3
G. E. D. 1-Elements of Drafting........ 4

Math. 2-Advanced Algebra................ 3
Math. 4-Trigonometry
Mil. 2a-Military Drill................................. 1
Phys. Tr. 1 and $1 a-G y m n a s i u m$ and Hy -
giene ......................................... 1
Rhet. 1-Rhetoric and Themes........... 3
Total . . . . . . . . . . . . . . . . . . . . . . . . . . . . 17
(Hours ${ }^{1}$
Acc'y 1b-Principles of Accounting. . . . . 3
G. E. D. 12-Descriptive Geometry..... 4

Math. 6-Analytic Geometry............. 5
Mil. 1-Drill Regulations........................... 1
Mil. 2b-Military Drill. ...................... 1
Phys. Tr. 2-Gymnasium..........................
Rhet. 2-Rhetoric and Themes............... 3

Total . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 18

## SECOND YEAR FOR THE CLASS OF 1918



## THIRD YEAR FOR THE CLASS OF 1917

## Prescribed Subjects

T. \&. A. M. 21-Analytical Mechanics... 2
T. \&. A. M. 29-Resistance of Materials. 5

Trans. 1-Transportation System.......... 3
Trans. 13-Railway Administration or
Trans. 17-Railway Terminal Management 3

Prescribed Subjects
M. E. 2-Steam Engineering. .............. 3

Trans. 2.-Transportation P olicy in
Europe and the United States......... 3
Trans. 22-Railway Train Service or
Trans. 26-Economics of Railway Loca-
tion and Maintenance. ................... 3
Total . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 9

## FOURTH YEAR FOR THE CLASS OF 1916

## Prescribed Subjects

Acc'y 1a-Principles of Accounting
Econ. 12a-Labor Problems......

## Prescribed Subjects

Acc'y 1b-Principles of Accounting. 3
C. E. 76-Surveying.......................... 2

Econ. 12b-Labor Problems................... 3
E. E. 12 and 62 Alternating Current....... 4

Rhet. 26-Conference on Written Work.. 1
Trans. 26-Economics of Railway Loca-
tion and Maintenance or
Trans. 22-Railway Train Service......... 3
Trans. 35b-Thesis .......................... 2
Total . . . . . . . . . . . . . . . . . . . . . . . . . . . . 18

## Curriculum for Commercial Teachers as Taught in 1915-16

The subjects listed for the first year are prescribed for students of the class of 1919. An option is allowed between Economics 26 and 7 the first semester, and between Economics 22 and 27 the second semester. In addition to prescribed subjects students must take sufficient electives to make a minimum of 15 hours, but not to exceed a maximum of 18 hours, of work each semester.

FIRST YEAR FOR THE CLASS OF 1919
first semester Hours ${ }^{1}$ second semester Hours ${ }^{1}$

| first semester Hours ${ }^{1}$ | second semester Hours ${ }^{\text {a }}$ |
| :---: | :---: |
| Acc'y 1a-Principles of Accounting..... 3 | Acc'y 1b-Principles of Accounting..... 3 |
| Econ. 26-Economic Resources or | Econ. 22-Economic History of United |
| Econ. 7-English Economic History | S |
| Foreign languag | Electives ................................ 2 |
| Mil. 2a-Military Dr | Foreign languag |
| Phys. Tr. 1 and 1a-Gymnasium and Hy- | Mil. 1-Drill Regulations................. 1 |
| giene .... | Mil. 2b-Military Drill. .................. 1 |
| Rhet. 1-Rhetoric and Themes.......... 3 | Phys. Tr. 2-Gymnasium...................... 1 Rhet. 2-Rhetoric and Themes............ 3 |
|  |  |
| Total . . . . . . . . . . . . . . . . . . . . . . . . . 18 | Total |

SECOND YEAR FOR THE CLASS OF 1918

| Prescribed Subjects | Prescribed Subjects |
| :---: | :---: |
| Econ. 1-Principles of Economics | Econ. 3-Money and Banking........... 3 |
| Hist. 3a-History of United States or | Hist. 3b-History of United States or |
| Hist. 1a-European History........ 3 or 4 | Hist. 1b-European History........ 3 or 4 |
| Mil. 2c-Military Drill................... 1 | Mil. 2d-Military Drill.................. 1 |
| Pol. Sci. 1-American Government...... 3 | Pol. Sci. 3-State and Local Government 3 |
| Psychology 1-Intro. Psychology........ 3 | Psychology 2-Intro. Psychology.......... 3 Rhet. 10-Business Writing.................. |
| Total ........................... 15 or 16 | Total ........................... 15 or 16 |
| Suggested Electives | Suggested Electives |
| English literature. | English literature |
| Foreign language continue | Foreign language continued. |
| Mathematics | Mathematics ............. |
| Science | Science |

## THIRD YEAR FOR THE CLASS OF 1917

Prescribed Subjects
Acc'y 1a-Principles of Accounting...... 3
Econ. 10-Corporation Management...... 3
Econ. 28-Domestic Commerce............ 3
Educ. 1-Principles of Education.

Total ...................................... 13
Suggested Electives
Bus. Org. and Op. 1-Business Organiza-
tion and Operation.........................
Econ. 5-Public Finance...................... 3
Foreign language continued.

## History

Phil. 1-Logic
Pol Sci 4 .....................................
Pol. Sci. 4-Municipal Government. ..... 3
Rhet. 22-Summarizing and Abstracting.. 2

## Prescribed Subjects

Acc'y 1b-Principles of Accounting..... 3
Bus. Org. and Op. 2-Organization and Control of Mercantile Distribution.... 3 Econ. 29-Foreign Commerce or
Econ. 31-Organization of Foreign Com-

Educ. 2-History of Education. . . . . . . . . . . . 5
Total ....................................... 14
Suggested Electives
Educ. 6-Principles of Secondary School Education
Foreign language continued.
History
Phil. 2-Introduction to Philosophy.......... 3

FOURTH YEAR FOR THE CLASS OF 1916

Prescribed Subjects
Bus. Law 1a-Comınercial Law.......... 3
Econ. 12a-Labor Problems..................
Educ. 10 -Observation and Technics of
Teaching $\ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots{ }^{3}$
Rhet. 25-Conference on Written Work... 1
Total ....................................... 10
Suggested Electives
Acc'y 2a-Advanced Accounting and Aud-
iting...............................${ }^{3}$
Bus. Org. and Op. 3 Business procedure 2
Econ. 4-Financial History of United
States
Econ. 9-Mractical Banking........................... ${ }_{2}$
Phil. 9—Political Ethics........................ . 2

Prescribed Subjects
Bus. Law 1b-Commercial Law......... 3
Econ. 12b-Labor Problems................. 3
Educ. 16-Social Education or
Educ. 15-School Hygiene.......... 2 or 3
Rhet. 26 -Conference on Written Work.. 1
Total ............................. 9 or 10 Suggested Electives
Acc'y 2b-Advanced Accounting and Aud-
iting . . .......................................... 3
Bus. Org. and Op. 4-Industrial Organi-
zation and Management. ................ 2
Econ. 8-The Money Market............... 2
Econ. 21-Socialism and Economic Re-
form ....................................... 2
Trans. 12-Freight Shipment.

## Curriculum in Foreign Commerce

The subjects listed for the first year are prescribed for students of the class of 1919. An option is allowed between Economics 26 and 7 the first semester and between Economics 22 and 27 the second semester. In addition to prescribed subjects, students must take sufficient electives to make a minimum of 15 hours, but not to exceed a maximum of 18 hours, of work each semester.

NOTE.-This is a new curriculum and is introduced because of the growing demand for trained service in foreign trade and more particularly in Latin-American trade. In the remaining years of the curriculum emphasis will be laid on instruction in foreign language and correspondence, business organization and operation, history, international relations, foreign commerce, and international exchange and finance.

FIRST YEAR FOR THE CLASS OF 1919

| first semester Hours ${ }^{1}$ | second semester Hours ${ }^{1}$ |
| :---: | :---: |
| Acc'y 1a-Principles of Accounting. ..... 3 | Acc'y 1b-Principles of Accounting. .... 3 |
| Econ. 26-Economic Resources or | Econ. 22-Economic History of United |
| Econ. 7-English Economic History.... 3 | States or |
| Electives For................................. ${ }^{3}$ | Econ. 27-Modern Industries............. 3 |
|  | $\underset{\text { Erectiges }}{\text { Elanguage..................................... } .^{2} 4}$ |
| Phys. Tr. 1 and la-Gymnasium and Hy - | Mil. 1-Drill Regulation |
| giene | Mil. 2b-Military Dril |
| Rhet. 1-Rhetoric and Themes.......... 3 | Phys. Tr. 2..................................... 1 Rhet. 2-Rhetoric and Themes |
| Total ........................................... 18 | To |

[^32]
## THE COLLEGE OF ENGINEERING

For a description of the buildings used by this College, see page 52, for collections belonging to it (architecture, ceramic engineering, civil engineering, electrical engineering, mechanical engineering, and railway engineering), see page 65; for clubs and societies auxiliary to its curriculums, see page 115; for fees, see page 122; for honors, see page 99; for honorary societies, see page 114.

## GENERAL STATEMENT

The purpose of the College is to train men for the profession of engineering. In arranging its curriculums, cultural subjects are interwoven with the theoretical subjects of the several departments. The instruction of the classroom and the practise afforded by the library, the drafting-room, and the laboratory are correlated. Throughout his course the student works upon problems and proceeds by methods similar to those which arise in the experience of the practising engineer.

## ADMISSION

See the statement of the entrance requirements of the University, pages 71 to 96.

## SPECIAL STUDENTS

See the statement of the regulations of the University in regard to special students, page 79.

## DESCRIPTION OF DEPARTMENTS

The College of Engineering comprises the following departments:
Department of Architecture, with curriculums inArchitecture
Architectural Engineering
Department of Ceramic Engineering
Department of Civil Engineering
Department of Electrical Engineering
Department of Mechanical Engineering
Department of Mining Engineering
Department of Municipal and Sanitary Engineering
Department of Theoretical and Applied Mechanics
Department of Physics
Department of Railway Engineering, $\dagger$ with curriculums in-
Railway Civil Engineering
Railway Electrical Engineering
Railway Mechanical Engineering

[^33]
## ARCHITECTURE

The department of architecture offers two curriculums leading to the first degree, the curriculum in architecture and the curriculum in architectural engineering. The aim of these curriculums is to give preparation for the practise of architecture.

The curriculum in architecture aims primarily to train the student to produce correct, thoughtful, and beautiful works of architecture. The schedule includes liberal and scientific subjects to supply the background for creative work and to give a knowledge of the principles involved in the processes of safe and economical construction; also freehand drawing for the purpose of training the eye to recognize correct proportion and training the hand to skilful and rapid drawing. The curriculum, however, consists mainly of the study of architectural forms and principles and their application in architectural design.

The curriculum in architectural engineering gives a groundwork in mathematics and applied mechanics, and includes such studies as strength of materials, bridge, mill, and tall building construction, reinforced concrete, etc. The principles of these subjects are applied to all forms of building construction in a course given in the senior year, known as architectural engineering. While specializing in construction, this curriculum includes also the study of the forms and principles of architecture through such subjects as free-hand drawing, architectural history, architectural drawing, and architectural design.

Both curriculums in architecture prepare the student for the examinations of the Illinois State Board of Examiners of Architects, and graduates are exempt from examinations required for entrance into the American Institute of Architects, and from the preliminary examination for the prize in Architecture of the American Academy at Rome. The Plym Fellowship in Architecture is awarded annually to a graduate of the department. This prize, which is awarded by competition, amounts to $\$ 1,000$ and provides for one year of travel abroad for the study of architecture.

The American Institute of Architects offers annually a medal to be awarded to the graduate of the department whose work throughout the four years has been adjudged the best. In making the award the scholarship in all work for the entire curriculum is considered.

The J. C. Llewellyn prize of fifty dollars is offered to the seniors in architectural engineering for the best solution of a given engineering problem.

The Scarab Medal in Architecture is awarded annually to a student of the Department. This prize is a bronze medal which is awarded by competition.

Students intending to take up the study of architecture should take freehand and mechanical drawing and general history in high school.

## Equipment

The collections of rendered and working drawing, lantern slides, plates, photographs, casts, specimens of American woods, building materials, and appliances are noted under "Collections" on page 65. A Zeiss epidiascope is used for direct projection of photographs and colored plates, and a double electric lantern for projecting two pictures on the screen at once for comparative study. Geometrical and architectural models are lighted by a light properly adjusted for demonstration of the subjects of shades and shadows and conventional rendering. Wall space in the corridors of the department and in all drafting rooms has been prepared for exhibition purposes, and collections
of drawings are constantly displayed. The department occupies the fourth floor of Engineering Hall, and part of the third; its quarters include drafting rooms for undergraduate and graduate work, library, lecture rooms, and studios for free-hand drawing.

## CERAMIC ENGINEERING

This department offers courses in instruction relating to the fabrication of clay products, cement, and glass from the crude clays and rocks.

In addition to the fundamental engineering courses, work is offered in the physical and chemical principles of the production of silicate products, the winning and preparation of raw materials, their shaping, drying, and burning, or fusion, the compositions and application of the various glazes, enamels, and colors, the construction of the various machines, apparatus, kilns, and furnaces used in these industries.

Industrial cooperation and research are prosecuted, and a series of bulletins on ceramic subjects is being published.

## Equipment

The ceramic laboratories contain apparatus for the testing of clays and the preparation of cements and glasses; machinery for grinding the raw materials, for shaping bricks, tiles, saggers, pottery and refractories; nine kilns and furnaces for calcining and fusing; pyrometers, potentiometers, electric furnaces, recording instruments, and all other accessories for exact scientific and technical work.

A library pertaining to the silicate industries is available; also sets of working drawings representing the construction of important plants.

## CIVIL ENGINEERING

The purpose of this department is to furnish a curriculum accompanied and illustrated by practise in the survey, design, and construction of public and other engineering works. While the instruction aims to be practical by giving the student information and practise applicable in his future professional work, the prime object is the development of the mental faculties. The power to acquire information and the ability to use it are held to be of greater value than so-called practical knowledge.

## Equipment

This department has an equipment of compasses, engineers' transits, solar transits, levels (ordinary and precise), plane tables and sextants, as well as a collection of illustrations of structural materials.

The cement laboratory occupies a room in the Mechanical Engineering Laboratory, and is provided with slate tables, testing machines, molding machines, sieves, and sample barrels of hydraulic cement, varieties of sand, and other necessary materials.

The road laboratory occupies a room in the Mechanical Engineering Laboratory, and is provided with machines for testing the resistance of macadam material to impact and abrasion and for making the cementation test. The laboratory is also supplied with rattlers and other devices for testing paving material; and with equipment for testing oils, tars, and asphalts.

## The College of Engineering

## ELECTRICAL ENGINEERING

This department provides a curriculum in the theory and application of electricity. The first two years of work are substantially the same as in the other engineering curriculums, including work in drafting room and shop, and instruction in the principles of mathematics and physics. In the third year a course in dynamo machinery is followed by the theory of alternating currents, while laboratory and design courses emphasize principles. Technical courses cover the generation, transmission, and distribution of electric power, and its various applications. In the laboratory a study of dynamos is followed in the fourth year by experiments in the operation of electrical machinery. Investigation of problems of power distribution is made in advanced laboratory and thesis work.

## Equipment

The 500-kilowatt power plant of the University supplies the electrical engineering laboratory with current for its operation.

The power equipment in the electrical engineering laboratory includes seventy-five direct current machines with a total capacity of 425 kilowatts, thirty alternating current machines with a total capacity of 325 kilowatts, and sixty transformers with a total capacity of 375 kilowatts. A 17 -panel experimental switchboard affords distribution and control.

The instrument room contains standards for the calibration of commercial instruments of all types, two hundred and fifty portable instruments for experimental work, and a 240 ampere-hour storage battery. The graduate laboratory contains apparatus for research, including four oscillographs, one 2,000 -cycle alternator, one 200,000 -volt transformer, one 1,000 -ampere direct current generator, and apparatus for high voltage direct current investigations. The photometer room contains apparatus for tests of the various light sources. Two special $100-$ line switchboards are connected with cables and apparatus for experiment in telephony. The equipment for electrometallurgical work includes one 30 -kilowatt induction furnace, one 25 -kilowatt arc furnace, two 30 -kilowatt resistance furnaces, one 15 -kilowatt vacuum furnace for melting, one 3-kilowatt vacuum furnace for annealing, and one $1.5-\mathrm{kilowatt}$ muffle furnace.

## MECHANICAL ENGINEERING

The courses in mechanical engineering are planned to present the theory and practise of the generation and transmission of power, and of the design, construction, operation, and testing of machinery of all kinds. In the laboratories emphasis is given to the engineering and economic principles of machine construction and to the problems of scientific shop management.

## Equipment

The Designing Rooms are supplied with drawing tables, and with reference books, files of trade catalogs, gear charts, and collections of blue-prints. A collection of kinematic models, sectional steam specialties, lantern slides, and photographs is also available.

The Mechanical Engineering Laboratory is equipped with machines and testing instruments for instruction in steam engineering, gas power engineering, refrigeration, heating, and ventilation, including a 210 -horsepower experimental boiler, equipped with chain-grate stoker, fuel economizer, and induced draft; a separately fired steam superheater; types of throttling, high speed automatic,
and Corliss steam engines; steam condensers; a compound two-stage air compressor; a large compound duplex steam pump; a Kerr steam turbine; a DeLaval turbo-pump; a 200,000 -pound Lea water-flow; a 10 -ton ammonia compression refrigerating machine; typical gas, gasoline, and oil engines; a 50 -horsepower suction gas producer, house-heating boilers and furnaces; and apparatus for instruction in heating and ventilation and the mechanical equipment of buildings. The central heating and power plant contains types of boilers, stokers, pumps, and engines in commercial service.

The Shop Laboratories are provided with machinery and apparatus to illustrate the processes of the manufacture of machinery. The laboratories include the Wood Shop with an equipment of benches, lathes, machinery, and small tools needed in pattern construction; the Foundry equipped with cupola, brass furnaces, core ovens, molding machines, and facilities for bench and floor molding; the Forge Shop equipped with forges, anvils and small tools, a steam hammer, a power-driven punch and shear, and with gas and electric furnaces; and the Machine Shop with an equipment of lathes, planers, shapers, milling machines, grinders, boring mills, drill presses, and with typical small tools and fixtures used in manufacturing.

## MECHANICS, THEORETICAL AND APPLIED

The courses in theoretical and applied mechanics are designed to meet the needs of students of engineering.

The Laboratory of Applied Mechanics comprises the materials testing laboratory and the hydraulics laboratory. The equipment of the materials testiny laboratory includes testing machines and apparatus for making physical test; of materials of construction, such as tension, compression, flexure, shearing, torsion, hardness, and impact tests, and tests under repeated load. The laboratory contains machines of capacity for testing full size structural and machine members. Among these is a universal machine of six hundred thousand pounds capacity. The hydraulics laboratory has facilities for furnishing water under a range of pressures and volumes. There is an equipment of devices for measuring and recording the flow of water, including measuring pits, water meters, weir channels, nozzles, pitometer, and Venturi meters. In the equipment are pumps, a standpipe, water motors, and a turbine water wheel for testing purposes. A supply of pressure gauges, weighing scales, and other auxiliary apparatus is provided.

## MINING ENGINEERING

The department of mining engineering offers courses of instruction in mining and metallurgy to train men for the various phases of the mineral industry.

The work of the department adds to the preliminary courses in mathematics, languages, chemistry, physics, geology, and general engineering, specialized work in mine surveying, mining methods, prospecting, mine examination and valuation, ventilation, mining machinery, coal washing and ore concentration, metallurgy, utilization of fuels, administration and organization of mines, mining law, and the design of mining and metallurgical structures.

In addition to its work of instruction, the department concerns itself with the development and dissemination of scientific facts of service in improving the practise of mining, with reference to efficiency in operation, the security of life in the mines, and the conservation of the mineral resources of the State.

## Equipment

The drawing rooms contain the catalogs of the manufacturers of mining machinery with a complete card index, the standard reference books on mine drafting, models of mine structures, and a collection of blue-prints and drawings of mine structures.

The mine-gas and safety-lamp laboratory contains safety lamps of different types, electric and magnetic locking appliances, a photometer, a dark room for photometric work, Ryan, Oldham, and Hailwood safety-lamp testing apparatus, appliances for gas and dust analysis and explosibility tests, and a Bacharach hydro volume and pressure recorder.

The coal washing and ore dressing laboratory contains for crushing, rolls, gyratory and jaw crushers, and a 500 -pound 3 -stamp battery; for screening and sizing, trommels, shaking and vibrating screens, and classifiers; for concentrating and cleaning, pan, piston and pulsating jigs, bumping table, vanner, concentrating table, and slimer. These machines can handle from 3 to 5 tons of coal and one ton of ore an hour. There are also a complete sampling and drying equipment, a cyanide testing plant, a Huff electrostatic machine, a flotation unit, and other appliances used for preliminary testing. Adjoining this laboratory is a chemical assay laboratory equipped for the analytical work required in connection with coal washing and ore concentration.

The explosives and drilling laboratory contains types of rock and coal drills, an air meter, a diamond drill, chain and puncher, coal cutters, and a complete outfit for demonstrating the use of explosives.

## MINE RESCUE STATION AND LABORATORIES

Cooperating with the department of mining engineering and with the State Geological Survey, the Federal Government in 1909 established at the University a mine rescue station in charge of a resident mining engineer. The purpose of the station was to interest all connected with the mining industry in modern appliances and breathing and resuscitation apparatus as part of the normal equipment of mines. At the station mine bosses and others were trained in the use of such apparatus, this service being rendered freely to all who desired the benefits thereof.

A direct outcome of the cooperative rescue station has been the establishment of a comprehensive mine rescue service by the State of Illinois. This state service has rendered unnecessary the maintenance of the cooperative rescue station in Urbana. The station is now maintained by the University for the training of students, but the Bureau of Mines keeps certain apparatus on exhibition.

The Cooperative Investigation of Illinois mining conditions is another outgrowth of the mine rescue station. This cooperation between the University of Illinois, the Illinois State Geological Survey, and the United States Bureau of Mines has for the past four years carried on an investigation of the coal resources and the mining practise in the state.

A laboratory has been maintained for the study of mine dusts and mine gases which is also available for the use of mining classes in the University. The Bureau of Mines has stationed in Urbana two resident mining engineers, and a chemist.

## MUNICIPAL AND SANITARY ENGINEERING

This curriculum is designed to train students for the duties of the engineer employed on the design, construction, and operation of public works and public utilities, and for general engineering work.

The methods of training are intended to develop power to take up and solve new problems connected with municipal public works, as well as to design and to superintend the ordinary constructions. Surveying, structural materials, and structural design are taught as in the civil engineering curriculum. Chemistry and bacteriology of water supply and sewage disposal are given; and instruction in mechanical and electrical engineering in the generation and transmission of power.

## PHYSICS

The department of physics occupies the Laboratory of Physics. This building supplies facilities and equipment for instruction and investigation in physics. Gas, distilled water, compressed air and vacuum, and direct and alternating electric currents are available in all parts of the building. There is a collection of over 4,000 pieces of apparatus, and only a small part of the equipment is antiquated. New investigations can usually be started with the apparatus on hand. There are two workshops, one for advanced students and instructors, and one for the mechanicians of the department. The students' shop is equipped with lathes, drill press, and bench tools. The mechanicians' shop contains lathes, milling machines, drill press, and other facilities for fine machine work.

The University library contains sets of journals of plysics and the related sciences in English, French, and German. The recent volumes of the physical journals, together with a collection of text-books, encyclopedias, dictionaries, and other reference books, are in the special library of the Laboratory.

## RAILWAY ENGINEERING*

The department of railway engineering is organized to train students for service in the technical departments of railways. It offers curriculums in railway civil engineering, railway electrical engineering, and railway mechanical engineering, all three of which are substantially the same as the corresponding civil, electrical, and mechanical engineering curriculums to the middle of the third year, after which is given in each course a group of subjects relating to the technical problems of steam or electric railways. The curriculums in railway civil and railway mechanical engineering are designed for those who wish to enter steam railway service in the engineering and motive power departments respectively, while the curriculum in railway electrical engineering is intended for those who will serve on electric railways or in the electrical departments of steam roads. The special subjects of the curriculum in railway civil engineering concern the location, design, construction, and maintenance of railway track and equipment, and the design of railway structures. The courses in railway electrical engineering deal with the design and construction of electric railway equipment, the operation and performance of electric cars and locomotives, and with the problems which arise in the electrification of steam lines. The curriculum in railway mechanical engineering adds to the fundamentals of the general mechanical engineering curriculum special railway courses on the design of locomotives and cars, the resistance of trains, the performance and tests of locomotives, and tests of railway equipment.

[^34]
## Equipment

A locomotive testing plant, equipped from the original designs of the department, occupies a building forty by one hundred fifteen feet. The plant is devoted exclusively to making tests to determine the performance of locomotives. The locomotives tested are furnished by certain western railroad systems under an arrangement which insures the maintenance in the plant of a locomotive of latest design.

The department owns and operates, jointly with the Illinois Central Railroad, a railway test car designed for experimental work on steam roads. It is equipped for making train resistance and locomotive performance tests, and during the last fifteen years has been in frequent operation in carrying on resistance and tonnage rating tests on the Illinois Central Railroad and on several eastern roads.

For work on electric roads the department owns also an electric test car, of the interurban type, designed and built for the University. It is equipped with four 50 -horse-power direct current motors and with the Westinghouse multiple control system, and is provided with instruments for recording power, speed, acceleration, and the other data needed in road tests. Through the courtesy of the Illinois Traction System this car is operated on its lines, which enter the campus of the University.

The department laboratory equipment includes a drop-testing machine and a brake-shoe testing machine, both constructed in accordance with the standards of the Master Car Builders Association. The drop-testing machine is designed for use in testing the strength of railroad rails, car axles, car couplers, and draft gears; and may be used in studies of the physical properties of structural materials of any sort. The brake-shoe testing machine supplies means for determining the wearing properties and frictional qualities of brake-shoes, such as are employed in regular service on railroad trains.

Much of the work in the railway courses is given in the departments of civil, electrical, and mechanical engineering, and the shop and laboratory equipment of these departments is available for students of the railway department.

Three steam roads-the Illinois Central, the Cleveland, Cincinnai, Chicago \& St. Louis, and the Wabash railroads-and two electric interurban roadsthe Illinois Traction System and the Kankakee and Urbana railway-enter Champaign and Urbana. The department is afforded opportunities for practical road tests and field work. The division shops of the C., C., C. \& St. L. railroad, located at Urbana, provide opportunity for similar work.

## APPROVED NON-TECHNICAL ELECTIVES

The following is a list of approved non-technical electives for students in the College of Engineering. In general, prerequisites must be observed.

Accountancy 10 ; Astronomy 3, 7, 8, 14, 15 ; Chemistry 16, 5a or 13a, 10b, 6, 7, 8, 31, 35, 65, 66, 69, 77, 78; Economics 1, 2, 3, 10, 12a-12b, 21, 25a-25', 41 ; Education 1, 2, 16, 25, 41 ; English, any intermediate or advanced courses; French, any advanced courses; Geology 2, 5a, 13a, 13b, 14, 24 ; (for students in mining any course in geology for which the student has prerequisite); German, any third or fourth year courses; History 3a-3b; Italian 2a-2b; Mathematics 10, 16-17, 19, 21, 23, 27-28; Philosophy 1, 17 ; Physics 15, 16, 17, 20, 22, 23, 24, 25, 30, 31a-31b; Political Science 1, 3, 4; Psychology 1, 2, 3, 4; Rhetoric 17; Sociology 1, 3; Spanish 3a-3b; 4a-4b.

## SUMMER READING

All engineering students not graduates of a literary college are required to complete prescribed courses of reading of a non-professional character during the summer vacations following the freshman and sophomore years. The purpose of the summer reading is to increase the acquaintance of the student with literature, history, and general science, to develop in him a taste for such reading, and to impress him with the importance of such knowledge not only as a source of individual enjoyment, but as an aid in social and business relations.

A circular on summer reading is issued, containing a list of books from which the student may choose. The books have been selected for their value in general training, but an attempt has been made to include only readable and attractive works. A statement of the books read during the summer is required at the beginning of the next college year.

## GENERAL ENGINEERING LECTURES FOR FRESHMEN

One general lecture, sufficiently popular in character to interest and inspire young students, will be given each week. All freshman engineering students are required to attend this lecture.

## TRIPS OF INSPECTION

Students in the College of Engineering are required to make a trip of inspection during their senior year. Such trips supply an opportunity to inspect the work of industrial establishments and of engineering enterprises. They usually occupy from three to four days, and are taken during term time, under the supervision of University authorities. They involve an expense from $\$ 15$ to $\$ 25$ to each student. For the year 1916-17, the trips will occur on November 27-29, 1916.

## CURRICULUMS AND DEGREES

The curriculums leading to the degree of Bachelor of Science in the College of Engineering, as scheduled for the year 1915-16, are given herewith in full. Each of the eleven curriculums given may ordinarily be completed in a period of four years.

A graduate of the University of Illinois in architectural, ceramic, civil, electrical, mechanical, mining, municipal and sanitary, or railway engineering may receive the degree of an allied curriculum upon the completion of from thirty to thirty-six semester hours work approved by the faculty. This work may ordinarily be done in one academic year.

A graduate of the College of Liberal Arts and Sciences of the University of Illinois, or of any college of equal standing, whose mathematical training includes the calculus, who has had an acceptable course in physics, and sufficient training in mechanics to enable him to begin the mechanics of the junior year, may receive the degree of Bachelor of Science in Engineering upon the completion of sixty-eight credit hours of work in engineering under the direction of the faculty. This work may ordinarily be done in two academic years. Candidates for the degree in the department of architecture are not required to be prepared in calculus or mechanics, but should have special preparation in drawing.

## RHETORIC PREREQUISITE FOR JUNIOR STANDING

The University Senate has approved the following requirements in the subject of rhetoric:

1. Rhetoric 1 and 2 shall hereafter be a prerequisite for junior standing in the College of Engineering, and no student in this College shall be permitted to register in more tlan eight hours of prescribed junior work without having passed or being registered in Rhetoric 1 or 2 .
2. Any student in this College whose written work shows that he is unable to use good English shall be reported by his instructor to a standing committee of the College, which committee shall have authority to direct the student to take as a prerequisite for graduation such additional work in rhetoric as may be prescribed by the department of English.

## CURRICULUMS IN ENGINEERING

The several engineering curriculums are in process of transition between a former schedule followed by the classes entering prior to the year 1914-15, and a new schedule, effective for the freshman class of that year and subsequent classes.

The outlines which follow show the work of each year in the several curriculums as taught during 1915-16. They do not show either the old or the new curriculum as a whole. The "First Year" as here scheduled is for freshmen; and the "Second Year," "Third Year," and "Fourth Year," respectively, for regular sophomores, juniors, and seniors; but these schedules must not be used for checking up on a student's previous work in his course or in planning the work of subsequent years. For such check or planning consult with the Assistant Dean of the College.

## Curriculum in Architecture <br> FIRST YEAR

First semester

## Hours ${ }^{1}$

Arch. $31^{2}$-Arch. and Freehand Drawing.. 4 Engineering lecture........................... 0 G. E. D. 2-Descriptive Geometry....... 4 Math. 2-Advanced Algebra................. 3
Math. 4-Trigonometry ....................... 2
Mil. 2a-Military Drill......................... 1
Plys. Tr. 1 and la-Gymnasium and Hy-

Total .......................................... 18
second semester
Hours ${ }^{1}$
Arch. 32-Arch. and Freehand Drawing. . 4 Chem. $1 \mathrm{a}^{3}$ or 1 b -Inorganic Chemistry 3 or 4 Engineering lecture.......................... 0
Mil. 1-Drill Regulations.......................... 1
Mil. 2b-Military Drill ...........................
Phys. Tr. 2-Gymnasium.................... 1
Rhet. 2-Rhetoric and Themes........... 3
T. \& A. M. 14-Elem. Mechanics......... . . 4

Total ................................ 17 or $\overline{18}$
Summer Reading, 50 points
SECOND YEAR


[^35]
## THIRD YEAR



## Curriculum in Architectural Engineering as Taught in 1915-16

# FIRST YEAR FOR THE CLASS OF 1919 <br> FIRST SEMESTER <br> SECOND SEMESTER 

## Hours ${ }^{1}$

Chem. 1a ${ }^{2}$ or 1 b -Inorganic Chemistry 3 or 4 Engineering lecture
G. E. D. I-Elements of Drafting

Math. 2-Advanced Algebra............
Math. 4-Trigonometry ..................
Mil. 2a-Practical Instruction............. 1
Phys. Tr. 1 and la-Gymnasium and Hy -
giene
1
Rhet. 1 - Rhetoric and Themes......................................
Total . . ............................. 17 or 18

SECOND YEAR FOR THE CLASS OF 1918


## THLRD YEAR FOR THE CIASS OF 1917

Arch. 15-History of Architecture. ..... 2
A. E. 45 -Graphic Statics.
Chem. 1a or 1 b -Inorganic Chem.3
Non-technical elective2
Rhet. 1-Rhetoric and Themes.3
4
T. \& A. M. 25-Resistance of Materials
Total ..... 18
Arch. 16-History of Architecture. ..... 2
A. E. 46-Graphic Statics ..... 3 ..... 3

Chem. 4-Qualitative Analysis. ..... | 4 |
| :--- |
| 2 |

Non-technical elective
3
3
T. \& A. M. 26-Analytic Mechanics and
Hydraulics ..... 4
Total ..... $\overline{18}$
Chem. 4-Qualitative AnalysisHours ${ }^{1}$
Engineering lecture. ..... 4 ..... 4
G. E. D. 2-Descriptive Geometry. ..... 0
Math. 6-Analytical Geometry. ..... 5
Mil. 1-Theoretical Instruction ..... 1
Mil. 2b-Practical Instruction ..... 1
Phys. Tr. 2-Gymnasium....... ..... 1
Rhet. 2-Rhetoric and Themes ..... 3
Total ..... 19
Arch. 14-History of Arclitecture. ..... 2
A. E. $44-$ Working Drawings. ..... 2
Mil. 2d-Military Drill. ..... 1
Laboratory ..... 2
Total ..... 18
Summer Reading, 50 points
FOURTH YEAR FOR
A. E. 47-Architectural Engineering..... 5
A. E. 57-Fireproof Construction.A. E. 48-Architectural Engineering..... 5
Inspection Trip................................M. E. 23 -Mech. Equipment of Buildings. 5
Non-teclinical elective
A. E. 58-Fireproof Construction..5A. E. 68-Estinates and Specifications.E. E. 92-Lighting and Wiring........... 2Non-technical elective4
2
Total ..... 15
Total ..... 16

[^36]
# Revised Curriculum in Ceramic Engineering FIRST YEAR 

## Hours ${ }^{1}$

Chem. $1 a^{2}$ or 1 b -Inorganic Chemistry 3 or 4 Engineering lecture ......................... 0 G. E. D. 1-Elements of Drafting........ 4

Math. 2-College Algebra................... 3
Math. 4-Trigonometry
Mil. 2a-Military Drill.
Phys. Tr. 1 and $1 \mathrm{a}-\mathrm{Gymnasium}$ and Hy giene
Rhet. 1-Rhetoric and Themes.

Summer Reading, 50 points

## SECOND YEAR

Chem. 5 - Quantative Analysis.......... $5 \quad$ Cer. 1-Ceramic Materials................. 3
Math. 7 -Differential Calculus............. 5 Chem. 5b-Quantative Analysis.............. 5

Phys. 1a-Physics Lectures................. 3 Phys. 1b-Physics Lectures................... 2
Phys. 3a-Physics Laboratory............. 2 Phys. 3b-Physics Laboratory..............
T. \& A. M. 20-Analytical Mechanics.... 3

Total ......................................... $\overline{19}$
Summer Reading, 50 points
THIRD YEAR
Cer. 2-Winning and Preparation of Clays 3 Cer. 5-Ceramic Bodies.................. 5
Cer. 3-Industrial Calculations............. ${ }^{3}$
Chem. 65-Gas and Fuel Analysis.......... 2
Language.................................
C. F. 76-Surveying .............................
T. \&. A. M. 21 —Analytical Mechanics... 2 Language ................................... 4
T. \&. A. M. 25-Resistance of Materials. 4

FOURTH YEAR

| Cer. 4-Drying and Burning............ 4 | Cer. 8-Glass . ........................... . 2 |
| :---: | :---: |
| Cer. 6-Glazes . . . . . . . . . . . . . . . . . . . . . 5 | Cer. 9-Ceramic Construction............ 4 |
| Cer. 17-Silicates . ........................ 3 | Ceramic thesis or technical elective...... 3 |
| Geol. 13a-Engineering Geology.......... 3 | Geol. 13b-Engineering Geology......... 3 |
| Non-technical elective ................... 3 | M. E. 62-Mech. Eng. Laborator |
| Total ................................... 18 | Total .................................. 15 |

## Curriculum in Civil Engineering as Taught in 1915-16 FIRST YEAR FOR THE CLASS OF 1919 <br> FIRST SEMESTER <br> second semester

## Hours ${ }^{1}$

Hours ${ }^{2}$
Ci:em. $1 \mathrm{a}^{2}$ or 1 b -Inorganic Chemistry 3 or ${ }^{4}$ Chem. 4-Inorganic Chemistry........... 4 Engineering lecture ........................ 0 G. E. D. 1-Elements of Drafting........ 4 Math. 2-Advanced Algebra................. 3 Math. 4-Trigonometry …................... 2 Mil. 2a-Military Drill ..............................
giene
Rhet. 1 - Rhetoric and Themes.
I

Total .............................. 17 or 18 Total ........................................ 19 Summer Reading, 50 points
SECOND YEAR FOR THE CLASS OF 1918


## Summer Reading, 50 points

${ }_{2}^{1}$ Semester hours. For definition see page 259.
${ }^{2}$ The numbers refer to courses in the Description of Courses, page 257.

## THIRD YEAR FOR THE CLASS OF 1917

C. E. 51-Railroad Surveying. M. E. 1-Steam Engines and Boilers... 3 Non-technical elective Non-technical elective . \& A. M. 21 Analytical Me. Manics.... 2 T. \& A. M. 29-Resistance of Materials 5
C. E. 52-Roads and Pavements. ..... 3
C. E. 60-Structural Stresses ..... 4
C. E. 70-Seminar ..... 1
Non-technical elective .......
T. \& A. M. $10-$ Hydraulics. ..... 3 ..... 3 ..... 16
Total
Total Total ..... 18
, FOURTH YEAR FOR THE CLASS OF 1916
I. General Civil Engineering Option
C. E. 77-Masonry Construction
C. E. 80-Contracts and Specifications...E. E. 4-Elementary Electrical Engineer-ing $\underset{\mathrm{E}}{\mathrm{in}}$............................................ 2E. E. 64 Electrical Engineering Labor-atoryM. \& S. E. 3-3
N. Sewerage
N. Sewerage
Non-technical elective. ..... 3
Technical elective ..... 5
Total ..... 16
II. Structural Engineering Option
C. E. 77-Masonry Construction C. E. 80-Contracts and Specifications. ..... 2
C. E. 79-Cement Laboratory.............. C. E. 82-Reinforced Concrete Design. ..... 4
3
M. \& S. E. 3-Sewerage ..... 3
C. E. 87-Advanced Bridge Analysis.... 2 Non-technical elective. ..... 2
Inspection trip Technical elective ..... 16
III. Highway Engineering Option
C. E. 77-Masonry Construction ..... 4
C. E. 80-Contracts and Specifications. . ..... 2
C. E. 94-Highway Administration ..... 2
3
C. E. 96-Road Laboratory ..... 2
Chem. 73-Asphalt, Tar, etc. ..... 2
Technical elective ..... 2
Total ..... 16 ..... 16
Technical Electives

C. E. 76-General Surveying ..... 2
C. E. 82-Reinforced Concrete Design C. E. 84-Concrete Buildings. ..... 4C. E. 88-Steel Building Design.C. E. 90-Hydro-EconomicsC. E. $90-\mathrm{Hydro}$ Economics
C. E. 94 -Concrete Bridges and Culverts. ..... $\frac{2}{2}$
C. E. 94-Highway Administration
C. E. 96-Road Laboratory ..... 2
C. E. 98-Thesis* ..... 3
Chem. 73-Asphalts, Tar, etc ..... 2
E. E. 4-Electrical Engineering ..... iaboratory ....
Min. 1 -Earth and Rock Excavation....... ..... $\frac{1}{3}$
M. \& S. E. 3-Sewerage.M. \& S. E. 9-Hydraulic Design and Con-struction . ......................................R. E. 31-Railway Yards and Terminals.2
3Curriculum in Electrical Engineering as Taught in 1915-15
FIRST YEAR FOR THE CLASS OF 1919
FIRST SEMESTER
Hours ${ }^{1}$
Chem. $1 a^{2}$ or 1 b -Inorganic Chemistry 3 or 4Engineering lecture.
G. E. D. 1-Elements of Drafting.SECOND SEMESTER
Chem. $4 \underset{\text { Engineering lecture. Analysis.................................. } 48}{4}$
Hours ${ }^{1}$
G. E. D. 2-Descriptive Geometry. ..... 0
4
rath. 6--Anayytic Geometry ..... 5
Mil. 2b-Drill Regulations ..... 1
P. T. 2-Gymnasium... ..... 1
Rhet. 2-Rhetoric and Themes. ..... 3
Math. 4-Trigonometry
Mil. 2a-Military Drill.
P. T. 1 and 1 a -Gymnasium and Hygiene 1
Rhet. 1-Rhetoric and Themes
Total
.17 or 18
.17 or 18
Summer Reading, 50 points

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## SECOND YEAR FOR THE CLASS OF 1918

| Language | Chem. 1a-Inorganic Chemistry. |
| :---: | :---: |
| Math. 7-Differential Calculus............ 5 | Language .......... |
| M. E. 81-Machine Work................ ${ }^{3}$ | Math. 9-Integral Calculus............... 3 |
| Mil. 2c-Military Drill.................... ${ }^{1}$ | Mil. 2d-Military Drill.................... 1 |
| Phys. 1a-Physics Lectures............... 3 | Phys. 1b-Physics Lectures |
| Phys. 3a-Physics Laboratory............ 2 | Phys. 3b-Physics Laboratory ........... 2 |
|  | T. A. M. 20-Analytical Mechanics..... 3 |
| Total ................................. 18 | Total ................................. 19 |
| Summer Read | ng, 50 points |
| THIRD YEAR FOR | THE CLASS OF 1917 |
| Chem. 4-Qualitative Analysis... | E. E. 26-Alternating Currents.......... 4 |
| E. E. 25-Direct Current Apparatus...... 4 | E. E. 76-Electrical Engineering Labo- |
| E. E. 75-Electrical Engineering Labo- | ratory |
| ratory | M. E. 2-Steam Engineering. ........... 3 |
| Math. 9a-Integral Calculus............. 2 | Non-technical elective |
| Phys. 4a-Electrical and Magnetic Measurement | Phys. 4b-Electrical and Magnetic Measurement |
| T. A. M. 25 -Resistance of Materials..... 4 | T. \& A. M. 26 -Analytical Mechanics and Hydraulics |
|  | Total ................................ 18 |
| FOURTH YEAR FOR | THE CLASS OF 1916 |
| E. E. 35-Alternating Current Apparatus 4 | E. E. 36-Alternating Current Apparatus 4 |
| E. E. 55-Electrical Design.............. 2 | E. E. 56-Electrical Design.............. 4 |
| E. E. 85-Electrical Engineering Labo- | E. E. 86-Electrical Engincering Labo- |
|  |  |
|  | E. E. 98-Thesis* or elective.............. ${ }^{\text {E }}$ 3 |
| M. E. 61-Power Measurement.......... ${ }^{2}$ | Non-technical elective.................... 3 |
| Non-technical elective.................... 3 |  |
| Inspection trip .......................... 0 |  |
| Total .................................. . 17 | Total ................................. 17 |

## Curriculum in Mechanical Engineering as Taught in 1915-16

FIRST YEAR FOR THE CLASS OF 1919

FIRST SEMESTER
Hours ${ }^{\text {x }}$
Chem. $1 a^{2}$ or 1 b -Inorganic Chemistry 3 or 4
Engineering lecturc.......................... 0
G. E. D. 1-Elements of Drafting...... 4

Math. 2-Algebra
Math. 4-Trigonometry
Mil. 2a-Military Drill ..........................
P. T. 1 and 1 a-Gymnasium and Hygiene 1

Rhet. 1-Rhetoric and Themes
Total
.17 or 18

SECOND SEMESTER
Hours ${ }^{1}$
Chem. 4-Qualitative Analysis............ . 4
Engineering lecture............................ 0
G. E. D. 2-Descriptive Geometry......... 4

Nath. 6-Analytical Geometry............. 5
Mil. 1-Drill Regulations................ 1
Mil. 2b-Military Drill........................ 1
P. T. 2-Gymnasium. ............................. 1

Rinet. 2-Rhetoric and Themes................ 3
Total ......................................... . 19

## Summer Reading, 50 points

## SECOND YEAR FOR THE CLASS OF 1918

| Math. 7-Differential Calculus. | Math. 9-Integral Calculus............. 3 |
| :---: | :---: |
| M. E. 75 \& 77-Forge and Fou | M. E. 75 \& 77-Forge and Foundry or |
| M. E. 79-Pattern Work... | M. E. 79-Pattern work................. 3 |
| Mil. 2c-Military Drill. | Mil. 2d-Military Drill .................. 1 |
| Phys. 1a-Physics Lectures | Phys. 1b-Physics Lectures.............. 2 |
| Phys. 3a-Physics Laboratory | Phys. 3b-Physics Laboratory .......... 2 |
| Rhet. 1-Rhetoric and Themes. | Rhet. 2-Rhetoric and Themes............. 3 T. \& A. M. 20—Analytical Mechanics..... . 3 |
| Total | Total . . . . . . . . . . . . . . . . . . . . . . . . . . . . 17 |

THIRD YEAR FOR THE CLASS OF 1917
Chem. 1a or 1b-Inorganic Chemistry 3 or 4
Math. 9a-Integral Mechanics.............. 2
Non-technical elective.................................. 3
T. \& A. M. 27-Analytical Mechanics.... 3
T. \& A. M. 29-Resistance of Materials.. 5
Total .............................. 16 or $\overline{17}$

[^38]
## FOURTH YEAR FOR THE CLASS OF 1916

| E. E. 11-Direct Current Apparatus..... 3 | E. E. 12-Alternating Current Apparatus |
| :---: | :---: |
| E. E. 61-Direct Current Laboratory.... 1 | E. E. 62-Alternating Current Laboratory |
| Inspection trip............................ 0 | M. E. 26-Heating and Ventilation |
| M. E. 15-Gas Power Engineering or | M. E. 32-Power Transmission. |
| M. E. 37-Principles of Management.... 3 | M. E. 44-Engineering Design or |
| M. E. 43-Engineering Design............ 5 | M. E. 66-Power Laboratory |
| M. E. 65-Power Laboratory. ............ 3 | M. E. 52-Power Plant Design or |
| Non-technical elective.................... 3 | M. E. 54-Industrial Plant Design |

# Curriculum in Mining Engineering as Taught in 1915-16 

FIRST YEAR FOR THE CLASS OF 1919

## FIRST SEMESTER

SECOND SEMESTER
Hours ${ }^{1}$


## SECOND YEAR FOR THE CLASS OF 1918

| Geol. 13a-Engineering Geology.......... Language | Geol. 13b-Engineering Geology......... 3 |
| :---: | :---: |
| Manguage フ- Differential Calculus............... ${ }^{4}$ | Language . . . . . . ${ }_{\text {Math }}$ |
| Mil. 2c-Military Drill................... 1 | Mil. $2 \mathrm{~d}-\mathrm{Military}$ Drill.. |
| Physics 1a-Physics Lectures............. 3 | Physics 1b-Physics Lectures............ 2 |
| Physics 3a-Phyics Laboratory......... 2 | Physics 3b-Physics Laboratory.......... 2 |
|  | T. \& A. M. 20-Analytical Mechanics... 3 |
| Total ................................. 18 | Total .................................. 18 |
| Summer Rea | g, 50 points |

## THIRD YEAR FOR THE CLASS OF 1917

| Chem. 5b-Quantitative A C. E. 27-Surveying <br> Geol. 13a-Engineering G <br> M. <br> E. <br> St <br> team <br> Engineer |
| :---: |
|  |  |
|  |  |
|  |  |

Total ......................................... $\overline{17}$
C. E. 58-Graphic Statics................. 2
E. E. 4-Elementary Electrical Engineer-

E. E. 64 -Electrical Enginecring Labora-
tory ............................................
Geol. 13b-Engineering Geology........... 3
Mining 4-Mining Methods.................. 2
Mining 6-Mechanical Engineering of
Mines.... ..................................
T. \& A. M. 26 -Analytical Mechanics and

Hydraulics ................................ 4
Total . ......................................... . . $\overline{16}$

## FOURTH YEAR FOR THE CLASS OF 1916

## I. Coal Mining Option

| Chem. 7-Metallurgy <br> Chem. 65-Technical Gas and Fucl Analysis | Min. 8-Mine Law, Administration, and Accounts |
| :---: | :---: |
| Inspection |  |
| Min. 5-Mine Ventilation................ 3 | Min. 62-Mine Surveyi |
| Min. 9-Coal and Ore Preparation..... 3 | Min. 64-Coal Mine Laborat |
| Min. 41-Principles of Coal Plant Design 3 | Min. 68-Mine Topography. |
| Non-technical elective.................... 3 | Min. 90-Tournal Meeting Non-technical elective. |
| Total . . . . . . . . . . . . . . . . . . . . . . . . . 17 | Total |

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## II. Ore Mining Option

| Chem. 7-Metallurgy | Geol. 2-Economic G |
| :---: | :---: |
| Chem. 69-Metallurgical Laboratory and | Min. 8-Mine Law, Administration, and |
| Assaying | Accounts ....... |
| Inspection trip............................ 0 | Min. 44-Ore Plant Des |
| Min. 15-Principles of Mine Ventilation.. 1 | Min. 62-Mine Surveying |
| Min. 19-Ore and Coal Preparation..... 3 | Min. 66-Ore Concentration |
| Min. 21-Mine Examination and Valuation | Min. 90-Journal Meeting. |
|  | Non-technical elective. |
| Non-technical elective.................... 3 |  |
| Total ................................... 17 | Total |
| III. Metallu | gical Option |
| Chem. 7-Metallurg | Chem. 7a-Non-ferrous Metallurgy. |
| Chem. 65-Technical Gas and Fuel An- | Chem. 70-Metallurgical Laboratory. |
| Chem. 69 -Metallurgical Laboratory ${ }^{\text {al }}$ and | Min. 8-Mine Law, Administration, and |
| Assaying . ........................... | Min. 46-Mill and Smelter Design |
| Inspection trip .......................... 0 | Min. 66-Ore Concentration Laboratory.. 3 |
| Min. 17-Problems ...................... 1 | Min. 90-Journal Meeting |
| Min. 19-Ore and Coal Preparation...... 3 | Non-technical elective. |
| Min. 45-Mill and Smelter Design........ 3 |  |
| Non-technical elective. |  |
| Total ................................. 17 | Total |

## Curriculum in Municipal and Sanitary Engineering as Taught in 1915-16

## FIRST YEAR FOR THE CLASS OF 1919



## SECOND YEAR FOR THE CLASS OF 1918



## THIRD YEAR FOR THE CLASS OF 1917

| Botany 6-Bacteriology................. 2 | Chem. 2a, 10b-Qualitative and Water |
| :---: | :---: |
| Chem. 1a or 1 b-Inorganic Chemistry 3 or 4 |  |
| C. E. 53-Railroad Surveying........... 3 | C. E. 60-Structural Stresses |
| Non-technical elective................... 2 | C. E. 52-Roads and Paveme |
| T. \& A. M. 21-Analytical Mechanics.... 2 | M. E. 2-Steam Engineering. |
| T. \& A. M. 29-Resistance of Materials. . 5 | T. \& A. M. 10-Hydraulics |
| Total ........................... 17 or 18 | Total |

[^40]
## FOURTH YEAR FOR THE CLASS OF 1916


C. E. 62-Structural Details................ 2
C. E. 80-Contracts and Specifications... 2
E. E. 4-Elementary Electrical Engineer-

E. E. 64 - Electrical Engineering Labo
ratory $\mathrm{E}_{3}$................................... $\frac{1}{3}$
M. \& S. E. 3-Sewerage …................. 3
M. \& S. E. 6b-Water purification and Sewage Disposal........................... 2
M. \& S. E. 9-Hydraulic Design and Con• 2
M. \& S. E. 99 Thesis or approved elec.
tive ........................................... 3
Total . ..................................... . ${ }^{17}$

# Curriculum in Railway Civil Engineering as Taught in 1915-16 

FIRST YEAR FOR THE CLASS OF 1919

| FIRST SEMESTER | Hours ${ }^{1}$ |
| :---: | :---: |
| Chem. 1a ${ }^{2}$ or 1 b -Inorganic Chemistry | 3 or 4 |
| Engineering lecture. | 0 |
| G. E. D. 1-Elements of Drafting | 4 |
| Math. 2-College Algebra. | 3 |
| Math. 4-Plane Trigonometry | 2 |
| Mil. 2a-Military Drill. | 1 |
| P. T. 1 and 1a-Gymnasium and Hy | iene 1 |
| Rhet. 1-Rhetoric and Themes. | . 3 |

Total ............................... 17 or 18

SECOND SEMESTER
Hours ${ }^{1}$
Chem. 4-Qualitative Analysis........... 4
Engineering lecture.......................... 0
G. E. D. 2-Descriptive Geometry....... 4

Math. 6-Analytical Geometry............. 5
Mil. 1-Drill Regulations.................. 1
Mil. 2b-Military Drill. ...................... 1
P. T. 2-Gymnasium.......................... 1

Rhet. 2-Rhetoric and Themes............. 3
Total . . . . . . . . . . . . . . . . . . . . . . . . . . . . 19

Summer Reading, 50 points

## SECOND YEAR FOR THE CLASS OF 1918



## THIRD YEAR FOR THE CLASS OF 1917

| C. E. 51-Railroad Surveying. . . . . . . . . . 5 | C. E. 60-Structural Stresses............ 4 |
| :---: | :---: |
| R. E. 25-Railway Development.......... 3 | R. E. 31-Railway Yards and Terminals. 3 |
| Rhet. 1-Rhetoric and Themes.......... 3 | R. E. 34-Railway Maintenance......... 4 |
| T. \& A. M. 21-Analytical Mechanics.... 2 | Rliet. 2-Rhetoric and Themes........... 3 |
| T. \& A. M. 29-Resistance of Materials. 5 | T. \& A. M. 10-Hydraulics............ 3 |
| Total . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 18 | Total . . . . . . . . . . . . . . . . . . . . . . . . . . 17 |

## FOURTH YEAR FOR THE CLASS OF 1916

| C. E. 77-Masonry Construction......... 4 | C. E. $80-$ Engineering Contracts and |
| :---: | :---: |
| C. E. 79-Cement Laboratory............ 1 | Specifications ........................ 2 |
| C. E. 81-Theory of Reinforced Concrete. 2 | E. E. 4-Elementary Electrical Engineer* |
| C. E. 83-Bridge Design.................. 3 | ing ................................. 2 |
| Inspection trip | E. E. 64-Electrical Engineering Labo- |
| M. E. 1-Steam and Air Machinery. . . . 3 | ratory ................................. 1 |
| R. E. 32-Railway Construction......... 3 | Non-technical elective.................... 3 |
| R. E. 35-Railway Signaling............. 1 | R. E. 30-Thesis* or elective............ 3 |
| R, E. 50-Seminar ...................... 1 | R. E. 33-Railway Location.............. 4 <br> R. E. 51-Seminar ............................. 1 |
| Total ................................... 18 | Total . . . . . . . . . . . . . . . . . . . . . . . . . . . 16 |

[^41]
## Curriculum in Railway Electrical Engineering as Taught in 1915-16

## FIRST YEAR FOR THE CLASS OF 1919

FIRST SEMESTER


## SECOND YEAR FOR THE CLASS OF 1918

| age | Langua |
| :---: | :---: |
| Math. 7-Differentia | Math. 9-Integral Calculus. |
| M. E. 75-Forge Wo | M. E. 79-Pattern Work. |
| M. E. 77-Foundry | Mil. 2d-Military Drill. |
| Mil. 2 c -Military Dr | Phys. 1b-Physics Lectures |
| Phys. 1a-Physics L | Phys. 3b-Physics Laboratory. |
| Phys. 3a-Physics L | T. \& A. M. 20-Analytical Mechanics.... 3 |
| Total | Total .................................. . 18 |
|  | , 50 points |

## THIRD YEAR FOR THE CLASS OF 1917

| Chem. 4-Qualitative Analysis............ 4 | E. E. 26-Alternating Cu |
| :---: | :---: |
| E. E. 25-Direct Current Apparatus..... 4 | E. E. 76-Electrical Engineering Labora- |
| E. E. 75-Electrical Engineering Labora- | tory . . .............................. 2 |
| tory . . . . . . . . . . . . . . . . . . . . . . . . . | M. E. 2-Steam Engineering. . . . . . . . . . . 3 |
| Phys. 4a-Electrical and Magnetic Meas- | Non-technical elective.................. 3 |
| urements ${ }^{\text {u }}$, ....................... | Phys. 4b-Electrical and Magnetic Meas- |
| R. E. 25-Railway Development......... 3 | urements ........................ 2 |
| T. \& A. M. 25-Resistance of Materials.. 4 | R. E. 60-Electric Railway Principles.... 2 <br> T. \& A. M. 36-Analytical Mechanics..... 2 |
| Total . . . . . . . . . . . . . . . . . . . . . . . . . . 19 | Total . . . . . . . . . . . . . . . . . . . . . . . . . . . 18 |

## FOURTH YEAR FOR THE CLASS OF 1916

| Elective | E. E. 56-Electrical Design.............. 4 |
| :---: | :---: |
| Inspectio | Non-technical elective.................... 3 |
| M. E. 11-Thermodynamics ............. 3 | R. E. 63-Electric Railway Laboratory... 2 |
| M. E. 61-Power Measurement. ......... 2 | R. E. 65-Electric Railway Economics .. 4 |
| R. E. 62-Electric Railway Laboratory.. 2 | R. E. 30-Thesis or elective............ 3 |
| R. E. 64-Electric Railway Practise..... 3 |  |
| R. E. 66-Electric Railway Machinery... 3 |  |
| R. E. 67-Seminar |  |
| Total ........................................ 17 | Total . . . . . . . . . . . . . . . . . . . . . . . . 16 |

# Curriculum in Railway Mechanical Engineering as Taught in 1915-16 

## FIRST YEAR FOR THE CLASS OF 1919

FIRST SEMESTER

## Hours ${ }^{1}$

SECOND SEMESTER
Hours ${ }^{1}$
Client. $1 a^{2}$ or $1 b$-Inorganic Chemistry 3 or 4 Engineering lecture ......................... 0
G. E. D. 1 -Elements of Drafting...... 4

Math. 2-College Algebra................. 3
Math. 4-Plane Trigonometry............. 2
Mil. 2a-Military Drill. ......................... 1
P. T. 1 and 1 a-Gymnasium and Hygiene 1

Rhet. 1-Rhetoric and Themes............ 3
Total . . . . . . . . . . . . . . . . . . . . . . . . 17 or 18
Chem. 4-Qualitative Analysis............ 4
Engineering lecture.............................. 0
G. E. D. 2-Descriptive Geometry...... 4

Math. 6-Analytic Geometry............. 5
Mil. 1-Drill Regulations.................... 1
Mil. 2b-Military Drill. ...................... 1
P. T. 2-Gymnasium ................................ 1

Rhet. 2 -Rhetoric and Themes........... 3
Total ........................................... . 19
Summer Reading, 50 points

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## SECOND YEAR FOR THE CLASS OF 1918

|  |  |
| :---: | :---: |
|  |  |
| M. E. 79-Pattern Work................. ${ }^{3}$ | M. E. 75-Forge Work |
| iil. 2c-Military Drill.................. 1 M. E. 77 -Foundry Work................. 2 |  |
| Phys. 1a-Physics Lectures .............. 3 M Mil. 2d-Military Drim |  |
| Phys. 3a-Physics Laboratory........... 2 | Pliys. 1b-Physics Lectures ............... 2 |
|  | Phys. 3b-Physics Laboratory............. 2 |
|  |  |
| Total ................................. 18 To |  |
| Summer Reading, 50 points |  |
| THIRD YEAR FOR THE CLASS OF 1917 |  |
| Chem. 1a or 1b-Inorganic Chemistry 3 or 4 Chem. 16-Engineering Chemistry........ 3 |  |
| Math. 9a-Integral Calculus.............. 2 | M. E. 12-Thermodynamics |
| Non-technical elctive............... 3 M. E. 64-Power Measurement.......... 3 |  |
|  |  |
|  |  |
| T. \&. A. M. 27-Analytical Mechanics... 3 |  |
| Total .......................... 18 or 19 Total |  |
| FOURTH YEAR FOR THE CLASS OF 1916 |  |
| E. E. 11-Direct Current Apparatus..... 3 | E. E. 12-Alternating Current Apparatus 3 |
| E. E. 61-Direct Current Laboratory.... 1 | E. E. 62-Alternating Current Laboratory 1 |
| Inspection tri | Non-technical elective..................... 2 |
| M. E. 37-Principles of Management.... 3 | R. E. 7-Advanced Design.............. 3 |
| Non-technical elective.................... 3 | R. E. 8-Railway Laboratory........... 2 |
| R. E. 2-Locomotive Design............. ${ }^{3}$ | R. E. 30-Thesis or Elective.............. 3 |
| R. E. 5-Railway Laboratory............. 3 | R. E. 61-Electric Traction.............. 3 |
| R. E. 9-Seminar |  |
| Total ................................... 17 | Total ................................... 17 |

## THE COLLEGE OF AGRICULTURE

For
is College offers curriculums to both men and women. The curricufered are designed for four distinct purposes:
st, and mainly, to train for the profession of farming.
ond, to train for the teaching of agriculture in the public schools.
rd, to train for the profession of landscape gardening.
(rth, to train for the profession of floriculture.
curriculums offered by the department of household science have two ; in view:
$\mathfrak{t}$, and mainly, to train young women in the science and art of houseairs.
Ind, to prepare teachers for giving instruction in domestic science in ools, and, in connection with the College of Liberal Arts and Sciences, $r$ college and university positions.
le case of both men and women the great purpose is to prepare for the affairs of life. In order that technical knowledge and skill may be develng with, and not at the expense of, those things which tend to the in of cultured and versatile men and women, the technical work is ssociated with the related sciences, and students are required to eir time fairly with those subjects that develop general knowledge lth of view.
College offers over ninety courses of instruction in technical subjects, portunity to elect from the scientific and literary offerings of the other if the University.
lective system prevails, and with a few exceptions the student is left ect those subjects which meet his needs, always under the advice and of the faculty.
is given for all work accomplished; this credit counts toward graduie student desires a degree.

## ADMISSION

e requirements for admission to the College of Agriculture, see the tement of the entrance requirements of the University, pages 71-96.

## IISSION TO GRADUATE WORK IN AGRICULTURE

in general it will be expected that applicants for admission to the shool shall have had an undergraduate course in scientific and techlture equivalent to that of the University of Illinois, yet students
who are otherwise eligible for admission to the Graduate School may be admitted to graduate standing in agriculture if they have had a thoro training in the fundamental sciences, even tho their undergraduate curriculum may have lacked to some extent the amount and kind of technical work included in our course.

## SCHOLARSHIPS IN AGRICULTURE AND HOUSEHOLD SCIENCE

For detailed information concerning scholarships in agriculture and household science, see page 118.

## FACILITIES FOR INSTRUCTION AND METHODS OF WORK

The affiliation of the College with the Agricultural Experiment Station enables the University to support a larger faculty than would otherwise be possible, and permits a higher degree of specialization. For the most part, those who teach in the College conduct experiments in the same subjects in the Station.

The methods of instruction vary with the nature of the courses. In general the laboratory method prevails. Text-books are used whenever good ones are available. Laboratory and text are supplemented by lectures and reference readings.

## AGRICULTURAL EXTENSION

Agricultural extension work serves as the intermediary between the College of Agriculture and the Agricultural Experiment Station and the local community and the farm. Each department does extension work, and so far as possible provides special men for such work. The responsibility for the work of these men lies with their own department. For this reason not all of the extension effort issues from one office.

For administrative purposes and for the coordination of these activities through a regular channel, agricultural extension is administered as a separate department, conducting all extension enterprises which do not deal with technical subjects and cooperating with other departments in diffusing the results of their work in the State.

Some of the general extension enterprises are: agricultural extension schools and demonstrations in different localities; the two weeks course given annually at the College in January; helping at farmers' institutes and similar gatherings, with special railway lecture trains, at the boys' state fair school, and in educational exhibits at fairs and elsewhere; welfare work in rural communities; and excursions to the College. (See also under University Extension, Part IV.)

Courses of study are offered to assist in determining what phases of agriculture are suitable for secondary school purposes and how they should be taught, and for the discussion of methods of organizing extension activities.

## AGRONOMY

The department of agronomy gives instruction in those subjects which relate to the field, as drainage, farm machinery, field crops; the chemistry, physics, and bacteriology of the soil; manures and rotation in their relation to fertility; plant breeding. The department possesses equipment and facilities for instruction in these subjects, and, in addition, affords opportunities for contact with the research work of the Agricultural Experiment Station, especially in crop production, soil fertility, and plant breeding, in the analytical
and pot-culture laboratories and on the experiment fields at the University and in other parts of the State.

Attention is called to the fact that, if circumstances prohibit a regular four-year curriculum, it is possible for a student who has had sufficient preparatory training to arrange his studies so as to obtain the necessary prerequisites and complete the general courses in soil physics and soil fertility in two years. (See Agronomy 9 and 12.)

## ANIMAL HUSBANDRY

The department of animal husbandry offers courses covering the study of sheep, swine, poultry, and beef cattle and their products; heavy and light horses with their care and training; the management of herds, flocks and studs; the principles and practise of feeding, breeding, and marketing; and the chemical and physiological phases of animal nutrition.

The University herds, flocks, and studs contain about six hundred pure bred cattle, swine, sheep, and horses, and several hundred fowls, ducks, and turkeys, which are available for class purposes. These animals are also used for investigations in feeding and breeding, and for illustration of breed types and characteristics. The breeds represented are Shorthorn, Hereford, and Aberdeen Angus cattle; Poland-China, Berkshire, Duroc Jersey, Chester White, Tamworth, Large Yorkshire, and Hampshire swine; Shropshire, Oxford, Southdown, Hampshire, Rambouillet, and Dorset sheep; and Percheron, Standard-bred, Shire, Belgian, and American Saddle horses. In addition to this pure-bred live stock, a large number of grade animals of the various classes of live stock furnish material for judging practise. In this practise, standard market classes and grades of live stock are illustrated, and instruction is given in the selection of animals according to feed-lot and market requirements. The new stock pavilion offers opportunity for show and judging work. (For detailed description see page 55). The lectures of the various courses are supplemented by 1,000 or more lantern slides, charts, diagrams, models, and photographs. Pedigree and breed work is facilitated by 75 sets of the different herd, stud, and flock registers, and complete files of the leading American and British journals.

The equipment for instruction and investigation in the feeding, breeding, and management of live stock consists of modern buildings for the housing of beef cattle, swine, sheep, horses, and poultry, with the appliances necessary for individual and collective feeding tests; brick-paved feed lots and open sheds, in which steers may be fed in carload lots; a feed storage barn, with various forms of grinding mills and other machinery for the preparation of feed; and various kinds of harness, vehicles, and other appliances for the training of horses. The department also maintains a cold-storage room and other equipment for demonstrations in the cutting and handling of meats; a collection of wool samples, and microscopes for the study of wool. The chemistry and physiology laboratories of the department afford facilities for advanced work in animal nutrition.

## DAIRY HUSBANDRY

The department of dairy husbandry furnishes instruction in the production and care of milk and in the manufacture of dairy products.

The various courses cover the application of science to dairy problems, approved methods in dairy operations, and the economic significance of these operations.

In addition to laboratories and lecture rooms, its equipment includes a farm of 160 acres with buildings; about 100 milch cows, bulls, and young stock, including typical representatives of the Ayrshire, Guernsey, Jersey, and Holstein-Friesian breeds; a manufactory with modern equipment for handling city milk and making butter, cheese, ice cream, and bulk condensed milk; and facilities for the distribution of milk on the University milk route.

## HORTICULTURE

The department of horticulture offers fifty-four courses, in the five divisions of horticulture (pomology, olericulture, floriculture, landscape gardening, and forestry), and also in subjects dealing with all the divisions, such as plant propagation, spraying, the evolution of horticultural plants, and experimental horticulture.

For instruction in pomology, use is made of the various fruit plantations maintained by the department. The orchards of different ages afford opportunities for practise in pruning and studies of tree types, while the products furnish materials for practise in the grading and packing of fruits and the study of systematic pomology. A collection of fruit packages illustrates the types used in commercial packing. There is also a collection of wax models of fruits representing the principal varieties grown in Illinois.

For olericulture, or vegetable gardening, certain areas of ground are reserved on which garden operations are illustrated and various crops are grown. The equipment also includes a greenhouse $105 \times 28$ feet, hotbed frames and sash, and an assortment of seed drills and wheel hoes, hand tools, markers, planters, and other appliances for the growing and handling of vegetables.

The equipment in floriculture includes ten glass houses covering an area of 28,000 square feet, and a service building. Six of the houses, including the palm house with an area of 3,200 square feet, are used for instructional work exclusively, and the other four, while intended primarily for experimental purposes, add to the facilities for instruction in floriculture as conducted on a commercial basis. Besides roses, carnations, and chrysanthemums, the houses contain a selection of plants representing all the torms used in commercial and decorative or conservatory work. The service building contains laboratories, class rooms, offices, and potting, storage, and work rooms. An assortment of florists' supplies is maintained. Floricultural periodicals, reference books, and a series of over five hundred slides add to the equipment. The ornamental gardens maintained by the department furnish illustrative materials for students in floriculture and landscape gardening.

The equipment in landscape gardening includes four drafting rooms with desks for individuals, modern filing devices for office practise, seminar rooms, lecture rooms, offices, and a library. The library contains a complete collection of books, periodicals, pamphlets, photographs of examples of foreign and Amcrican landscape gardening, and works on civic design, all carefully indexed. There is also a collection of representative drawings and blue-prints from the offices of practising landscape architects.

The collection of trees and shrubs growing on the campus and about certain residences near the University furnishes material for plant studies in the courses in planting design. The herbarium of the division is also available for reference. A series of 1,500 lantern slides is used in lectures.

Instruction in forestry is facilitated by a collection of native woods and a forest tree plantation of about twenty acres, containing Scotch pine, white pine, Norway spruce, European larch, green ash, black walnut, hickory, bur oak, white elm, and other species.

## HOUSEHOLD SCIENCE

The courses given in this department are planned to meet the needs of two classes of students, viz: (a) those specializing in other lines of work, but desiring a knowledge of the general principles and facts of household science; (b) those who wish to specialize in household science.

The department is housed in the north wing of the Woman's Building. The kitchen for extension work, with dining room adjoining, is in the basement. The first floor contains two class rooms, a seminar room, an exhibition room for illustrative material for work in house construction and textile fabrics, offices, and cloak rooms. On the second floor are individual, diet, institutional, and class kitchens, small and large dining rooms, chemical laboratory, two large sewing rooms, offices, and store rooms. On this floor provision is made for the study of the preparation and service of food in large quantities in the institutional kitchen and large dining room adjoining. The equipment on this floor provides practise for those interested in the problems of lunchroom management and for dietitians. The third floor contains additional sewing rooms, offices, equipment for teaching home care of the sick, and an apartment in which the problems of house construction and furnishing and household administration are studied.

## REQUIREMENTS FOR GRADUATION

Students who have satisfied all matriculation requirements and have maintained throughout their course a satisfactory record of scholarship and moral character will be graduated with the degree of Bachelor of Science, upon having completed the studies of the prescribed list and sufficient electives to make a total of 130 semester hours.

A thesis is not required for graduation, but any student who has completed not less than 90 hours before the senior year may then elect a thesis course in any department in which he has done not less than 20 hours' work, subject to the approval of the head of the department in question.

Graduates of approved colleges may expect to secure a degree in agriculture from the University of Illinois upon completion of the technical and scientific requirements. This will ordinarily require two years of residence work; a minimum of one year will be exacted.

## GENERAL CURRICULUM IN AGRICULTURE

All students except those in the special curriculums in household science, floriculture, and landscape gardening are required to take the same work during the freshman year and part of the sophomore year. This work gives the student a correct conception of the fundamental farm practises and an insight into the technical branches of agriculture, such as animal and dairy husbandry, horticulture, farm crops, soils, farm mechanics, and buildings, and leaves the junior and senior years open for elective studies.
General Curriculum in Agriculture181
One hundred thirty hours are required for graduation, as follows:
Agriculture prescribed first two years...... 19 hours
Agriculture prescribed as electives. ..... 40 hours
Total agriculture required 59 hours
Non-agriculture prescribed 42 hours
Non-agriculture prescribed as electives. 15 hours
Total non-agriculture required......... 57 hours Open electives ..... 14 hours
130 hours
Prescribed Subjects
Required for the Degree of Bachelor of Science in the General Curriculumin Agriculture
FIRST YEAR
first semester Hours ${ }^{1}$ SECOND SEmester ..... Hours ${ }^{1}$
Ag. Ext. 4-Country Life Problems 1 A. H. 5-Live Stock Judging. ..... 3
Agron. 25-Farm Crops............. 4 Chem. 2a-Inorganic Chemistry and Chem. 1 or 1a-Inorganic Chem- Qualitative Analysis ..... 5
istry ..... 5 or 3
D. H. 3-Elements of Dairy Hus-Hort. 1a-Elements of Horticulture 2 bandry1
Mil. 2a-Military Drill 1 Hort. 1b-Elements of Horticulture. ..... 2
Phys. Tr. 1 and 1a-Gymnasium and Mil. 1-Drill Regulations. ..... 1
Hygiene 1 Mil. 2-Military Drill ..... 1
Rhet. 1*-Rhetoric and Themes. 3 Phys. Tr. 2-Gymnasium. ..... 1
Rhet. 2-Rhetoric and Themes ..... 3
Total 17 or $\overline{15}$ Total ..... 17
SECOND YEAR
A. H. 8 and 21-Principles of Breed- A. H. 8 and 21-Principles of Breed- ing and Feeding .................. 3 ing and Feeding ..... 3

    and
    Botany 1-General Botany 5 Botany 1-General Botany ..... 5 or ..... or
Agronomy 26-Elementary Farm Agronomy 26-Elementary Farm Mechanics 3 Mechanics ..... 3
and and
Chemistry 13a-Elementary Quanti- tative Analysis ..... 5
Chemistry 13a-Elementary Quanti- tative Analysis ..... 5
Electives Elective
Mil. 2c-Military Drill................. 1 Military 2d—Military Drill. ..... 1
Total $\overline{9}$ Total ..... 9
In addition to the above, students will take the following:
Agriculture, electives ..... 40 hours
Non-agriculture, electives ..... 15 hours
English 20 ..... 5 hours
Open electives ..... 14 hours

[^43]CURRICULUM IN FARM ORGANIZATION AND MANAGEMENT
first semester Prescribed Subjects

FIRST YEAR

SECOND SEMESTER<br>Prescribed Subjects

Hours ${ }^{1}$
Agron. 25-Farm Crops...................... 4
Ag. Ext. 4-Country Life Problems. .... . 1 Chem. 1 or la-Inorganic Chemistry. 5 or 3 Hort. 1a-Elements of Horticulture. . . . . . 2
Mil. 2a-Nilitary Drill......................... 1
Phys. Tr. 1 and la-Gymnasium and Hy giene
Rhet. 1 - $\dot{\text { Rhetoric }}$ and Themes................ 3
A. H. 5-Live Stock Judging. ...... Hours ${ }^{\mathbf{1}}$

Chem. 2a-Inorganic Chemistry and Quali-
tative Analysis ............................ 5
D. H. 3-Elements of Dairy Husbandry... 1

Hort.-Elements of Horticulture. . . . . . . . . . 2
Mil. 1-Drill Regulations.................... 1
Mil. 2b-Military Drill......................... 1
Phys. Tr. 2-Gymnasium.................... 1
Rhet. 2-Rhetoric and Themes.............. 3

Prescribed Subjects
A. H. 8 and 21-Principles of Breeding Agron. 26-Elementary Farm Mechanics.. 3 and Feeding .............................. 3 Mil. 2d-Military Drill.
Mil. 2c-Military Drill............................... 1
In addition to the above courses the following are also prescribed:

To avoid conflicts with other prescribed work it is suggested that the courses in economics, accountancy, and farm management be taken in the following order:
SECOND YEAR
Business Law 2.......................... 3 Economics 2 ................................. 3
THIRD YEAR
Accountancy 11............................. 3 Economics 14 ................................ 2
Economics 16c .................................. 3
Farm Management i............................... 3
FOURTH YEAR
Economics 15 ............................... 2 Business Law 2................................ 3
Economics 17 ..................................................... 2

## CURRICULUM IN FLORICULTURE

The object of this curriculum is to fit men and women for the profession of fioriculture. The laboratory exercises in the technical subjects consist of practical work in the greenhouses and gardens and give the students a working knowledge of the best methods now in use.

FIRST YEAR

> FIRST SEMESTER Prescribed Subjects

SECOND SEMESTER
Prescribed Subjects

## Hours ${ }^{1}$

Chem. 2a-Inorganic Chemistry and Quali-
tative Analysis ............................ 5
Hort. 5-Plant Propagation ..................... 5
Mil. 1-Drill Regulations ..................... 1
Mil. 2b-Military Drill .............................. 1
Phys. Tr. 2-Gymnasium ...................... 1
Rhet. 2-Rhetoric and Themes............ 3
Total . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 16

[^44]

## CURRICULUM IN HOUSEHOLD SCIENCE

Of the 130 hours required for graduation, 91 are provided for in the prescribed list and the restricted electives of List A. The other 39 hours of credit necessary for graduation may be taken, subject to the approval of the Dean of the College, from any courses offered in the University. Holders of scholarships in household science in this College take the course as laid out here. Variations from it can be made only by special permission of the Council of Administration on recommendation of the faculty of the College.

## Prescribed Subjects

Required for the Degree of Bachelor of Science in Household Science
Art and Design 1,12, 19, 20............................ 9 hours
Bacteriology 5.............................................. 5 hours
Botany 1.................................................. 5 hours
Chemistry, 1, 2a ........................................... 10 hours
English, 1, 2............................................. 8 hours
Household Science 1, 2, 3, 5, 6, 7, 10, 12.............. 20 hours
History la-1b, or 3a-3b............................... 6 or 8 hours
Physiology 4a or 4b....................................... 5 hours
Physical Training 7a-7b, 9................................. 3 hours
Rhetoric 1, 2............................................... 6 hours
Zoology ................................................... 5 hours
English or Rhetoric ...................................... 5 hours
*List A, a minimum of................................... 4 hours

| Total required subjects | . 91 to 93 hours |
| :---: | :---: |
| Electives | . 39 to 37 hours |
| Total | 13 |

[^45]
## Electives

List A-English 21, 22, 23, 24<br>Horticulture 1a, 1b, 2, 3, 5, 19, 28, 10a<br>Household Science 11, 13, 14, 17, 18, 19<br>Economics 2, 22, 26<br>Sociology 1<br>Physics 7a, 8a<br>Education 1, 6, 10<br>Agronomy 7, 9, 12, 25, 26<br>Animal Husbandry 10, 5<br>Dairy Husbandry 1, 3, 19, 11, 4<br>Agricultural Extension 1, 3, 4, 5

Suggested Curriculum

## FIRST YEAR

FIRST SEMESTER

SECOND SEMESTER
Hours ${ }^{1}$
Chem 2a-Inorg Chem and Qual Anal. CH . 2a-1norg. Chem. and $Q u a l$. Anal.. 5 ${ }^{2} \mathrm{H}$. Sci. 1-Sel. and Prep. of Food......... 3
H. Sci. 7-Textiles .......................... 2

Lib'y 12—General Reference. .............. 2
P. T. 7-Gymnasium ..................... 1

Rhet. 2-Rhetoric and Themes................ 3
Total . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 16

## SECOND YEAR



## THIRD YEAR

| A. \& D. 19-History of Fine Arts....... . 2 | A. \& D. 20-History of Fine Arts. |
| :---: | :---: |
| Electives | Bact. 5-Intro. Bacteriology.... |
| Eng. 23-Intro. to Shakespeare.......... 3 | Econ. 2-Principles of Econ. |
| Hist. 1a or Hist 3a................... 4 or 3 |  |
| H. Sci. 5-Dietetics....................... 3 | H. Sci. 3-Home Decoration |
| H. Sci. 19-Dress Design . . . . . . . . . . . . . 2 | H. Sci. 12-Clothing . . . . . . . . . . . . . . . . . 2 |
| Pub. Sp. 1-Oral Expression............. 2 |  |
| Total ............................ 14 or 13 | Total |

## FOURTH YEAR

| E | Edu. 10-Technics of Teachin |
| :---: | :---: |
| Electives | Electives |
| ${ }_{\text {H. Sci }}$ Sci. 13 -Hist. of Home Economics.... ${ }^{2}$ | H. Sci. 10-Home Management.......... 2 |
| Sociol. 1-Principles of Soc.............. 3 | H. Sci. 11-Teachers' Course............... 3 H. Sci. 17-Study of Textiles............... . 3 |
| Total $9$ |  |

${ }^{3}$ Attention is called to the fact that high school physics is a prerequisite for Housebold Science 1.

# CURRICULUM IN LANDSCAPE GARDENING FIRST YEAR 

## FIRST SEMESTER Prescribed Subjects

## SECOND SEMESTER

Prescribed Subjects
Hours ${ }^{1}$

SECOND YEAR

Prescribed Subjects
Bot. 4d-Taxonomy. . . . . . . . . . . . . . . . . . . . 3
C. E, 31-Surveying ......................... 3

Hort. 21a-Landscape Design............... 4
Hort. 31-Garden Flowers................... 3
Mil. 2c-Military Drill. ......................... 1
Total . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 14
Electives
A. and D. 12-Theory and Practise.

Arch. 13-History of Architecture.

## Prescribed Subjects

C. E. 32-Surveying. ......................... 3

Hort. 21b-Landscape Design.............. 4
Hort. 24a-Trees and Shrubs............... 3
Mil. 2d-Military Drill....................... 1
Total ........................................ $\overline{21}$

## Electives

Arch. 14-History of Architecture....... 2
Ent. 4b-Introductory Economic Entomol.
ogy
Geol. 12-Geology of Soils. .....................
Hort. 2-Small Fruits. ........................
Zool. 16-Field Ornithology....................... 2

## THIRD YEAR

Prescribed Subjects
Hort. 23a-Landscape Design.............. . . 4
Hort. 24 b -Trees and Shrubs. ............... 3
Hort. 27a-Landscape Construction....... 3

Total ........................................ 10
Electives
Arch. 15-History of Architecture.
A. and D. 13-History and Practise...... 2

Econ. 2-Principles of Eco Practise
Hort. 8-Fruit Culture
2
. . . . . . . . . . . . . . . . 5
Hort. 29a-Garden Design.................. 3
Sociol. 1-Principles of Sociology........ 3

Prescribed Subjects
C. E. 55-Roads and Pavements

FOURTH YEAR

Hort. 26a-Planting Design.................. 3
Hort. 36-Landscape Reading. ............... 2
Hort. 41-Civic Design (Elementary Course)1
Total ..... 13
Electives

Arch. 16-History of Architecture. ...... 2
A. and D. 8-Modeling . ...................... 2

Bot. 20-Plant Diseases........................ 3
Hort. 7-Spraying . .............................. 3
Hort. 9-Forestry .............................. 2
Hort. 29b-Garden Design. ..................... 3
Rhet. 17-Advanced Composition............. 3
Sociol. 7-The Rural Community......... 2
= =

Prescribed Subjects
Hort. 25b-Landscape Design.............. 5
Hort. 28-Exotics . . . . . . . ................... 1
Hort. 37b-Civic Design. ....................... 3
Hort. 38-Office Practise................... 2
Total .......................................... 11

## Electives

Hort. 15-Plant Growing................... 5
Hort. 40b - Trees and Shrubs (Adv.
Course) .................................... 3
Hort. 25b-Extra hours.

## General <br> Electives

[^46]Hort. 19-Amateur Floriculture........... 3
*Hort. 39-Special Lectures................. $1-8$
Zool. 1-General Zoology.

[^47]
## CURRICULUM FOR PROSPECTIVE TEACHERS OF AGRICULTURE

A curriculum is offered for prospective teachers of agriculture. Among the subjects recommended are the following:

Agronomy 2, 9, 12, 25, 26 ; Animal Husbandry 1a, 2a, 4a, 5, 6, 11a, 11b, 30*; Dairy Husbandry 2, 3; Horticulture 1a, 1b, 3, 5, 10a, 19; Agricultural Extension 1, 4-5; Botany 1, 3b; Chemistry 1, 2, 3, 13a; Entomology 4a-4b; Zoology 1; English 20; Rhetoric 1-2, 19; Public Speaking 5-6; Economics 2; Education 1, 6; Library Science 12; Military 1, 2; Physical Training 1, 2, 1a; foreign language.

For further information concerning this curriculum, address the Dean of the College of Agriculture.

## TWO WEEKS' COURSE IN AGRICULTURE

The Corn Growers' and Stockmen's Convention is held usually at the College of Agriculture (not held in 1915 and 1916 on account of the foot and mouth disease). At the time of this meeting, the College gives instruction for two weeks in subjects of special interest to young men on the farm, such as corn and stock judging, milk and seed testing, soils, etc. A morning session of two hours eaclı day is devoted to the discussion of questions of importance to the farmer. In the afternoon an hour is given to lectures upon topics of general interest. The rest of the day is filled with class work in the subjects mentioned above. Each year about a thousand men who are unable to spend a longer time away from home avail themselves of this opportunity to come in touch with the work of the College.

## THE SCHOOL FOR HOUSEKEEPERS

A two-weeks' course in household science consisting of lectures and recitation work is given in the rooms of the department of household science in the Woman's Building. (See University Extension, Home Economics, Part IV.)

## Admission to Short Courses

No entrance examinations are required and any farmer or farmer's son or daughter may enter these courses. It is important that everyone should be here at the opening of the session. Upon arrival at Champaign or Urbana, application should be made at the University Young Men's Christian Association, where information concerning board and room may be obtained.

[^48]
# THE GRADUATE SCHOOL 

## THE EXECUTIVE FACULTY

Edmund Janes James, Ph.D., LL.D., President of the University

David Kinley, Ph.D., LL.D., Dean, Professor of Economics
Boyd Henry Bode, Ph.D., Professor of Philosophy
Albert Pruden Carman, A.M., D.Sc., Professor of Physics
Julius Goebel, Ph.D., Professor of Germanic Languages
George Alfred Goodenough, M.E., Professor of Thermodynamics
Harry Alexis Harding, Ph.D., Professor of Dairy Bacteriology
Laurence Marcellus Larson, Ph.D., Professor of History
Herbert Windsor Mumford, B.S., Professor of Animal Husbandry
William Abbott Oldfather, Ph.D., Professor of the Classics, Secretary
Stuart Pratt Sherman, Ph.D., Professor of English
Arthur Newell Talbot, C.E., Professor of Municipal and Sanitary Engineering
Edgar Jerome Townsend, Ph.D., Professor of Mathematics
Henry Baldwin Ward, Ph.D., Professor of Zoology
Edward Wight Washburn, Ph.D., Professor of Physical Chemistry

## HISTORY AND ORGANIZATION

Altho for many years the University of Illinois had offered advanced students facilities for study and research in various lines, graduate work was undertaken under the name of the Graduate School for the first time in 1892. In 1894 the administration of the school was vested in the Council of Administration, and the Vice-President of the University became Dean of the School. In 1906 the Graduate School was organized as a separate faculty, consisting of a dean and members of the University faculty assigned to this duty by the President.

By act of the Trustees the teaching faculty of the Graduate School includes all members of the University faculty who give instruction in approved graduate courses. The affairs of the School, however, are in charge of the executive faculty appointed each year by the President.

## ADMISSION

Admission to the Graduate School may be granted to graduates of institutions whose requirements for the bachelor's degree are substantially equivalent to those of the University of Illinois, and to applicants from other institutions approved by the executive facuity, as hereinafter provided. Admission to the Graduate School does not, however, imply admission to candidacy for an advanced degree.

A graduate of an institution meeting the requirements of a standard college, as described below, may be admitted to the Graduate School, provided he satisfies the Dean and the departments concerned that he will be able to proceed to the master's degree in a period not exceeding two years.

For purposes of admission to the Graduate School a standard college is one which meets the following requirements:
a. The college shall require four years' work of collegiate grade for graduation, based on an entrance requirement of at least fourteen standard highschool units.
b. If conditioned students are admitted, they shall not be allowed to proceed beyond the sophomore year without removing their conditions.
c. The college shall maintain at least six departments in liberal arts and sciences, each having at least one professor in each department giving his entire time to the college work of his department.
d. The minimum educational attainment of college professors shall be equivalent to graduation from a college of high grade and graduate work equivalent at least to that required for a master's degree from the University of Illinois.
e. The college shall have a productive endowment sufficient to yield a net annual income of at least $\$ 10,000$ available for instructional purposes in the college. If the institution offers courses in addition to the usual liberal arts course, it shall have a correspondingly larger annual income.
f. The college shall have library and laboratory equipment sufficient to meet fully the needs of the courses announced.
g. In addition to the foregoing specific requirements, so far as possible the general standing of the college shall be considered, including: the character of its curriculum, the efficiency of its instruction, the number of hours of instruction required of the members of its faculty, the size of the classes, the general standards for graduation, its conservatism in granting degrees based on work done in absentia, the success of its graduates in the Graduate School of this University and elsewhere.

Unless otherwise specially permitted, a student enrolled in the Graduate School must take each semester at least one course accepted by the executive faculty for credit in his major subject.

Admission to particular graduate courses or departments may be granted only to those who have had the requisite undergraduate work in those courses or departments. But a student of mature age who satisfies the Dean and the department concerned of his ability to pursue graduate work in a given line may be enrolled in particular graduate courses, and permitted to carry on such study or investigation under the direction of a department of the University as the department shall recommend and the executive faculty approve.

Application blanks may be secured from the Dean of the Graduate School or from the Registrar of the University.

## REGISTRATION AND PROGRAM OF STUDY

After the students' application for admission has been approved, he receives at the Dean's office a permit to register and also a study blank. This study blank must be filled out with the advice of the professors in charge of the selected work.

## Advisers

The person in charge of the major work of the student becomes his adviser, and, together with those with whom the student is taking first and second
minor courses, forms a committee with general supervision over the student's general course of study. The committee is expected to follow the student's work and see that he is helped to lay out an intelligently planned course, and to give him such advice as may be necessary concerning his scholastic career.

## Amount of Work

Each student is required to attend a minimum of four class, lecture, or laboratory exercises a week, in the first year of his graduate study; and in no case is he permitted during his course to attend more than twelve a week.

Each first year student doing full work must take at least four unit courses. A unit course is one which requires ten hours of time a week through one semester, irrespective of the mode of distribution of that time in class work, laboratory work, and private study. Four such courses or their equivalent constitute a full minimum program for one semester, and eight such courses, or their equivalent of graduate grade, constitute the minimum year's work required for a master's degree.

Therefore, registration for full work for the master's degree ordinarily provides for three unit courses, or their equivalent, a semester, in addition to a thesis, the time devoted to the thesis being ordinarily reckoned as equivalent to that for one unit course, or ten hours of time a week. If a student is excused from writing a thesis he must take four unit courses or their equivalent a semester.

Unless otherwise specified by the department concerned, a course for graduates and advanced undergraduates, not open to students below senior grade and counting four or five hours of undergraduate credit, if taken by graduate students, will be treated as a unit course; when counting less than four hours of undergraduate credit, such a course, if taken by graduate students, will be treated as a half-unit course.

Unless otherwise specified by the department, a course the prerequisites of which are such as to make it possible for juniors or sophomores to be admitted, if taken by a graduate student, is counted as a half-unit course, or a quarterunit course, according to the number of hours of undergraduate credit for which the course is given.

## Miscellaneous and Listener's Courses

Graduate students are permitted under proper circumstances to attend classes as visitors, or listeners, and to elect miscellaneous subjects, that is, courses which do not count towards an advanced degree. Under the authority conferred by the faculty on the Dean no student will be permitted by the Dean to visit more than one class or to take more than one miscellaneous subject, nor is any subject open as a listener's or miscellaneous course unless it has a specific educational bearing on the student's major or minor subjects of study.

The above regulations concerning the program of studies are laid out primarily for first year students. Second and third year graduate students fill out their programs irrespective of unit value of courses, according to their needs, under the advice of their instructors.

## Students on the Staff

Assistants and others on the University staff who undertake to do graduate work are permitted to take an amount of work determined by the terms of their employment. Such a student, applicant for a master's degree, must
ordinarily stay through at least two years. In no case will the doctor's degree be conferred upon an applicant otherwise fit in less than four years if he is on the staff in any capacity.

## Residence and Transfer of Credit

Continuous residence and study are required of all members of the Graduate School, unless they are granted leave of absence by the Dean, on recommendation of the professors in charge of their work, for the purpose of carrying on elsewhere studies or investigation in the line of work for their degrees.

Students should note, moreover, that all the work for the master's degree must be done in residence at the University, excepting in the case of members of the staff who have spent half of their time in study through a year at some other institution, and then do the rest of the work required during a year's residence here. Credit for work done elsewhere is not "transferred." The candidate is examined here on all the work required for the degree.

## CHARACTER OF GRADUATE WORK

The principal aim of graduate study is the development of the power of independent work and the promotion of the spirit of research. Each candidate for a degree is expected to have a wide knowledge of his subject and of related fields of work; for the graduate student is not expected to get from lecture and laboratory courses all the knowledge and training necessary to meet the requirements for his degree.

Students, especially candidates for the doctor's degree, are warned against restricting themselves to the courses prescribed or suggested by the departments in which they are studying. Each student is expected to do a wide range of private reading and study, and in many cases will find it advisable to take one or more courses of lectures quite outside the field of his chosen subject.

## THE MASTERS' DEGREES

Candidates for the degree of Master of Arts or Master of Science are required to do at least one year's work in residence and to write a thesis.

## Majors and Minors

A candidate for a master's degree may do all his work in one subject, or he may select a major and one minor, or a major and two minors. A major or minor denotes the field of knowledge of a department, or such part thereof as constitutes a separate and independent division of that field. The candidate must do at least half his work in his major subject.

## Master's Thesis

Each candidate for a master's degree is also required to present a thesis on some subject approved by the professor in charge of his major work and the faculty of the School. The requirement of a thesis may be waived, however, upon the recommendation of the head of the department in which the student is doing his major work, and the approval of the Dean, provided application to waive the thesis is made at the beginning of the year. In no case will permission to take the degree without the thesis be given by the Dean if applicd for later than the latest date for the approzal of thesis subjects, as shown by the calendar.

The thesis required from a candidate for a master's degree ordinarily will demand about one-fourth of the student's time. The thesis must be typewritten, on "thesis paper," and the title-page must be printed. The thesis in its final form, together with a certificate of approval by the proper officer, must be leit by the professor in charge at the Dean's office at the time set in the calendar.

## Advanced Degrees in Engineering

Two classes of second degrees are open to graduates of the College of Engineering, namely, academic and professional.

The academic second degree in engineering is Master of Science, following Bachelor of Science, in Architecture, Architectural Engineering, Civil Engineering, Electrical Engineering, etc. This degree is conferred in accordance with the regulations described above for academic work in residence only.

The professional second degrees in engineering are as follows:
Master of Architecture after B.S. in Architecture.
Architectural Engineer after B.S. in Architectural Engineering.
Civil Engineer after B.S. in Civil Engineering or B.S. in Municipal and Sanitary Engineering.

Electrical Engincer after B.S. in Electrical Engineering.
Mechanical Engineer after B.S. in Mechanical Engineering.
Mining Engineer after B.S. in mining engineering.
Civil Engineer, Electrical Engineer, or Mechanical Engineer after B.S. in Railway Engineering, according to the course.

Professional degrees are conferred upon two classes of candidates: (1) graduates of the College of Engineering of the University of Illinois who have been engaged in acceptable professional work away from the University for a period of not less than three years after receiving the degree of Bachelor of Science; (2) graduates of the University of Illinois, or of institutions of equal standing, who have been engaged in acceptable professional worl in residence at the University for a period of not less than three years after receiving the degree of Bachelor of Science.

In "acceptable professional work" may be included contributions to technical literature, activity in professional societies, investigation of engineering problems, and the teaching of engineering subjects.

A candidate must declare his candidacy and file with the Dean of the College of Engineering, as chairman of the committee in charge, a detailed statement covering his professional study and experience, not later than the first Monday in November preceding the commencement at which he proposes to qualify. Prior to December 31 next succeeding, he must submit for approval an outline of his proposed thesis and he must file his completed thesis not later than April 1. If the statement of professional experience and study and the thesis are accepted, the candidate must present himself at commencement in order to receive the degree.

Candidates for professional degrees in engineering who already hold the degree of Master of Science may qualify for the professional degree after two years of professional work.

A candidate for a professional degree in engineering must pay the incidental fee of twenty-four dollars on being notified that his professional study and experience are accepted as qualifying him to enter as a candidate for the degree. No one will be enrolled as a candidate for the degree at the following commencement who does not pay lis fee at this time. When a candidate for
a professional degree in engineering has once been accepted and paid his fee, he is eligible to receive the degree at any time within five years, without additional fee, on completion of the requirements; provided, however, that unless he completes the requirements within two years his name will be dropped from the list of candidates and in order to receive the degree within the fiveyear period he must register once more.

## THE DEGREE OF DOCTOR OF PHILOSOPHY

General Statement of Requirements.-The requirements for the degree of Doctor of Philosophy are a thorough mastery of a selected field of study, evidence of the power of independent investigation in this field, a broad knowledge of the wider field of study of which this major subject is a part, a general acquaintance with related fields of knowledge and a mastery of all branches of study which are necessary to a full knowledge of the main subject. Each student who is seeking this degree is expected to choose for study and final examination a major subject, or field of study, and a first and second minor. The major subject is the field in which the student expects to become expert and an authority. The first minor should ordinarily be a subject closely related to the major, and under certain conditions and with proper approval, may be a subdivision of the major field of study. The second minor should be chosen outside of the major field of study.

When a candidate chooses any subject as his major, and a division of that subject as his minor, he is not permitted to choose as a second minor any division of work in that same department, excepting by vote of the executive faculty of the School.

The candidate's list of subjects must receive the approval of the head of the department in which he chooses his major work and of the Dean of the School.

Period of Study.-The minimum period of study required for securing the degree of Doctor of Philosophy is three years. The degree is conferred, however, not for residence during a certain period, but for scholarly attainments and power of investigation, as proved by thesis and examinations.

Credit for work done in other universities is not "transferred." The candidate is examined here on the subjects offered by him for the advanced degree. However, his period of residence at another institution of proper grade may be accepted as fulfillment of the residence requirement of the University of Illinois so far as it goes.

At least the first two or the last one of the three years required must be spent at this University.

Examination.-Towards the end of his second year of study, or, by special permission, at the beginning of his third year, the candidate for the degree must submit to a preliminary examination conducted by the members of the faculty with whom he is doing his principal work, in order to determine whether he will be accepted as a candidate for the degree in the following year. This examination is intended to test the student's knowledge of the fields of his major and minor subjects of study. It is partly oral, and may be wholly so. At this time, or before, the candidate will be required to demonstrate his ability to read French and German, and any other language needed for the prosecution of his work.

On or before the last Monday in May of the year in which the candidate expects to come up for his degree, he must submit to a final examination. Besides the written examination set by the departments of the major and minor
studies, the candidate must also take an oral examination, given by a committee appointed by the Dean. The oral examination is primarily on the research work of the student, as embodied in his thesis, but it is not confined to this. It extends to the whole field of the study of the candidate. It will not be confined to the courses which the candidate has attended in the University of Illinois only, if he has done part of the work elsewhere; nor even to the field covered by the courses specifically taken in this or other universities; but will be so conducted as to determine whether the candidate has a satisfactory grasp of his major subject as a whole, and a general acquaintance with the fields of knowledge represented by his course of study.

Before the candidate is admitted to the final examination and the defense of his thesis, he may be required to take any other examination, oral or written, that is thought proper by the various departments in which he has studied. If after having passed his preliminary examination, he fails in the third year of his study to meet the expectations of the professors in charge of his work, or in any way fails to maintain the standard of scholarship and power of research expected of him, he may be refused admission to the final examination.

The final examination in the major and minor subjects may not be divided. The examination must be taken all at one time even tho it requires several sessions.

Thesis.-The power of independent research must be shown by the production of a thesis on some topic connected with the major subject of study. The candidate is expected to defend his thesis or dissertation before the members of the faculty, or as many of them as may wish to question him about it, in connection with his final examination.

The subject of the thesis should be chosen not later than the end of the second year of study and must be submitted for formal approval by the faculty not later than the first Monday of November of the year when the degree is expected. Unless previously printed with proper authority, a typewritten copy of the complete thesis, on thesis paper*, must be in the hands of the Dean not later than noon of the Saturday nearest the middle of May, for submission to the examining committee.

The doctor's thesis must be printed and one hundred copies deposited in the Library of the University not later than the first of June preceding the conferring of the degree. If it is not printed by the first of June, the student must deposit seventy-five dollars ( $\$ 75$ ) or a bond for that amount satisfactory to the Comptroller of the University and the Dean of the Graduate School. If a bond is accepted, it must be replaced at the end of one year with a cash deposit. At the end of two years, if the thesis has not then been printed by the student, the University will print such part of it as it deems best.

The cash deposit made by the student who does not print his thesis by the end of the second year after his degree is conferred becomes the property of the University, to be used for the general purpose of printing theses.

The title page of each thesis, whether typewritten or printed, must bear the words, "Submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in-(here put the major subject)-in the Graduate School of the University of Illinois." The title page must also contain the full name of the author, his previous degrees, the full title of the thesis, the year of imprint, and, if a reprint, the title, volume and statement of the

[^49]pagination of the volume from which it is reprinted. Each thesis must have an appendix giving a short biography of the candidate, including the institutions he has attended, his degrees and honors, the titles of his publications, and such other matters as are pertinent.

Doctor's Degree in Engineering.-The degree of Doctor of Philosophy in Engineering is offered in certain lines of academic graduate work of a high scholastic type in engineering science that will attract students who wish to prepare themselves as teachers, investigators, and experts.

The general requirements for this degree, as to preliminary education, linguistic attainments, etc., are the same as in other lines.

The following lines of engineering science are open as majors for the present:

Engineering mechanics
Hydraulic and sanitary engineering
Steam engineering
Electrical engineering
Heating and ventilation engineering
Railway engineering
Masonry construction and structural engineering
Coal mining engineering
The first minor may be any of the above or one of the following fundamental sciences or an authorized combination of two of them:

Theoretical mechanics
Mathematics
Thermodynamics
Chemistry
Geology
Physics (Experimental or mathematical)
Zoology
Botany
The second minor should be in other than engineering subjects.

## SCHOLARSHIPS AND FELLOWSHIPS

A number of fellowships and scholarships have been established by the Trustees of the University. To first year graduate students of ability and promise there are open a number of scholarships with a stipend of $\$ 250$ each and freedom from tuition, incidental, and laboratory fees. To second and third year graduate students, that is, those who have had one or two years of graduate study, there are open fellowships with a stipend varying from $\$ 300$ to $\$ 500$, with freedom from fees. The larger stipends are given only to students who are expected to take their degrees within the year. Each holder of a fellowship or scholarship must pay the matriculation fee of ten dollars, unless he holds a first degree from the University of Illinois, and also the diploma fee of five dollars on receiving his diploma.

Candidates for these scholarships and fellowships must be graduates of the University of Illinois, or of colleges or universities having equivalent requirements for bachelors' degrees.

Application must be made upon blanks to be obtained from the Dean of the Graduate School. These application forms should be addressed to the Dean of the Graduate School as early as possible in February and not later than the first of March of the academic year preceding that for which the fellowship
is desired. No application will be considered if received later than March first, until after April fifteenth, the date when appointees from the first list of applicants must accept or refuse their appointments.

Persons appointed are notified on April first and must send the Secretary of the Board of Trustees notice of their acceptance or refusal by April fifteenth; and must agree that, if accepted, the appointment will not be resigned in favor of a similar one in any other institution during the year for which it is awarded.

Nominations to fellowships are made on the grounds of worthiness of character, scholastic attainments, and promise of success in the principal line of study or research to which the candidate proposes to devote himself.

Scholarships and fellowships are good for one year, but may be renewed for a second or third year in special cases. An appointment as honorary fellow, without stipend, may be made as specified for paid fellowships in the case of any one who has shown distinguished merit in his work.

Research Fellowships in the Engineering Experiment Station
The Engineering Experiment Station is devoted entirely to research. Its purposes are the elevation of engineering education, and the study of problems of special importance to engineers and to manufacturing, railway, mining, and industrial interests.

Fourteen research fellowships have been established in the Engineering Experiment Station. These fellowships are open to graduates of approved technical schools and universities, both American and foreign. There is a stipend of $\$ 500$ a year for each fellowship. Applicants to whom these fellowships are awarded are required to agree to hold them for two years, devoting a part of their time to the work of the Engineering Experiment Station. At the expiration of this period, if all requirements have been met, the degree of Master of Science will be conferred.

Application for these fellowships should be made to the Director of the Engineering Experiment Station not later than February first. Candidates must present with their applications full information concerning themselves, including any written or published papers or results of investigation.

## THE GRADUATE CLUB

The Graduate Club is an unofficial organization of the graduate students and graduate faculty. Its purpose is to furnish an opportunity for those working in different departments to become acquainted with one another and thus counteract the tendency toward narrowness which intense specialization may sometimes induce.

## THE ILLINOIS HISTORICAL SURVEY

The Illinois Historical Survey is a department of the Graduate School established in 1910 to conduct research in the history of the State of Illinois. The members of the staff, assisted by graduate students, are engaged in the production of scientific studies in Illinois history, and it is expected that the results of these labors will lay a solid basis for the interpretation of the State's past.

The following persons constitute the staff of the Survey for the year 1915-16: Clarence W. Alvord, Ph.D., Professor of History, Director; Ernest L. Bogart, Ph.D., Professor of Economics ; John M. Mathews, Ph.D., Assistant Professor of Political Science; Theodore C. Pease, Ph.D., Associate in History; Arthur C. Cole, Ph.D., Associate in History ; Jessie J. Kile, A.M., Research Assistant.

## THE LIBRARY SCHOOL

For a description of the Library Building, see page 56; for an account of the libraries themselves, see pages 60-62; for the collection in library economy, see page 66; for fees, see page 122.

## GENERAL STATEMENT

The Library School offers a two-year curriculum to students who wish to enter library work as a profession, and certain library courses to students in other schools and colleges of the University of Illinois who may wish to elect them as a part of their course of training. The instruction in the first or junior year covers the generally accepted methods and practises in library work; students who complete this year's work are prepared to accept positions in library service. In the second or senior year emphasis is placed on historical and comparative methods of treatment; new subjects are introduced to give the student the necessary outlook and equipment for responsible positions.

One or two years' training will not take the place of years of experience, but they will make the student more adaptable and his general library service more intelligent. The time spent in actual practise, under supervision, amounts to about three and a half months, counting seven hours to a working day. Altho stress is laid on simplicity and economy, methods are taught to enable students to work in large libraries where bibliographic exactness is required. Emphasis is laid on the extension of the activities of the public library, and on the importance of cooperation between the library and the schools and other educational and social agencies.

A member of the senior class in any other school or college of the University may, with the approval of the Director of the Library School, elect any course for which he is prepared.

The school also offers to freshmen and sophomores a course on the use of the library and the ordinary reference books, which will help in general reading or study.

## ENTRANCE REQUIREMENTS

Admission to the Library School is conditioned on the presentation of credentials showing that the applicant holds a bachelor's degree in arts or science from the University of Illinois or has had other equivalent training.

Application blanks for admission may be secured from the Director of the School, and these, filled out, should be filed, together with such documentary material as the candidate may offer, showing qualifications for admission, not later than the registration days in September. It is to the candidate's interest to present the application and certificates early, in order that the question of admission may be settled before he comes to the University.

## PROPOSED PRELIMINARY CURRICULUM

Undergraduates who intend, on the completion of their college work, to apply for admission to the Library School, are requested to select their courses so as to conform in general to the following recommended program of studies preparatory to library work.

# Proposed Preliminary Curriculum 

English literature, $5^{*}$; rhetoric, 2
Latin, 4, in addition to four years of high school Latin
German, 6, in addition to two years of high school German
French, 4, in addition to two years of high school French
Languages begun in college instead of in the high school should be continued for a longer period.

Medieval and modern European history, 3; history of England, 3; history of the United States, 3

Economics, 3; political science, 2; sociology, 3
Philosophy, 2; general psychology, 2
Zoology, 3; botany, 2 ; chemistry or physics, 3
The total of this work is 100 semester hours, leaving the equivalent of one year of a four-year course free for work in other subjects or for more work in the subjects" named.

## ADVANCED STANDING

College graduates who have had approved library experience or who have attended other library schools may be accorded advanced standing by securing credit for some of the courses required for graduation. After satisfying all entrance requirements and after matriculation, the applicant for advanced standing may secure such credit either by examination or by transfer of credits from another institution offering courses in library economy.

## SPECIAL STUDENTS

It is the practise of this School to admit as special students only those mature persons, who, tho unable to meet the formal requirements for entrance, are prepared for thoro and advanced work. Such persons must present evidence of possessing the information and ability to pursue profitably, as special students, the chosen subjects, and some substitute for the regular requirement for entrance, such as the completion of part of a college course, approved library or teaching experience, or foreign travel. Preference will be given to those already engaged in library work, especially in Illinois libraries. Students thus admitted are expected to take all of the curriculum prescribed for those who are candidates for the degree of Bachelor of Library Science, or failing that, as much of the prescribed work as they are prepared for.

## LIBRARY VISITS AND FIELD WORK

Each year all the students in the School visit the libraries and certain of the book binderies, book stores, and printing establishments of either Chicago and vicinity or St. Louis and vicinity. During this visit, which occupies one week, the students are accompanied by a member of the faculty.

The estimated expense of this visit is about $\$ 20$ for each trip. Students are required to present a written report of the week's visit upon their return to the University, as the work forms part of Library 22 and Library 26.

In order to assure a varied library experience, each student in the senior year is required to spend one month in an assigned library, usually a public library, working, as far as practicable, under the same conditions as a member of the staff of that library. Written and oral reports of the month of field work are required, as the work forms part of Library 26. The estimated expense for the month of field work is $\$ 40$.

[^50]
## CURRICULUM

The curriculum is two years in length. For graduation a student must receive credit for all courses except those marked with an asterisk (*), which are elective. The degree of Bachelor of Library Science is conferred on a student who has completed the required work in the two years' curriculum, and has received credit in courses amounting to 65 hours.

|  | First semester $\quad$ JUNIOR | YEAR SECOND SEMESTER Hours ${ }^{1}$ |
| :---: | :---: | :---: |
| Lib. Sc. | 2a-Reference Work | Lib. Sc. 2b-Reference Work........... 3 |
| Lib Sc. | 3a-Selection of Books........ | Lib. Sc. 3a-Selection of Books......... 2 |
| Lib. Sc. | 4a-Practise Work............. 2 | Lib. Sc. 4b-Practise Work............. 2 |
| Lib. Sc. | 16-Order and Accession........ 2 | Lib. Sc. 7-History of Libraries......... 2 |
| Lib. Sc. | 17-Classification ............... 3 | Lib. Sc. 19-Trade Bibliography.......... 1 |
| Lib. Sc. | 18-Cataloging ............... 3 | Lib. Sc. 20-Loan Department........... 1 |
| Lib. Sc. | 23a-Library Administration ... 1 | Lib. Sc. 21-Printing, Binding, Indexing. 2 <br> Lib. Sc. 22-Library Extension. ............ 3 <br> Lib. Sc. 23a-Library Administration..... 1 |
| Total | . 16 | Total ................................... 17 |
|  | SENIOR | YEAR |
| Lib. Sc. | 6a-Subject Bibliography...... 2 | Lib. 6b-Subject Bibliography ......... 2 |
| *Lib. Sc. | 8-Advanced Reference Work. 2 |  |
| Lib. Sc. | 10a-Practise Work............. ${ }^{4}$ | Lib. Sc. 10b-Practise Work.............. 4 |
| Lib. Sc. | 13a-Public Documents......... 2 | ${ }^{*}$ Lib. Sc. 13b-Public Documents......... 2 |
| Lib. Sc. | 15a-Seminar .................. 2 | Lib. Sc. 15b-Seminar ................... 2 |
| Lib. Sc. | 24a-Selection of Books......... 2 | Lib. Sc. 24b-Selection of Books........ 2 |
| Lib. Sc. | 26a-Library Administration..... 3 | Lib. Sc. 25-Adyanced Classification...... 1 |
| Lib. Sc. | 27-Bibliographical Institutions.. 1 | Lib. Sc. 26b-Library Administration..... 3 <br> *Lib. Sc. 28-Practise Work......... 1 to 4 |
| Total |  | Total ............................. . 19 to $\overline{22}$ |
| LIBRARY CLUB |  |  |

Any member of the Library School faculty or of the staff of the University Library and any student in the Library School may become a member. Six meetings are held each year.

[^51]
## THE SCHOOL OF MUSIC

For admission to the School of Music, see the general statement of entrance requirements of the University, pages 71 to 96 . For fees, see page 122. For the faculty of the School of Music and description of the courses in Music, see under "Music" in the "Description of Courses," Part III.

## GENERAL STATEMENT

The School of Music offers regular courses leading to the degree of Bachelor of Music, and a teacher's certificate in public school music.

Students who are not working for the degree in music may receive a statement from their instructors upon completing not less than one year of college work.

Classes in ear training meet twice each week. The fundamental principles of music notation are studied thoroly, and the ear is trained to recognize intervals, chords, etc., so that the student may eventually think music. Music students are required to attend these classes.

The sight-singing classes meet twice each week. This work is required of music students.

Choral or orchestral work is required of all students who are taking courses in piano, voice, violin, or organ.

All students majoring in a practical subject are required to take Music 94 (Recital).

A series of lectures and recitals is given each year. Only artists of the best reputation appear. Music students are required to attend.

The instructors in the School of Music give recitals and lectures on musical subjects during the year.

The courses in the history of music and musical theory, as well as the work in the University Orchestra and the University Choral Society, may be taken by students in other departments without fee.

## REQUIREMENTS FOR GRADUATION

Candidates for the degree of Bachelor of Music must offer credit for 130 semester hours, including the prescribed subjects named below, together with an acceptable thesis on a topic related to music.

## CURRICULUM IN MUSIC

## FIRST YEAR

| St Semester | ECond Semester Hours ${ }^{1}$ |
| :---: | :---: |
| Foreign language, French, German, or | Foreign language, French, German, or |
|  | Italian |
| Mus. 3-Harmony . . . . . . . . . . . . . . . . . . . 2 | Mil. 2b-Military Drill (men) |
| Mus. 21a-Ear Traini | Mus. 4-Harmony |
| Mus. 42a, 52a, or 62a-Piano, Voice, or | Mus. 21b-Ear Training. |
| Mus. 46a, 56 a , or $6 \mathbf{6} \mathrm{a}-\mathrm{M}$ Minor subject..... 2 | Violin |
| Phys. Tr. 7a-Gymnasium (women)...... 1 | Mus. 46b, 56b, or 66 b -Minor subj |
| Phys. Tr. 1 and 1a-Gymnasium and Hy- | Phys. Tr. ${ }^{\text {7b }}$-Gymnasium (women) |
| Rhet. 1-Rhetoric and Themes............. $\frac{1}{3}$ | Rhet. 2--Rlietoric and Themes. |
| Total, Men . . . . . . . . . . . . . . . . . . . . . . . 17 |  |
| Total, Wom | Total, Women |

[^52]
## SECOND YEAR

| SECOND YEAR |  |
| :---: | :---: |
| Foreign language, French, German, or Italian | Foreign language, French, German, or Italian ....................................... 4 |
| Mil. 2c-Military Drill (men)............. 1 | Mil. 2d-Military Drill................... 1 |
| Mus. 1-History of Music................ 2 | Mus. 2-History of Music................ 2 |
| Mus. 5-Advanced Harmony. ............. 3 | Mus. 6-Advanced Harmony. ............. 3 |
| Mus. 22a-Ear Training................. 1 | Mus. 22b-Ear Training . . . . . . . . . . . . . . 1 |
| Mus. 23a-Sight Singing | Mus. 23b-Sight Singing |
| Mus. 43a, 53a, or 63a-Piano, Voice, or Violin | Mus. 43b, 53 b , or $63 \mathrm{~b}-$-Piano, Voice, or Violin |
| Mus. 46c, 56 c , or 66 c -Minor subject.... . 2 | Mus. 46d, 56 d , or 66d-Minor subject. .... 2 |
| Total, Men .......................... 17 | Total, Men ............................17 |
| Total, Women.......................... 16 | Total, Women . ......................... 16 |
| THIRD | YEAR |
| Edu. 1-Introduction to Education | Edu. 10-Technics of Teaching......... 3 |
| Eng. 1-Survey of Engiish Literature.... 4 | Eng. 2-Survey of English Literature... 4 |
| Mus. 7-Counterpoint, Canon, and Fugue 3 | Mus. 8-Counterpoint, Canon, and Fugue 3 |
| Mus. 24a-Sight Singing. P : $\cdot$.......... | Mus. 24b-Sight Singing............... 1 |
| Mus. 44a, 54a, or 64a-Piano, Voice, or Violin | Mus. 45 b , 55 b , or 65 b -Piano, Violin |
| Mus. 46e, 56 e , or $66 \mathrm{e}-\mathrm{Minor}$ subject..... 2 | Mus. 46f, 56 f , or 66 f -Minor subject..... 2 |
| Total ................................... 18 | 'rotal ................................... 27 |
| FOURTH YEAR |  |
| Eng. 35-The English Drama............ 3 | Mus. 10-General Theory............... 2 |
| Mus. 9-General Theory.................. ${ }^{2}$ | Mus. 12-Acoustics . . . . . . . . . . . . . . . . . . . 1 |
| Mus. 11-Acoustics | Mus. 27b-Ensemble . . . . . . . . . . . . . . . . . 1 |
|  | Mus. 45 b , 55b, or |
| Mus. 45a, 55a, or 65a, Piano, Voice, or Violin | Violin <br> Mus. $46 \mathrm{~h}, 56 \mathrm{~h}$, or 66 h -Minor subject.... 2 |
| Mus. $46 \mathrm{~g}, 56 \mathrm{~g}$, or 66 g -Minor subject.... 2 | Mus. 94b-Recital . ....................... 1 |
| Mus. 94a-Recital........................ 1 |  |
| Total .................................. . 14 | Total .................................. 11 |
| In addition, to make up the prescribed total of r30 hours: Elective, for |  |
| men, 1 hour; for women, 4 hours. This extra credit may be taken at any time; the election must be approved by the student's adviser. |  |
| Practical courses include regular attendance in orchestra and choral society, |  |

## CURRICULUM IN PUBLIC SCHOOL MUSIC

The aim of the curriculum in Public School Music is to prepare competent teachers and supervisors of music for the public schools. Students completing the curriculum are granted teacher's certificates. An opportunity for practise teaching is offered. The curriculum comprises the following prescribed subjects:

## FIRST SEMESTER

## FIRST YEAR

## Hours ${ }^{1}$

Hours ${ }^{1}$

| History | Mus. 2-History of |
| :---: | :---: |
| Mus. 3-Harmony ....................... 2 | Mus. 4-Harmony. |
| Mus. 21a-Ear Training................... 1 | Mus. 21b-Ear Training. |
| Mus. 23a-Sight Singing | Mus. 23b-Sight Singing |
| Mus. 25-Methods of Teaching | Mus. 25b-Methods of Te |
| Practical Music, major, Piano, or Voice. . 6 | Practical Music, major, Piano, or Voice. |
| Practical Music.. | Practical Music, minor, Voice, or Piano. |
| Total .................................. 18 | Total ................................. . 18 |
| SECOND | YEAR |
| Edu. 1-Principles of Education......... 4 | Edu. 10-Technics of Teaching. |
| Eng. 1-Suryey of English Literature.... 4 | Eng. 2-Survey of English Liter |
|  | Mus. 24b-Sight Singing. |
| Practical Music, major, Piano, or Voice. . 6 Practical Mus, minor, Voice, or Piano. 20 | Practical Music, major, Piano, or Vo |
| Total .................................. 18 | Total |

[^53]Advanced students may satisfy a part of the foregoing requirements by examination; in no case, however, is a student permitted to take less than 30 hours of work.

## MUSICAL ORGANIZATIONS

The University Choral and Orchestral Society is conducted by the Director of the School of Music, with the assistance of the instructor of violin, and gives a series of concerts throughout the year. The orchestra meets for two hours' rehearsal once a week; it is open to all students who qualify for membership. The chorus meets once a week for rehearsal of choral works. Singers not connected with the University are admitted by examination.

The Military Band is conducted by the instructor in band instruments. Besides giving several concerts during the year, it furnishes music for regimental formations and ceremonies and other occasions as required by the President of the University. Membership is decided by competitive examinations. A second band is also conducted, in order that all students who play band instruments ordinarily well may have an opportunity to play in a band. Each full term of service in the band counts for one term of the required work in military science. After obtaining credit for four semesters' work those who are continued in the band for not less than one year are paid an amount equal to the incidenttal fees for the year. There is also a reserve band and a trumpet and drum corps.

## THE SCHOOL OF EDUCATION

## GENERAL STATEMENT

The School of Education was established in 1905 as an organization of the various activities of the University which are concerned with the professional preparation of teachers and supervisors for the public schools. The nucleus of the School is the department of education in the College of Liberal Arts and Sciences. The faculty of the School is made up of the members of this department and of other departments who offer courses intended for the preparation of high-school teachers. The Board of Trustees has approved plans for a building to be used as a laboratory for the School of Education and to include quarters for a training school of secondary grade, and has purchased a site upon which the first wing of this building will be erected.

## THE DEPARTMENT OF EDUCATION

The Department of Education includes four full professors, a principal of the training school, and several assistants. It offers courses in educational history, theory, and practise-see under Education in the General Description of Courses, Part III. Two of the courses (Education 1 and 10) are required of all students who wish to secure the official recommendation of the University for teaching positions in secondary schools-see "Committee on Appointment of Teachers," page 203. Credits carned in these courses are usually accepted by the State Examining Board in lieu of examinations in pedagogy for county teachers' certificates; and these and other courses serve to prepare candidates for the examinations in professional subjects required for the State supervisory and high-school certificates-see "Certification of High School Teachers in Illinois," page 203.

## GRADUATE WORK IN EDUCATION

Graduate work in education is offered to qualified students in the following fields: general educational theory (Professor Bagley); educational administration and supervision and elementary education (Professor Bagley and Mr. Brown) ; secondary, vocational, and higher education (Professor Johnston and Professor Hollister) ; educational psychology, including mental tests and clinical psychology, health administration, and school hygicne (Professor Whipple).

The equipment of the department for graduate work comprises: (a) A library of some 20,000 volumes (besides pamphlets), including the Aron Library of 8,000 titles relating largely to European education in the sixteenth, seventcentl, and eighteenth centuries; a collection of documents representing educational development in the United States, including school reports and courses of study and of state and city systems; and a text-book library representing the development of elementary and secondary school texts used in American schools from the beginning of the nineteenth century; (b) an educational muscum, containing exhibits of school furniture, apparatus, illustrative material, and representative work of pupils; (c) a laboratory of educational and clinical psychology equipped for mental and physical tests.

## PUBLICATIONS OF THE SCHOOL OF EDUCATION

The School of Education publishes a series of bulletins comprising (a) reports of the annual High School Conference, the Conferences on Teachers' Institutes, and other meetings and conferences regarding public education held at the University, and (b) reports of investigations and studies by members of the instructional staff and students in the department.

The department of education is unofficially related through the editorial work of its members to the following journals: The Journal of Educational Psychology (Baltimore), edited by J. C. Bell, W. C. Bagley, C. E. Seashore, and G. M. Whipple; and Educational Administration and Supervision (Baltimore), edited by C. H. Johnston, L. D. Coffman, J. H. Van Sickle, and David Snedden.

## COMMITTEE ON APPOINTMENT OF TEACHERS

The Committee on Appointment of Teachers recommends qualified graduates of the University for positions as teachers or supervisors in public schools, colleges, and technical schools in response to requests from the school authorities. The Director of the School of Education is chairman of the Committee, and the Secretary of the School is its chief executive officer.

The recommendations of the Committee are made under the following regulations of the University Senate.

1. The University Committee on Appointments is authorized to issue its recommendation, signed by the committee as the agent of the University, in all cases in which it is satisfied with the student's scholarship and ability to teach. The Committee shall regard the scholarship requirements as met if, in addition to carrying the professional courses mentioned in the next paragraph, the student has passed with an average grade of 85 in the courses necessary to constitute a major in the principal subject which he wishes to teach, and in courses aggregating a minimum varying from six to twelve semester hours (according to subject, and at the discretion of the Committee) in each of the other subjects for which he wishes to be recommended. The Committee shall, however, in each case secure the written opinion of the departments concerned in regard to the scholarship of the applicant, and shall yiew the evidence of scholarship as shown by the records in the light of this opinion; and if there appear to the Committee to be reasons which from their nature cannot be shown by mere records for questioning the scholastic ability of the student, the Committee may in its discretion withhold the recommendation.
2. A candidate must have successfully completed the following courses in the department of education:
a. An introductory course which shall aim (1) to acquaint the prospective teacher with the public-school system as it exists today in the United States, and (2) to present a brief outline of the principles of education. (A four-hour course.)
b. A course in the technics of teaching, accompanied by observation of class-room work in secondary schools, and including a discussion of class-management (routine and discipline), the elements of school hygiene, and the types of school exercises. (A three-hour course.)
3. The Director of the School of Education may, in his discretion, excuse a candidate from the professional courses outlined above, (1) if the candidate is a normal-school graduate or has taken equivalent courses in a normal school or in another college or university; or (2) if the candidate has had at least one year of successful teaching experience. If, at the time of registration with the Committee on Appointments, the candidate has not completed one of the required courses, but is enrolled at that time in the course, a Committee recommendation may be given with the approval of the instructor in charge of the course.

The courses mentioned in Section 2 are (a) Education 1, Introduction to Education (4 hours), and (b) Education 10, Observation and Technics of Teaching (3 hours). Either course may be taken in either semester.

## CERTIFICATION OF HIGH-SCHOOL TEACHERS IN ILLINOIS

A student who expects to teach in the Illinois high schools should bear in mind that all teachers must be duly certificated. County high-school certificates are granted upon examination by county superintendents, and State high-school certificates upon examination by the State Superintendent. For county high-
school certificates issued without an examination the new certificating law makes the following provision:
"At the option of the county superintendent, a high school certificate may be issued without examination to graduates of a recognized normal school, college, or university, who present within three years after graduation, certified credits in English, pedagogy and six high school subjects (chosen from a list published by the Examining Board) and accompanied by faculty recommendations of ability to teach in the high school." (Section 6.)

The educational courses required for the official recommendation of the University, Education 1 and 10, are commonly accepted as meeting the requirement in pedagogy.

State high-school certificates are granted under the following conditions:
"A four-year high school certificate valid in any high school in the State, for which the requirements slall be: (1) Graduation from a recognized college or university, or the completion of an equivalent preparation. (2) three years' successful teaching, two of which sliall have been in the State on a first grade, a high school, or a supervisory county certificate: (3) a successful examination in English, educational psychology, and the principles and methods of teaching, and (4) the preparation of a thesis on one or more secondary school problems, the subject or subjects of which shall be selected from a list prescribed by the Superintendient of Public Instruction.
"[Note-Candidates who have had three years of successful experience in teaching, two of which were in Illinois under a first grade certificate and have exchanged the same for, a county high school certificate under the new law, meet the requirements of No. 21" (Circular 72, State Department of Public Instruction.)

Education 1, 10, and 25 embody the materials usually coveiad by the State examinations in educational psychology and in methods of teaching.

## CERTIFICATION OF SUPERINTENDENTS AND PRINCIPALS

The following are the requirements for certification in supervisory work:
"A four-year supervisory certificate valid for supervisory work and for teaching in any district in the State. The requirements for this certificate shall be: (1) Graduation from a recognized high school and from a recognized normal school, or an equivalent preparation; (2) three years' successful supervision, two of which shall have been in this State on a county supervisory certificate; (3) a successful examination in English, educational psychology, sociology, the history of education, and school organization, adninistration, and supervision, and (4) the preparation of a thesis on one or more problems of school administration, the subject or subjects of which shall be selected from a list prescribed by the Superintendent of Public Instruction.
"[Noti-Candidates who have had three years of successful experience in teaching, two of which were in Illinois, under a first grade certificate, and have exchanged the same for a connty supervisory certificate under the new law, meet the requirements of No. 2.] Life Certificates
"At the time of its expiration upon evidence of successful teaching or supervision satisfactory to the Superintendent of Public Instruction, any four-year State certificate enumerated in this Act shall become valid and be endorsed for life. The validity of State certificates now in force and those issued in accordance with this Act, shall be conditioned upon the good behavior of the holder." (Circular 72, State Department of Public. Instruction.)

Education 1, 2, 4, 16, 20, and 25 embody the material usually covered by the examination (except in English) for the State supervisory certificate.

## REQUIREMENTS OF THE NORTH CENTRAL ASSOCIATION

Students who anticipate teaching in high schools accredited to the North Central Association of Colleges and Secondary Schools should complete courses in education aggregating at least eleven semester hours. This requirement of the Association is effective for new teachers after 1915, but is not retroactive. Certain work offered outside the department of education, especially "teachers' courses," may be counted as part of the eleven-hour minimum.

## THE SCHOOL OF RAILWAY ENGINEERING AND ADMINISTRATION

## GENERAL STATEMENT

The School of Railway Engineering and Administration has been established to prepare men for the technical and administrative departments of railroads. The work offered is arranged in five different curriculums, any one of which is designed to occupy four years' time. The curriculums are:

Railway Civil Engineering
Railway Electrical Engineering
Railway Mechanical Engineering
Railway Administration
Railway Transportation
The first three of these curriculums are administered by the College of Engineering, and a description of them appears with that of other curriculums offered by this College. Students are admitted to them under the same conditions as to other curriculums of the College of Engineering, and they have available for their use all of the library, drafting-room, and laboratory facilities which constitute the equipment of this College. The last two curriculums are administered by the College of Commerce and Business Administration; they are described in detail in connection with the other curriculums of this College. Students are admitted to them under the same conditions as to other curriculums of the College of Commerce and Business Administration.

It is the purpose of each of these curriculums to add to a foundation of general discipline and training specialized training for those who look forward to careers in railway service.

## MILITARY SCIENCE

The military instruction is under the charge of an officer of the United States Army. The course has special reference to the duties of officers of the line. A supply of arms and ammunition is furnished by the War Department, including 1852 U. S. magazine rifles (model 1898 and 1903), accouterments for infantry, and two pieces of field artillery.

Every male student under twenty-five years of age, able to perform military duty, and not excused for sufficient cause, is required to drill twice each week until he has gained credit for four semester hours. He is also required to study drill regulations for infantry, and to recite upon the text once a week until he gains credit for one semester hour. The standings in study and drill are placed on record with other class credits; one semester of recitations and drill counts two hours, and the three remaining semesters of drill three hours. This work is required for graduation in all the undergraduate colleges of the University. Two hours' credit in Military is given to men who complete the course of instruction at the student Military Instruction Camps, and obtain a certificate from the commanding officer to that effect.

The Cadet Brigade consists of two regiments of infantry ( 24 companies), a foot battery of field artillery, signal company, engineer company, and hospital company. There are 2140 cadets enrolled in the military department, including the band of 165 men, and 114 commissioned officers.

The artillery, signal, engineer, and hospital companies are organized mainly from those students of the second year or sophomore class who have made more than an average standing in the work of the previous year.

A special military scholarship, good for one year, is open to each student who attains the grade of commissioned officer; its value is paid to the holder at the close of the year. Appointments in the regiment are made on the nomination of the commandant of cadets confirmed by the Council of Administration.

Towards the close of the year a committee appointed by the President of the University examines candidates for nomination to the Governor of the State to receive commissions as brevet captains in the State militia. Candidates must be members of the senior class in full standing at the time of this examination; must have completed the course of military studies; must have served two semesters as commissioned officers; and must be approved by the Council of Administration as having good reputations as scholars, officers, and gentlemen.

The uniform of the sophomore companies is cadet gray; that of the freshman companies the olive drab, woolen service, like that used by the United States Army. A deposit ( $\$ 14.20$ ) covering the price of the uniform is required from each student upon registration. Additional equipment costing $\$ 6.75$ must be purchased at the same time.

The University military band is composed of students, and every full term of service therein is counted as one term of drill. Those who play in the band after having earned their five military credits necessary for graduation have their incidental fees remitted at the end of each year. Besides giving several
concerts during the year, the band furnishes music for regimental formations and ceremonies and other occasions as required by the President of the University. Membership is decided by competitive examination.

## Division of Military Information

A division of military information has been established to compile and disseminate military information. The division has on file copies of the regulations for the various branches of the army; general orders, circulars, and bulletins of the war department; army regulations, and rosters of the officers of the army and the navy. It also has data concerning the military schools and land grant colleges of the country. Information on any of these subjects is given freely to ail who may apply.

## PHYSICAL TRAINING

## FOR MEN

The object of the work in this department is to preserve and improve the bodily health of the students by rational exercises and to teach proper intercollegiate sports. Physical training is compulsory for all freshmen. Regular classes are formed in swimming and fencing and for drill on the various gymnasium appliances. Lectures are given on personal hygiene.

All competitive athletic games are under the direct supervision of the Director of Physical Training, and an examination is required to show that membership on any team will not cause injury, but will tend to improve the physical condition. No student whose class work is unsatisfactory is allowed to play on a University team.

For a description of the Men's Gymnasium, see page 57.

## FOR WOMEN

The object of the work of this department is to preserve and improve the general health, carriage, and coordination of the young women of the University. Each student is given a physical examination; suitable exercise is prescribed and advice given.

The class work embraces corrective, hygienic, and recreative exercise, including free and light gymnastics, marching, simple steps, games, and Maypole. Tennis, hockey, basket-ball, volley-ball, German-ball, and quoits are played in season.

The gymnasium is open at certain hours and under suitable restrictions to all women of the University. The uniform consist of black serge bloomers, white cotton blouse, black tie, and gymnasium shoes.

The swimming pool is open daily, except Saturday, from 10 to 12 a. m., and from 2 to $5: 30 \mathrm{p} . \mathrm{m}$. The regulation swimming suit of one piece must be made of cotton jersey or other cotton material.

For a description of the Woman's Gymnasium, see under Woman's Building, page 57.

## THE SUMMER SESSION

| Edmund Janes James, Ph.D., LL.D., President of the University William Chandler Bagley, Ph.D., Director of the School of Education, and Director of the Summer Session |
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| William Chandler Bagley, Ph.D., Professor of Education |
| Clarence William Balke, Ph.D., Professor of Inorganic Chemistr |
| Daniel Otis Barto, B.S., Associate in Poultry Husbandry |
| Philip Stephan Barto, Ph.D., Instructor in German |
| Paul LeVern Bayley, A.M., Assistant in Physics |
| George Denton Beal, Ph.D., Instructor in Chemistry |
| Ernest Ludlow Bogart, Ph.D., Professor of Economics |
| Simeon James Bole, A.M., Associate in Pomology |
| Clarence Valentine Boyer, Ph.D., Associate in English |
| Howard Vernon Canter, Ph.D., Assistant Professor of Classics Datid Hobart Carnahan, Ph.D., Associate Professor of Romance Langivages |
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|  |
| Clarence E. Carter, Ph.D., Professor of History, Miami University |
| Lotus Delta Coffman, Ph.D., Professor of Education |
| William Truman Crandall, M.S., Associate in Milk Production |
| Rupus Crane, A.B., B.S., Instructor in General Engineering Drawing |
| Mervin James Curl, A.M., Instructor in English |
| Clarence George Derick, Ph.D., Assistant Professor of Chemistry |
| Daniel Kilmam Dodge, Ph.D., Professor of the English Language and Literature |
| James Merion Duncan, Assistant in Pattern Making |
| Karl John Theodore Ekblaw, M.S., Associate in Furm Mechanics |
| Newton Edward Ensign, A.B., B.S., Instructor in Theoretical and Applied Mechanics |
| Justus Watson Folsom, D.Sc., Assistant Professor of Entomology Thomas Walton Galloway, Ph.D., Professor of Zoology, James Millikin University |
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|  |
| Olaf Harold Glimsted, Assistant in Physical Training for Men |
| Lewis J. Hass, Instructor in Art Metal Work |
| Edward Carey Hayes, Ph.D., Professor of Sociology |
| Felix Emil Held, Ph.D., Associate Professor of German, Miami University |
| William F. Henderson, A.B., Assistant in Zoology, James Millikin University Mary Hill, Assistant in Art and Design |
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| Horace Adelbert Hollister, A.M., Professor of Education and High School Visitor |
| Leona Hope, Assistant in Household Science <br> B. Smith Hopkins, Ph.D., Associate in Chemistry |
|  |  |

Orren Chalmer Hormell, A.M., Professor of History, Bowdoin College
Charles Frederick Hottes, Ph.D., Professor of Botany
George A. Huff, Director of Physical Training for Men
Charles Hughes Johnston, Ph.D., Professor of Education
Harry Stuart Vedder Jones, Ph.D., Assistant Professor of English
Lloyd Theodore Jones, Ph.D., Instructor in Physics
Ralph R. Jones, Basket Ball Coach
Oliver Kamm, Ph.D., Assistant in Chemistry
Aubrey J. Kempner, Ph.D., Instructor in Mathematics
Charles Tobias Knipp, Ph.D., Assistant Professor of Physics
Arman Hajman Koller, Ph.D., Instructor in German
Jacob Kunz, Ph.D., Assistant Professor of Physics
Ernest Michael Rudolf Lamkey, A.M., Assistant in Botany
Grace Linder, Assistant in Household Science
Albert Howe Lybyer, Ph.D., Associate Professor of History
Charles George MacArthur, A.M., Instructor in Chemistry
Harrison McJohnston, A.M., Instructor in Business English and Salesmanship
Wilford Stanton Miller, A.M., Assistant in Education and Secretary of the School of Education
Gertrude Evelyn Moulton, A.B., Director of Physical Training for Women
Jonas Bernard Nathanson, A.M., Assistant in Physics
William Abbott Oldfather, Ph.D., Associate Professor of the Classics
Joseph C. Park, Director of Industrial Education, State Normal School, Oswego, New York
William Alvah Peterson, B.S., A.M., Assistant in Entomology
Charles Marshall Poor, Ph.D., Instructor in German
Oscar Alan Randolph, M.S., Assistant in Physics
Harold Ordway Rugg, C.E., Ph.D., Assistant in Education
Hiram Thompson Scovill, A.B., Instructor in Accountancy
George Wallace Sears, Ph.D., Instructor in Chemistry
Fred B. Seely, B.S., Instructor in Theoretical and Applied Mechanics
James Byrnie Shaw, D.Sc., Assistant Professor of Mathematics
Stuart Pratt Sherman, Ph.D., Professor of English and Chairman of the Committee of the Department of English
Constance Barlow Smith, Assistant Professor of Sight Singing, Ear Training, and Public School Music
Louie Henri Smith, Ph.D., Professor of Plant Breeding in the College of Agriculture, and Chief in Plant Breeding in the Agricultural Experiment Station
William Herschel Smith, M.S., Instructor in Animal Husbandry
Rafael Arcangel Soto, B.S., Assistant in Romance Languages
Margaret Beaumont Stanton, B.S., A.M., Instructor in Household Science
Russell McCulloch Story, A.M., Instructor in Political Science
Grace Swan, Assistant in Music
Charles Manfred Thompson, Ph.D, Associate in Economics
Alex Vallance, M.E., Instructor in Theoretical and Applied Mechanics
Gustaf Eric Wahlin, Ph.D., Associate in Mathematics
Henry Charles Paul Weber, Ph.D., Assistant Professor of Chemistry
Guy Montrose Whipple, Ph.D., Associate Professor of Education
William Harold Wilson, A.M., Assistant in Mathematics

Cearles Henry Woolbert, A.M., Associate in English Henry Charles Zeis, A.B., Assistant in Mathematics Adolf Eduard Zucker, A.M.,Assistant in German Robert Carl Zuppre, Ph.B., Instructor in Physical Training

## GENERAL STATEMENT

The Summer Session of the University of Illinois for 1915 opened on June 21 and closed on August 13, making a term of eight weeks. The Summer Session of 1916 will open on June 19 and close on August 11.

All the courses extend through the eight weeks. Students who wish to remain for only six weeks may obtain from the Director of the Session a certificate of such attendance, but university credit will not be given for sixweeks courses.

Students may register for courses aggregating eight credit hours or less.

## PURPOSE

The primary purpose of the Summer Session is to meet the needs of teachers in the public schools who wish to spend a part of the summer in study or investigation. The greater number of courses offered are designed for highschool teachers, supervising officers, and teachers of special subjects (art, music, manual training, domestic science, agriculture), and for college instructors, school supervisors, and principals who are working for advanced degrees. At the same time, students who may not fall within these groups are welcomed at the Session, and several courses of a more general nature are provided to meet their needs.

## ADMISSION

Admission in regular status to courses in the Summer Session for which university credit is granted is limited to students who could be regularly admitted to the college of the University (Liberal Arts and Sciences, Commerce and Business Administration, Engineering, or Agriculture) in which they would be registered in the regular session.

In order to meet in full the entrance requirements for any one of these colleges, a student must obtain credit, either by passing entrance examinations, or by presenting certificates of work completed in accredited secondary schools or other recognized schools, for 15 units of high-school work, or the equivalent, in subjects accepted for admission to the University, including in the case of each college certain subjects especially prescribed for admission to that college. (See pages 71-96.)

Admission to courses which give university credit, as special students, not candidates for a degree, may be granted to persons 21 years of age, or over, subject to the general regulations of the University relating to special students.

## REGISTRATION

Students will present themselves for registration on Monday, June 19, 1916.

## FEES

A tuition fee of twelve dollars ( $\$ 12$ ) is required of all students in regular attendance at the Session. This entitles one to admission to regular courses and to all special lectures. An extra laboratory fee is charged in some courses
for materials used. Any single course may be taken for a fee of six dollars ( $\$ 6$ ) and the laboratory fee, if there be one. A single course is understood to mean not more than two and one-half credit hours.

## SCHOLARSHIPS

By ruling of the Board of Trustes of the University, all high school teachers in Illinois, and all cther teachers in the State who are qualified to matriculate in the University as regular students, are entitled to Summer Session scholarships, exempting them from payment of the tuition fee. To miatriculate regularly in the University, one must either pass the entrance examinations, or present a certificate from an accredited high school or other evidence of having completed the requisite amount of preparatory work.

The Board of Trustees has extended the scholarship privilege also to persons graduated from the Illinois State Normal Schools during the academic year preceding the session in which the schclarship is desired, and to persons (otherwise qualified) who have not been teachers, but who are under contract to teach in the State during the coming year.

Application blanks for scholarships may be obtained by addressing the Director.

## GRADUATE WORK IN THE SUMMER SESSION

The Summer Session places emphasis on graduate courses leading to the master's degree. The department related to high school teaching and to educational administration have been selected as the centers of this emphasis. An attempt is made to vary the graduate offerings from year to year so that advanced students each year may find acceptable work in their chosen fields.

The normal requirement for the master's degree is full work of graduate grade, satisfactorily completed, through one year of residence. This means a residence of thirty-six weeks at the University. Qualified graduate students may fulfill this residence requirement in four summer sessions of eight weeks each and an additional four weeks' study at the University under the direction of the person in charge of the major work. Thus a student, by working at the University for one week before or after each session under the direction of the professor in charge of his major subject, may earn the master's degree in four summers.

In certain cases it will be possible for the graduate student to complete the last fourth of his residence requirement under a leave of absence. This privilege may be granted in the event that the student is able to take advantage of opportunities for research and investigation that are not afforded in the Uniiversity community. Superintendents, principals, and class-room teachers frequently find it possible to carry on investigations in connection with their school work. There are, for example, numerous problems of school administration and of teaching for which the public school itself forms the only available "laboratory." Where the investigation of such problems is prosecuted with the cooperation of a department of the University, it may be possible to count the work toward the master's degree.

## SUMMER COURSES IN LIBRARY TRAINING

Beginning in the summer of 1911, the Library School has conducted each year a summer session continuing for six weeks, to which weire admitted only those actually employed as librarians, or library assistants, or teacher-
librarians, or under definite appointment to serve in ssch positions. In 1915 the requirement of graduation from a high school was added. The curriculum was planned to meet especially the needs of workers in public libraries and in high school libraries of Illinois and no tuition fee was charged students entering from this State; students entering from libraries in other states paid a tuition fee of $\$ 12$. The work was under the general direction of the faculty of the Library School, and the instruction was given by members of the faculty, supplemented by lectures by neighboring librarians. No university credit was given for the work as offered in 1915.

The work occupied the whole tinne of the student. The number of lectures in each subject was approximately as follows: Cataloging, 20; classification and book numbers, 13 ; book selection, 12; administration of small libraries, 10 ; reference work, 10 ; work with children, 10 ; loan systems, order, accession and shelf work, binding and repairing, 14.

The Library courses are not offered in connection with the Summer Session, but as an independent undertaking of the Library School.

## PLAYGROUND WORK AND COACHING

In addition to the regular gymnasium work, special courses in coaching high school athletes were offered under the general direction of George A. Huff, Director of Physical Training for Men. This work was added because of the increasing demand for trained men to direct high school athletics. A course in plays and games designed for teachers who coach high-school girls or supervise grammar school games, was offered by Miss Gertrude Moulton, Director of Physical Training for Women.

Courses were offered in baseball coaching (Mr. Huff), football coaching (Mr. Zuppke), basketball coaching (Mr. Jones), and track coaching (Mr. Gill). These courses were particularly adapted to high school teachers and principalswho are engaged for part of their time in coaching athletic teams. The courses were so arranged that a student might, if he desired, devote his entire program to this work.

## DESCRIPTION OF COURSES

For a description of the courses offered in the Summer Session, see the General Description of Courses, beginning on page 257.

## THE COLLEGE OF LAW

For the faculty of the College of Law, see page 357; for the courses in law, page 357; for fees and expenses, page 122.

## GENERAL STATEMENT

It is the aim of the College to furnish its students with such a training as will fit them for the practise of the law. A mere knowledge of what the law is will not suffice. The student must learn the reasons which have made it what it is. These can be mastered only by studying the law in the light of its historical development. No special course is offered on the history of the law; but it is sought to present each subject so that the principles peculiar to it may be historically understood. It is also the aim of the College that the courses shall be so presented as to familiarize the student with legal methods of reasoning and to equip him with legal habits of thought. It is believed that the case method of instruction, properly understood and applied, is best adapted to accomplish these objects.

## ADMISSION

For admission as a regular student and candidate for the degree of Bachelor of Laws, an applicant must be matriculated and have 60 hours of credit in a college of this University; or have completed two full years of work as given at another college or university of recognized standing; or have received by transfer 60 hours of university credit here.

The faculty of the College of Law may, in its discretion, prescribe from time to time subjects which shall be required as part of the preliminary college work, subject to approval by the University Senate.

A student who is 21 years of age and is entitled to admission as a regular student to another college of this University, will be admitted as a special student in the College of Law. If he attains in the courses of the first year an average grade of 80 or over, he will be admitted to regular standing, and he may receive the degree of Bachelor of Laws if in all the courses he presents for the degree his average grade is 80 or more.

Note: The above is not intended to abrogate the present rule in regard to the admission of special students.

## SPECIAL STUDENTS

Students twenty-one years of age, or over, who are not able to satisfy the regular requirements for admission, but who have had a preliminary education which would entitle them to take the Illinois State Bar Examination, may, by permission of the faculty, be admitted without examination as special students, but no such student may be a candidate for a degree. In exceptional cases, other persons may, by permission of the faculty, be admitted as special students.

No one may continue as a special student for more than two years except by special permission of the faculty, application for which should be made through the Dean.

## ADVANCED STANDING

After matriculating, an applicant may obtain advanced standing (1) by transfer of credits from another accredited law school upon presentation of a certificate of honorable dismissal and a certified record of work done; or (2) by examination taken at the time of entrance to the College of Law in first year subjects only.

## SUGGESTED PREPARATORY CURRICULUM

The following schedule of studies is recommended by the faculty of the College of Law for students taking two years in the College of Liberal Arts and Sciences to meet the requirement for admission to the College of Law :

FIRST YEAR

| FIRST SEMESTER |  | SECOND |  |
| :---: | :---: | :---: | :---: |
|  | Hours ${ }^{1}$ |  | Hours ${ }^{1}$ |
| Foreign language. | . 4 | Foreign language | 4 |
| History 2a. | . . 3 | History 2b... | 3 |
| Military, 2 a | 1 | Mathematics 2 | 3 |
| Phys. Training 1 and | 1 | Military 1 and 2 b | 2 |
| Rhetoric 1.. |  | Physical Training |  |
| Science | . 5 | Rhetoric 2...... | 3 |
| Total | . 17 | Total |  |
|  | SECOND | YEAR |  |
| Economics 1. | . 5 | Economics 3. | 3 |
| History 3a. | . . 3 | English 20... |  |
| Military 2c. | . 1 | History 3b. |  |
| Political Science 1. | .... 3 | Military 2d | 1 |
| Science or foreign language. | 5 or 4 | Political Science Philosophy 1.... |  |
| Total | 17 or 16 | Total .... | 17 |

The courses in military and physical training, Rhetoric 1-2, and eight hours in foreign language are required of freshmen in the College of Liberal Arts and Sciences. Latin is strongly urged for all students intending to study law; but those who have not had the necessary preparation for college courses in Latin should substitute 2 modern language, preferably French or German.

## COMBINED CURRICULUM IN LIBERAL ARTS AND SCIENCES AND LAW

By the proper selection of his studies it is possible for a prospective law student to take both the degree in arts and the degree in law in six years. (See page 138.)

## METHOD OF INSTRUCTION

Courses in substantive law are taught by analyzing and comparing cases in case books. References, however, are constantly made to leading text books, and they are recommended and in certain courses required for collateral reading.

Courses in the law of procedure are taught from text books, supplemented by the examination of statutes and adjudged cases, and students are brought into close touch with actual practise, both by the method of instruction in these courses and by means of the Moot Court.

The instruction gives a training in the common law, which constitutes a proper foundation for the practise of law in any state.

The faculty of the College is impressed with the idea that a state university should teach the law of the state which supports the school, and to that end,

[^54]without neglecting the general principles that lie at the foundation of the common law, attention is given in all courses to grounding the student in the law as determined by the courts of Illinois. Throughout the curriculum the students are required to consult Illinois decisions and statutes, which are made the basis of discussion in class by students and instructor. In the Moot Court and through the course in Illinois procedure, attention is paid to the rules of: pleading and practise that obtain in the State of Illinois.

## MOOT COURT

The sessions of the Moot Court are held every Monday afternoon of the first semester for the third year class; every Tuesday afternoon of the first semester for the second year class; and every Monday afternoon of the second semester for the second and third year classes together. The Court is presided over by the Dean, who has had an experience of twenty-five years as a judge of the Circuit and Appellate Courts of Illinois. It is the purpose to have the workings of the Moot Court parallel proceedings in the various courts of the State. Students are trained in the preparation of legal documents and in the trial of cases, both civil and criminal.

The Moot Court Bulletin is published every other week of the college year, and in this are printed the statements of cases, the briefs of opposing counsel, and the opinions of the presiding judge.

## THE LAW LIBRARY

The Law Library contains 18,500 volumes, including all the reports of the courts of last resort of all the states; the United States Supreme, Circuit, and District Court reports; the English reports; the Irish reports; the Scotch Appeal Cases; the Current Canadian and Australian reports, together with complete reports of several of the Canadian provinces; the statutes of the various states; digests of the state reports; several sets of special reports, such as the American Reports, American State Reports, American Decisions, Lawyers' Reports Annotated, and American Cases Annotated ; complete National Reporter System; all the great Encyclopedias and Digests; and a collection of text books and legal periodicals.

## REQUIREMENTS FOR GRADUATION AND DEGREES

The degree of Bachelor of Laws will be granted to all regularly matriculated students who complete all the courses in the first year list; course 12a-12b (second year) ; and enough of the other courses offered to make 84 hours of credit.

## Degree of Doctor of Law

The degree of Doctor of Law (J.D.) will be granted to students who comply with the following conditions:

1. Complete the work required for the degree of Bachelor of Laws.
2. Secure a bachelor's degree in arts or science at least two academic years prior to the completion of the course for the degree of Bachelor of Laws.
3. Obtain a minimum average grade of 85 in the College of Law.
4. Present a thesis approved by the faculty of the College of Law, in accordance with the requirements hereinafter set out.

## Rules Concerning Theses

The following are the rules concerning theses presented for the degree of Doctor of Law: (1) The thesis must be on a subject approved by the Dean of the College of Law after consultation with him as to the proposed method of treatment. (2) The subject of the thesis must be filed with the Secretary on or before December 20. (3) The thesis must be typewritten on paper $8 \frac{1}{2} \times 11$ inches, with at least one inch margin at the top, bottom, and sides. (4) It should contain not less than 4,000 nor more than 10,000 words. (5) In citing cases, names of parties, volume, page, and year should be given. Citations are not to be counted in determining the number of words. The student is expected to exhaust the cases decided during the period covered by his thesis, and to state the period for which the cases have been examined. (6) The thesis must be delivered to the Secretary of the faculty not later than May 1.

The thesis may then be returned to the writer for revision, or if unsatisfactory, it may be rejected altogether. If returned for revision it may be rejected after being revised. If accepted it will be filed in the Law Library, and may be published by the College of Law or by the University.

## CERTIFICATE FOR ADMISSION TO THE ILLINOIS STATE BAR EXAMINATION

Any student altho not a candidate for a law degree, if he has taken at least ten hours a week for the period of three academic years, from among the courses offered, is entitled to a certificate thereof from the University, which certificate satisfies the requirements as to legal studies prescribed by the Supreme Court of the State of Illinois for admission to the bar.

## CURRICULUM LEADING TO THE DEGREE OF LL.B.

## First Year

First Semester: Contracts (Law 1a)); Torts (Law 2a); Criminal Law (Law 5) ; Personal Property (Law 6); Introduction to the Study of Law (Law 37).

Second Semester: Contracts (Law 1b); Torts (Law 2b); Real Property (Law 3) ; Domestic Relations (Law 7) ; Agency (Law 11).

## Second or Third Year

First Semester: Real Property (Law 10); Agency (Law 11); Equity (Law 12a) ; Brief Making (Law 35a) ; Public International Law (Law 30); Sales (Law 9) ; Damages (Law 13); Bills and Notes (Law 15); Partnership (Law 19) ; Insurance (Law 28).

Second Semester: Equity (Law 12b); Evidence (Law 8); Equity Pleading (Law 20) ; Moot Court (Law 35b) ; Carriers (Law 14) ; Wills (Law 18) ; Trusts (Law 16); Municipal Corporations (Law 24); Future Interests in Property (Law 27).

## Third Year

First Semester: Illinois Procedure (Law 4a); Constitutional Law (Law 22) ; Moot Court (Law 36a) ; Mortgages (Law 23) ; Bankruptcy (Law 25).

Second Semester: Private Corporations (Law 17); Suretyship (Law 21); Constitutional Law (Law 33) ; Moot Court (Law 36b) ; Conflict of Laws (Law 31).

## PRIVILEGES OF STUDENTS

The students of the College of Law may take, without extra fee, courses of study in other departments of the University, provided they secure the approval of the Dean of the College of Law. Especial attention is called to the courses in public speaking and debate, and to the courses in history, economics, and political science in the College of Liberal Arts and Sciences and the Graduate School.

Law students are entitled to library privileges in the general library as well as in the law library, and possess in general all the rights and privileges enjoyed by other students of the University.

## SCHOLARSHIP PRIZES

Eight scholarship prizes are open to matriculated students of the first and second years, to be awarded at the end of each year, four of $\$ 50$ each and four of $\$ 25$ each, available in discharge of tuition fees.

The American Law Book Company of New York offers an annual prize consisting of the Students' Edition of CYC, to be awarded to the member of the senior class making the best average during his senior year.

Callaghan \& Company, Law Publishers, of Chicago, offer an annual prize consisting of the Cyclopedic Law Dictionary, to be awarded to the member of the second year class making the best average during that year.

## THE COLLEGE OF MEDICINE

For the faculty of The College of Medicine, see page 35; for a description of the building, see page 58.

## LOCATION

The College buildings are located in the city block lying between Harrison, Congress, Honore, and Lincoln streets, in Chicago.

## CLINICAL FACILITIES

## Dispensary

The Dispensary is divided into ten departments : medicine, pediatrics, orthopedics, laryngology, dermatology, ophthalmology, gynecology, neurology, and genito-urinary diseases. These departments occupy the first floor and part of the second floor of the college building. Connected with them are the Roentgen laboratory and the dispensary laboratory, which is devoted to experimental and research work. The average number of patients treated annually is twenty-three thousand.

Dispensary instruction is given in the third and fourth years; the subjects of medicine, surgery, orthopedics, laryngology, and genito-urinary diseases in the third year, and the subjects of pediatrics, dermatology, neurology, ophthalmology, and gynecology in the fourth year. The larger departments devote two hours and the smaller departments one hour daily to this work. Three weeks' service is given by each department in each semester, so that the student receives a total of thirty-six hours in the larger departments and eighteen hours in the smaller departments.

## Amphitheater Clinics

More than six hundred clinics besides the dispensary clinics are given each year. Practically all diseases seen in the temperate zone are demonstrated and all the operations of surgery are performed. Fourth year students are required to examine and diagnose many cases and to assist in the operations.

Students are prohibited from doing work that interferes in any way with the fulfillment of the requirements of the curriculum. Unofficial clinical work may not be substituted for the official clinical requirements.

## Hospital Clinics

The West Side Hospital, containing one hundred and forty-nine beds, five operating rooms, including a clinical amphitheater having a seating capacity of seventy-two, and a laboratory connected with the college by a corridor.

The University Hospital, corner Ogden avenue, Congress and Lincoln streets, opposite the College, contains ninety-two beds, two operating rooms, a laboratory, an X-ray department, and a clinical amphitheater of seventy-five seats.

These institutions are located near the College and certain clinical facilities, furnished by them, are open to its students.

Within half a block of the College is the Cook County Hospital, the chief free hospital in Chicago. During the past year it has cared for thirty thousand patients. In this hospital is conducted much of the clinical instruction of the College. Medical appointments in this institution are made each year by the Civil Service Board. The internes, sixty-four in number, and externes are selected each spring by competitive examination. Only graduates of medical colleges of Cook County are eligible. The internes serve eighteen months in surgical, medical, and obstctrical work, and receive their board and laundry and have rooms in the hospital.

In addition to Cook County Hospital there are more than sixty public and private hospitals in Chicago, each appointing from two to four internes annually.

The students of this College are required to attend the clinics of the Cook County Hospital during their third and fourth years. The hospital tickets cost $\$ 5.00$ each, and are for sale at the office of the Warden. They admit the holders to all clinics and autopsies and to all public operations and lectures.

The County Morgue is located in the hospital grounds, and daily postmortems are held by the pathologists of the hospital. Attendance is required during two years.

Members of the Faculty are connected with and give clinical instruction, to which students are admitted under certain conditions, in the following hospitals:

| Cook County Hospital | St. Luke's Hospital |
| :--- | :--- |
| West Side Hospital | Michael Reese Hospital |
| University Hospital | St. Joseph's Hospital |
| Augustana Hospital | North Chicago Hospital |

St. Mary's Hospital
All students of the fourth year attend clinics in a number of the important hospitals in the city, in small groups every Wednesday forenoon during the year. Those members of the fourth year class who have maintained satisfactory records for scholarship and attendance, and who have taken the summer term, are selected to act as externes during the hours from $8 \mathrm{a} . \mathrm{m}$. to 12 m . in a number of the best hospitals in the city during the entire year.

## THE QUINE LIBRARY

The library of the College of Medicine, named in honor of Dr. William E. Quine, for many years the Dean of the College and now Professor of Medicine, Emeritus, occupies the east end of the second floor of the Medical Building. This library contains 14,000 bound volumes, besides pamphlets and reprints and files of 250 American, German, English, French, and Italian journals. It is open from 9 to 5 daily, except Sundays and legal holidays.

This collection of books and periodicals is in charge of a librarian who is constantly present to assist and instruct students in the use of a technical library.

## ADMISSION

Applicants for admission to the College of Medicine are required to offer:
I. Four years' work in an accredited high school, or the equivalent, comprising fifteen (15) units* of secondary credit and including prescribed subjects as follows:

II. Two years' wark in a recognized college or university, comprising not less than sixty (60) semester hours $\dagger$ and including prescribed subjects as follows:

| ${ }^{\text {Physics }}$ | 8 hours |
| :---: | :---: |
| Chemistry | 8 hours |
| Biology | 8 hours |
| German or French | 6 hours |
| Electives | 30 hours |
|  | - |
| Total | 60 hours |

Either the secondary or the collegiate requirements may be satisfied (a) by certificate or (b) by examination.

Secondary credits will be accepted by certificate from the following sources:
(1) From high schools and academies in the State of Illinois which are accredited to the University of Illinois.
(2) From schools accredited by the North Central Association of Colleges and Secondary Schools.
(3) From schools accredited to the state universities which are included in the membership of the North Central Association of Colleges and Secondary Schools.
(4) From high schools and academies registered by the regents of the University of the State of New York.
(5) From schools approved by the New England College Entrance Certificate Board.
(6) From the state normal schools of Illinois and other normal schools having equal requirements for graduation.

Secondary credits may be made by examination.
(1) In the examinations conducted by the Registrar of the University of Illinois at the University in Urbana in January, July, and September of each year. For programs of these examinations, see pages 81-82.

[^55](2) In the examinations conducted by the Registrar of the University of Illinois at the College of Medicine in September of each year. In 1916 these examinations will be held September $20-22$. Programs may be had by applying to the Secretary of the College of Medicine, Congress and Honore Streets, Chicago. The subjects offered will be the same as those included in the list on pages 74 and 75. For a description of the ground covered in the several subjects see pages 89 to 96 .
(3) In the examinations conducted in June of each year by the College Entrance Examination Board. See page 77.
(4) In the examinations conducted by the Regents of the University of the State of New York.

Collegiate credits will be accepted by certificate from recognized colleges which require for admission the completion of at least 14 units of high school work in an accredited high school, or the full equivalent thereof, and for graduation, in addition, four years of college work; or may be made by examination in the examinations conducted by the Registrar of the University of Illinois at the College of Medicine in September of each year. Special arrangements must be made in advance with the Registrar for examinations in collegiate subjects.

Students are strongly urged to acquire such an elementary knowledge of Latin as may be obtained in four or five years' work in school or college.

It will be noted that a properly prepared student of good ability can complete the minimum prescriptions in collegiate work within two years and still have considerable time for the study of language, history, economics, psychology, etc.-all subjects of which it is eminently desirable that the future physician should know something.

The above represent the minimum requirements for admission to the College of Medicine. It is strongly urged that students shall have completed at least three years, or, if possible, four years, in a standard college before taking up the study of medicine.

## ADVANCED STANDING

The University will accept scholarship and time credits for work done in medical colleges having standards equal to those of the College of Medicine of the University of Illinois, in so far as this work coincides with or is the full equivalent of the courses prescribed by the University.

Students presenting credentials from such medical colleges will be exempt from examination in so far as the credentials cover the work of the year or years for which the applicant seeks to be credited. Every such student must present a letter of honorable dismissal from, and be eligible for promotion in, the college in which he has pursued his medical studies and must comply with the requirements for such promotion in the University of Illinois.

## Entrance Requirements for Upper Classes

Candidates for admission to advanced standing must in all cases satisfy the entrance requirements which were met by the classes which they wish to enter as follows:

For the sophomore and junior classes, the present entrance requirements of the College as outlined above.

For the senior class, (1) 15 units of high school work, including English, 3 units; algebra, 1 unit; plane geometry, 1 unit; German, French, Latin or Greek,

2 units; American history and civics, 1 unit; physics, 1 unit; and electives, 6 units; and (2) one year-i. e., thirty semester hours-in liberal arts and sciences in a recognized college or university.

## CONDITIONS

For the year beginning in October, 1916, conditions may be permitted as follows:

For the Freshman, Sophomore, and Junior classes-6 hours in college French or German, or 8 hours in collegiate electives. No conditions can be permitted in high-school subjects or in the prescribed college physics, chemistry, or biology.

For the Senior class-4 collegiate hours. No conditions can be permitted in high-school subjects.

## ADMISSION AS SPECIAL STUDENTS

The general rule of the University will apply to the College of Medicine: Persons over twenty-one years of age, not candidates for a degree, may, on special approval of the dean, be admitted to classes for which they are prepared.

## REGISTRATION

Students are required to register in the office of the Secretary immediately upon the opening of the term for the work of that term, and credit will be allowed only in the branches in which the students are registered. Students are registered in the order in which their fees are paid. Registration of students closes October 7.

## COLLEGIATE YEAR

The collegiate year of 1915-1916 consists of a session of thirty-seven weeks, beginning October 1, 1915, and ending June 14, 1916. Each year is divided into two semesters of eighteen and nineteen weeks respectively. Attendance upon the full session is required in order to secure credit for a year's work, and attendance upon four full sessions is required for graduation.

## FEES AND EXPENSES

| Fees- | First <br> Year | Second Year | Third Year | Fourth Year |
| :---: | :---: | :---: | :---: | :---: |
| Matriculation | \$ 5.00 |  |  |  |
| Registration |  | \$ 5.00 | \$ 5.00 | \$ 5.00 |
| General ticket | 120.00 | 120.00 | 140.00 | 155.00 |
| Laboratory | 20.00 | 20.00 | 5.00 | .... |
|  | \$145.00 | \$145.00 | \$150.00 | \$160.00 |

Note-Dissections, $\$ 5.00$ a part. County Hospital ticket, $\$ 5.00$. Maternity fee, Chicago Lying-In Hospital, $\$ 15.00$.

No fees are charged regular students for special courses or quizzes. Under no circumstances are instructors, dispensary physicians, or professors allowed to receive a fee for instruction or service.

Fees charged special students are based on the amount of work taken.
Alumni are admitted, without charge, to all regular courses except in laboratory work in which a charge is made for material actually used.

The Board of Trustees reserve the right to change the fees at any time.

## Microscopes

Each student is required to have a microscope. Provision has been made whereby the student can purchase a microscope at reduced rates or make payment in annual installments. If a student be unable to purchase a microscope the College will rent him one for his exclusive use at the rate of $\$ 2.50$ or $\$ 4.00$ a semester, the rate depending upon the equipment of the instrument.

## Living Expenses

The expense of living in Chicago is less than in most other large cities. From twenty-five to thirty-five dollars a month may be regarded as adequate for ordinary living expenses, exclusive of books, clothing, railroad fare, and miscellaneous needs.

The expense for books varies between $\$ 15.00$ and $\$ 25.00$ a year. The instructors, at the beginning of each course, direct their students in regard to the purchase of text-books.

## Scholarships

Through the generosity of the late Prof. R. L. Rea, a fund has been provided for four scholarships each year for indigent worthy students. These scholarships are awarded to the four students whose credentials and qualifications for the study of medicine entitle them to participate in the benefits of the Rea fund.

The students whose names follow received benefit under this scholarship during the session of 1915-1916

William Franklin Carroll
Max Lampert

Lincoln Harrison Norwood<br>Abraham Seletz

## COURSES OFFERED

Students entering the four-year curriculum as offered in the College of Medicine offer two years of work in liberal arts and sciences for admission. Upon the completion of the first two years in the College of Medicine, the degree of Bachelor of Science will be conferred; and upon the completion of the four years in the College of Medicine, the degree of Doctor of Medicine will be conferred. The two years of work in arts and sciences required for admission to the College of Medicine may be taken in the College of Liberal Arts and Sciences at Urbana.

## REQUIREMENTS FOR GRADUATION

1. Four full courses of instruction of not less than thirty-two weeks each, no two being in the same year, are required of every candidate for graduation.
2. The last course of instruction shall have been taken in this institution.
3. Acceptable evidence of good moral character must have been filed.
4. The candidate shall be at least twenty-one years old.
5. He shall have satisfactory credits and pass his final examinations in accordance with the rules of the Faculty.
6. All indebtedness to the college shall have been paid.

## GENERAL PLAN OF INSTRUCTION

The curriculum required for graduation extends over four years. During the first two years the work is largely confined to the sciences fundamental to practical medicine, and the time of the student is largely devoted to laboratory
work. During the first year this consists of work in anatomy, histology, embryology, physiology, and chemistry. During the second year the study of anatomy, physiology, and physiological chemistry is continued, and in addition the student takes up therapeutics, pathology, and autopsies.

During the third and fourth years the time is devoted to practical medicine and surgery, and to clinical instruction.

Attendance upon clinics is required and students are graded on and given credit for their work in the clinical courses just as they are for the work in the didactic and laboratory courses. The students of the third and fourth years are divided into sections for dispensary work, and have instruction in rotation in the various departments of practical medicine and surgery.

## Optional Work

In addition to the required work, students may, with the permission of the Committee on Optional Courses, take one or more optional courses. No credit will be allowed for this work.

## RULES FOR PROMOTION

The passing grade in each subject is 70 per cent. A grade of from 60 per cent to 70 per cent constitutes a condition and entitles the student to one reexamination in the subject. A mark below 60 per cent or the failure to remove a condition by re-examination constitutes a failure, and the subject must be repeated in course. A student who has any failure standing against him may not be advanced to the next year without the permission of the committee on promotion. Students who fail in the re-examination in subjects given in the first semester of the fourth year totaling more than 48 hours will not be permitted to go on with the work of the second semester, but must repeat the subjects the following year. No student may be a candidate for graduation who has conditions in more than 96 hours.

General examinations will be held in all subjects at the end of each semester. The examinations for the removal of conditions for students of the first three years will be held during the week preceding the opening of the next collegiate year. Re-examinations in subjects presented in the first semester of the fourth year will be held not later than two weeks from the end of that semester.

Certificates showing credits earned, including the attendance record, are issued at the end of the college year.

## DESCRIPTION OF COURSES

## ANATOMY, HISTOLOGY, EMBRYOLOGY

Albert Chauncey Eycleshymer, B.S., M.D., Ph.D., Professor and Head of the Department<br>Frederick Bogue Noyes, A.B., D.D.S., Professor of Dental Histology<br>Victor Emanuel Emmel, Ph.D., Assistant Professor<br>Roy Lee Moodie, Ph.D., Associate<br>Elmer S Riggs, A.M., Lecturer on Comparative Dental Anatomy<br>Thomas Smith Jones, B.F.A., Artist<br>Louis N Boelio, Technician<br>Morris Kramer, Technician

## General Statement

The laboratories for gross anatomy occupy two floors in the Dental Building. They comprise two dissecting rooms and a number of smaller rooms for embalming, storing, and prosecting. The laboratory for histology and embryology and the offices and research laboratories, are on the third floor of the Medical Building. The equipment includes apparatus for embalming, sectioning, macerating, corroding, and digesting; microtomes, microscopes, paraffin ovens, drawing apparatus, chemicals, glassware and Grübler stains. A small museum contains special dissections, osteological preparations, and models; sets of histological, neurological, and embryological sides; charts, lantern slides, and other teaching accessories. The departmental library contains the standard texts and about two thousand five hundred special monographs. All the English, German and French anatomical journals are received. The Crear library is readily accessible and makes it possible to consult practically the whole literature of anatomy, zoology, and biology.

The aims of the department are: to give such training in the essentials of anatomy as is necessary to secure a foundation for later clinical work; to aid the exceptional student and physician to obtain a special knowledge of certain restricted fields of anatomy as a foundation for specialization; to stimulate both students and physicians to contribute to medical science.

## Required Courses-First Year

Embryology.-Ovogenesis and spermatogenesis, maturation, ovulation and its relation to menstruation, fertilization, segmentation, gastrulation, formation and significance of germinal layers; the formation of foetal envelopes and placenta; organs and systems of organs; congenital malformations. Lectures and recitations: 2; laboratory: 2 two-hour periods. II (second half.)*

Professor Eycleshymer and assistants
Cytology, Histology, and Microscopic Anatomy.-Animal cells; modified cells, such as are found in blood and lymph, epithelial, connective, muscular,

[^56]and nervous tissues and their relationships in the body. Lectures and recitations: 3; laboratory: 3 three-hour periods. $I$.

Professor Eycleshymer and assistants
Neurology.-The gross and microscopic anatomy of brain, spinal cord, and organs of special sense. Lectures and recitations: 2; laboratory: 2 twohour periods. II (first half). Professor Eycleshymer and assistants

Systematic Anatomy.-Dissection of the human body. For convenience, the body is subdivided into: (1) upper extremity and head and neck; (2) lower extremity and thorax and abdomen. (In order that there may be a correlated study of osteology each student is lent a set of bones for study at home.) Lectures and recitations: 3; laboratory: 2 three-hour periods. I, II.

## Required Course-Second Year

Topographical Anatomy.-The topography and relations of the various regions, systems and organs of the body. Lectures and recitations: 2; laboratory : 2 three-hour periods. $I$.

Dr. Moodie and assistants

## Optional and Graduate Courses

Microscopical Technics.-Preparation of objects; injecting blood vessels and lymphatics; maceration, digestion, corrosion; decalcification, fixation of tissues, embedding, sectioning, staining, mounting. Hours to be arranged. Mr. Boelio
Medical Illustrating.-Drawing, including perspective; values and their adaptation in the representation of medical subjects; normal and pathological specimens, both gross and microscopic; media adapted for representing certain conditions and structures, and for special methods of reproduction, such as line work, half tone, and lithography. (Open to all who are interested in the making of medical illustrations for publications.) Hours to be arranged.

Mr. Jones
Embryology and Histogenesis.-The structural changes in the principal tissues and their cellular elements during growth; changes in the structure of cells during senescence. Hours to be arranged.

Professor Eycleshymer
Dissection Review.-The principal systems of the body. Demonstration, occasional lectures, and quizzes. (Open only to those who have completed at least the first half of the third year.)

Dr. Moodie

## Courses Preparatory to Specialization

> (Special fee)
A. The Eye.
B. The Ear.
C. The Mouth, Nose, and Throat.
D. The Thorax and Abdomen.
E. The Genito-urinary System.
F. Pelvic Anatomy.
G. The Extremities, especially the joints and their mechanism.
H. The Brain and Spinal Cord.

Research.-Physicians who desire to do research and students who have had three years of university training are invited to begin research work in this department. A reading knowledge of French and German is essential.

Seminar.-Critical reviews of recent literature; bibliographies; preparation of scientific papers for publication. Presentation and discussion of the results of investigations.

## APPLIED AND SURGICAL ANATOMY

(See Department of Surgery.)

## DERMATOLOGY

Frederick Glleette Harris, M.D., Assistant Professor of Dermatology and Vencreal Diseases and Acting Head of the Department Philip Frank Shaffner, M.D., Instructor John H. Stokes, M.D., Instructor

Required Courses-Fourth Year
Dermatology.-Didactic, illustrated. 2; I or $I I$.
Assistant Professor Harris
Clinical Dermatology.-Given in Cook County Hospital. 1; I or II.
Assistant Professor Harris
Clinical Dermatology.-Given in the dispensary. Clinics of one hour daily throughout the year. 3; I, II (three weeks each semester).

Assistant Professor Harris, Dr. Shafrner

## Optional Courses

Syphilis.-Advanced clinical course, limited to six students. Assistant Professor Harris
Pathology and Bacteriology of the Skin.-Limited to six students.
Dr. Shaffner

## EXPERIMENTAL MEDICINE

Danid John Davis, B.S., M.D., Ph.D., Professor and Director of the Laboratories Josiah J Moore, M.S., M.D., Associate, Experinental Medicine Harry B. Culver, B.S., M.D., Instructor, Experimental Medicine

## General Statement

The function of this department is to carry on research in medical problems, especially in clinical medicine, and to conduct the courses in clinical diagnosis and the laboratory work of the dispensary.

## Required Course-Second Year

Laboratory Diagnosis.-The microscopic, bacteriologic, and chemical examination of urine, blood, sputum, feces, stomach contents, exudates. 8; one-half of $I$ or II. Professor Davis, Dr. Moore

Optional Courses
Advanced Special Laboratory Methods.-Limited to 2 few specially qualified students. Hours to be arranged.

Research.-Limited to qualified students.

## HYGIENE AND MEDICAL JURISPRUDENCE

Adolph Gehrmann, M.D., Professor and Head of the Department of Hygiene Elmer DeWitt Brothers, M.S., LL.B., Lecturer, Medical Jurisprudence Matthew Mills, LL.B., Alternate Lecturer, Medical Jurisprudence

## Required Courses-Third Year

Public Hygiene.-General etiology, immunity, contagious diseases, epidemiology, and preventive medicine; organization of health departments and the work of divisions of the same; vital statistics; factory and school inspection; sanitation; municipal sanitation; public welfare. Visits to public institutions and plants where the actual operation of the various phases of public health activities may be studied. Lectures. 2; II; laboratory and conference : 8 three-hour periods.

Professor Gehrmann
Medical Jurisprudence.-Lectures: 1; I or II.
Mr. Brothers

## MEDICINE

Charles Spencer Williamson, B.S., M.D., Professor, and Head of the Department

## Division of Internal Medicine

Charles Spencer Williamson, B.S., M.D., Professor of Medicine Maurice Louis Goodkind, M.D., Professor, Clinical Medicine
Joseph McIntyre Patton, M.D., Professor, Clinical Medicine
Frederick Tice, M.D., Professor, Diseases of the Chest and Clinical Medicine John Weatherson, C.E., M.D., Assistant Professor, Medicine
Maurice Lewison, M.D., Assistant Professor, Physical Diagnosis
Edward Louis Heintz, Ph.G., M.D., Assistant Professor, Medicine and Clinical Medicine
Robert Mosser, M.D., Associate, Clinical Medicine
Ernest Sisson Moore, Ph.D., M.D., Associate, Clinical Medicine
George J Lorch, Ph.G., M.D., Instructor, Medicine
Robert William Morris, A.B., M.D., Instructor, Medicine
Waldemar Eberfardt, B.S., M.D., Instructor, Medicine
Frank Chauvet, M.D., Instructor, Physical Diagnosis
Walter Bradford Metcalf, M.D., Instructor, Clinical Medicine
Edward F Fox, M.D., Instructor, Medicine
Solomon Strouse, A.B., M.D., Instructor, Clinical Medicine
Louis Rudolph, M.D., Instructor, Physical Diagnosis
F Raymond Crooks, M.D., Instructor, Medicine
Franklin S Wilson, M.D., Instructor, Clinical Medicine
Philip M Dale, M.D., Instructor, Clinical Medicine
Frank J Jirka, M.D., Assistant, Physical Diagnosis
Alexander William Burke, M.D., Instructor in Medicine
Robert Archie Crawford, M.D., Instructor in Medicine
Robert Ludwick Furby, M.D., Instructor in Medicine
John Charles Matthew Krasa, M.D., Instructor in Medicine
Paul Brown Welch, M.D., Instructor in Medicine

## General Statement

The work of this department is given in the second, third, and fourth years. In the second year the work includes physical diagnosis on the normal subject; pathologic cases preparatory to the clinical work of the last two years; laboratory diagnosis.

In the third year instruction is carried on by conferences, recitations, and clinics. The student obtains instruction in internal medicine, sees appropriate
clinical cases, and comes into intimate contact with patients and examines them in the dispensary under supervision.

In the fourth year instruction is given by means of lectures and group quizzes, continuing the work of the third year. A large part of the work, however, is clinical, and is given not only in the College, but in the Cook County, University, and Michael Reese hospitals. In addition practical work is given in the dispensary in the various medical specialties. The last six weeks of the second semester are given over to a review of internal medicine.

## Required Course-Second Year

Physical Diagnosis.-(a) Lectures. 1; II.
(b) Practical drill on normal subjects. 1 two-hour period; $I I$.

Assistant Professor Lewison, Dr. Chauvet, Dr. Rudolph

## Required Courses-Third Year

Practise of Medicine.-Infectious diseases, except tuberculosis; intoxications; diseases of metabolism and of the ductless glands. Conferences; recitations. 4; $I, I I$.

Assistant Professor Heintz, Dr. Lorch, Dr. Crooks, Dr. Furby, Dr. Krasa
Medical Clinic.-Selected topics-in the amphitheatre of the Cook County Hospital. 1 two-hour period; I or II. Professor Williamson

Medical Clinic.-Material from the University Hospital dispensary. 1 two-hour period; I or $I I$.

Assistant Professor Heintz
Physical Diagnosis Clinic.-Given to small groups, using the patients in the tuberculosis wards of the Cook County Hospital. 1; I.

Assistant Professor Lewison, Dr. Chauvet
Medical Dispensary.-Practical work on out-patients. The rooms in which the course is conducted have been designed for this purpose. Practically every disease of an ambulatory nature found in the temperate zone may be seen here. 3 two-hour periods; I, II (three weeks.)

Dr. Mosser, Dr. Moore, Dr. Metcalf, Dr. Wilson, Dr. Dale

## Required Courses-Fourth Year

Practise of Medicine.-Diseases of the alimentary tract, liver, pancreas, peritoneum, heart, and lungs. The kidneys and the blood; review of selected subjects. Lectures illustrated by pathological specimens, charts, and lantern slides; conferences. 6; I-3; II.
Lectures, Professor Williamson and Professor Tice; Conferences, Assistant
Professor Weatherson, Dr. Morris, Dr. Eberhart, Dr. Fox
Medical Clinic.-Gastro-intestinal, cardio-vascular, and renal diseases; methods of diagnostic analysis. Collateral reading. 1 two-hour period; I or II.

Professor Williamson
Medical Clinic.-Given in the amphitheatre of the Cook County Hospital. 1 two-hour period; $I$ or $I I$.

Professor Patton
Medical Clinic.-Given in the amphitheatre of the Cook County Hospital. 1 two-hour period; I or II. Professor Tice

Group Clinic.-Given at the Michael Reese Hospital. Four one-hour periods to each group.

Professor Goodkind
Medical Seminar.-Work in cooperation with the departments of surgery and obstetrics. The student receives 48 hours' credit, 16 in each department,
altho the work done is in one department only. During the first semester, the groups meet informally, and abstracts are prepared and submitted for criticism. During the second semester, each group is assigned one hour in which to present its work before the entire class. Professor Williamson and Assistants

## Optional Course

Seminar in the Classics of Medicine.-Given if a minimum number of four students apply; more than eight can not be admitted. Hours to be arranged.

Professor Williamson

## Division of Pediatrics

Julus Hays Hess, M.D., Associate Professor, Pediatrics and Clinical Pediatrics Emanuel Oliver Benson, A.B., M.D., Assistant Professor, Pediatrics and Clinical Pediatrics
Edward Kent Armstrong, M.D., Instructor
Henry Eugene Irish, M.D., Instructor
Maurice L Blatt, M.D., Instructor
Jacob Carl Krafft, M.D., Instructor
Joseph Samuel Cohn, M.D., Instructor
Abraham Levinson, M.D., Instructor

## General Statement

The work in pediatrics is given in the third and fourth years. So far as possible, individual instruction is given, the class being divided into small groups for clinical work.

## Required Courses-Third Year

Pediatrics.-Nutrition and nutritional disturbances in infancy. Lectures. 1; $I I$.

Associate Professor Hess
Pediatrics.-Recitations. 1; I.
Dr. Irish, Dr. Armstrong, Dr. McCarty, Dr. Cohn
Pediatric Clinic.-Physical diagnosis and demonstration of cases. 1; $I$ or $I I$. Assistant Professor Benson, Dr. French

## Required Courses-Fourth Year

Section Conference.-Michael Reese Hospital. 1 hour a week for four weeks. Associate Professor Hess
Section Conference.-University Hospital. I hour a week for four weeks.

Dr. Irish
Section Conference.-Contagious diseases. Cook County Hospital. 1 hour a week for four weeks.

Dr. Armstrong
Dispensary.-Three two-hour periods for three weeks each semester.
Dr. Blatt, Dr. Cohn, Dr. Krafft, Dr. Levinson
Pediatric Clinic.-Cook County Hospital. 1 two-hour period; I or II. Associate Professor Hess

## Division of Neurology

Lee Harrison Mettler, A.M., M.D., Professor and Head of the Division of
Neurology and Clinical Neurology
Isador Bernard Diamond, M.D., Instructor
Carl J S Rydin, M.D., Instructor
Edwin Franklin Leonard, M.D., Instructor

## Required Courses-Fourth Year

Neurology.-Clinico-didactic lectures; recitations. Lectures, 1; I, II. Recitations, 1; I, II.
Lectures, Professor Mettler; recitations, Dr. Diamond, Dr. Leonard, Dr. Rydin
Clinical Neurology.-Dispensary instruction. 3 two-hour periods, three weeks; I, II. Dr. Diamond, Dr. Rydin, Dr. Leonard

## Optional Courses

Special lectures in neuropathology, electrotherapeutics, or other related subjects. 4 one-hour periods. Professor Mettler

## Division of Psychiatry

Haim I Davis, M.D., Assistant Professor, Clinical Psychiatry and Head of the Division of Psychiatry

## Required Courses-Fourth Year

Psychiatry.-Lectures and quizzes. 1; II. Assistant Professor Davis Clinical Psychiatry.-Given in the detention wards of the Cook County Hospital. 1, eight weeks; I, II.

Division of Roentgenology
Adolph Hartung, M.D., Instructor

## Required Course-Fourth Year

Roentgenology.-Conferences and demonstrations. 4 one-hour periods.
Dr. Hartung
Division of History of Medicine
Bernard John Cigrand, M.S., D.D.S., Lecturer
Optional Course-Fourth Year
History of Medicine.-Lectures. 1; I or II.

## OBSTETRICS AND GYNECOLOGY

Charles Sumner Bacon, Ph.B., M.D., Professor of Obstetrics and Head of the Department

## Division of Obstetrics

Charles Sumner Bacon, Ph.B., M.D., Professor, Obstetrics and Clinical Obsterrics
Rachelle S Yarros, M.D., Associate Professor, Obstetrics and Clinical Obstetrics
Cecil Von Bachelle, M.S., M.D., Assistant Professor, Obstetrics
Otto Herman Rohrlack, Ph.G., M.D., Assistant Professor, Obstetrics and Clinical Obstetrics
Annie Esther Barron Harrison, M.D., Instructor
Richard Charles Steffan, M.D., Instructor
John William Birk, M.D., Instructor
Charles Newberger, M.D., Instructor
Walter Charles Hammond, M.D., Instructor
Edward Martin Heacock, M.D., Instructor
Frederick Howard Falls, A.B., M.D., Research Fellozv and Instructor

## General Statement

The equipment of this department consists of manikins, demonstration pelves, malformed pelves, and other pathological specimens, charts, obstetrical instruments, and prepared fetuses. The histology and pathology is given in connection with the department of experimental medicine.

The clinical work is given in the University Hospital and the Chicago LyingIn Dispensary. Bedside and dispensary clinics are given in the University Hospital. Each student is also required to assist in the delivery of six parturients. Reports of cases kept by students form the basis of conference discussions. An amphitheater clinic is given to the senior class.

Fourth year students are required to take two weeks in residence in the Chicago Lying-In Hospital and Dispensary.

## Required Courses-Third Year

Anatomy and Histology of the Obstetrical Passages and Passenger.4 periods of two hours each.

Dr. Falls
Physiology of Pregnancy, Labor, the Puerperium, and the New Born Infant-Lectures; recitations. 2; $I, I I$.

Associate Professor Yarros, Dr. Birk, Dr. Newberger, Dr. Heacock, Dr. Hammond, Dr. Falls
Bedside and Dispensary Clinic.-University Hospital. 12 one-hour periods.

Professor Bacon, Assistant Professor Rohrlack, Dr. Harrison, Dr. Falls
Parturition Clinic.-University Hospital. Three cases.

## Required Courses-Fourth Year

Pathological Anatomy and Histology.-Laboratory. 2 to 4 two-hour periods in combination with the course on the pathology of the genital tract. (See division of gynecology.)

Dr. Falls
Pathology of Pregnancy, Labor, and the Puerperium.-Lectures; recitations. 48 hours in one-hour and two-hour periods.

Professor Bacon, Assistant Professor Rohrlack, Dr. Birk, Dr. Newberger, Dr. Heacock, Dr. Hammond, Dr. Falls
Manikin Work.-8 two-hour periods.
Assistant Professor Bachelle, Dr. Steffen
Bedside and Dispensary Clinic.-Given at the University Hospital. 12 one-hour periods.

Professor Bacon, Assistant Professor Rohrlack, Dr. Harrison, Dr. Falls
Amphitheater Clinic.-Given at the University Hospital. 1 ; $I$ or $I I$.
Professor Bacon
Parturition Clinic.-Given at the University Hospital. Three cases.
Chicago Lying-In Hospital and Dispensary.-Residence, two weeks; at least six cases. (Fee, \$15.)

Obstetrical Seminar.-Work in cooperation with the departments of medicine and surgery. For this work the student reccives 48 hours credit, 16 in each department, altho the work is in one department only. During the first semester, the groups meet informally, and abstracts are prepared and submitted for criticism. During the second semester each group is assigned one hour in which to present its work before the class.

Professor Bacon and assistants

## Optional Course

Obstetrical Pathology.-Third or fourth year.
Division of Gynecology
Channing Whitney Barrett, M.D., Professor, Gynecology and Clinical Gynecology
Mary Gilruth McEwen, B.S., M.D., Assistant Professor, Clinical Gynecology
John Michael Lang, M.D., Assistant Professor, Clinical Gynecology
Egan Walter Fischman, M.D., Instructor
Wesley John Woolston, M.D., Instructor
Albert John Schoenberg, M.D., Instructor
Frank Lee Stone, M.D., Assistant
Mathilda Osborne Lichner, B.S., M.D., Assistant

## Required Courses-Fourth Year

Gynecology.-Recitations; lantern slide demonstrations; exhibition of fresh and preserved pathologic tissue; illustrations by charts and models. An occasional hour is devoted to operative work. 2; I.
Professor Barrett, Dr. McEwen, Dr. Lang, Dr. Fischmann, Dr. Woolston, Dr. Schoenberg, Dr. Stone
Diagnostic and Operative Clinic.-Cook County Hospital. Diagnosis, prognosis, and treatment of typical and atypical cases. Cases preliminary to operation; post-operative progress; pathologic tissues. 1 two-hour period; $I$ or $I I$.

Professor Barrett
Diagnostic and Operative Clinic.-The College Amphitheater or West Side Hospital. Material from the College and Marcy Center dispensaries is available for bedside study of the post-operative course. 1 two-hour period, 8 weeks; $I, I I$.
Professor Barrett, Assistant Professor Mcewen, Assistant Professor Lang
Dispensary Clinics.-College and Marcy Center dispensaries. Examinations; study of cases; written reports. 3, six weeks; I, II.
Assistant Professor Lang, Dr. Fischmann, Dr. Woolston, Dr. Stone, Dr. Lichner
Gross and Microscopic Study of Pathology of the Genital Tract-Gross and microscopical specimens; conferences. 2 to 4 two-hour periods, in combination with the course on pathological anatomy and histology. (See division of obstetrics.)

Dr. Fischmann, Dr. Stone

## Optional Course

Gynecologic Pathology.-Special courses for students of demonstrated proficiency. Special investigation. Professor Barrett and assistants

## OPHTHALMOLOGY

Casey Albert Wood, A.M., M.D., Professor of Ophthalmology and Head of the Department
William Elliot Gamble, B.S., M.D., Associate Professor, Clinical Ophthalmology
Jonathan Brown Loring, M.D., Assistant Professor, Clinical Ophthalmology Ephraim Kirkpatrick Findlay, M.D., Assistant Clinical Professor, Opthatmology

Charles Clayton Clement, M.D., Instructor
Frederick Douglas Vreeland, M.D., Instructor
William Butler West, M.D., Instructor
Lawrence Wells Whitmer, M.D., Assistant
Edward F Slavik, M.D., Assistant, Clinical Ophthalmology
George William Woodnick, M.D., Instructor, Clinical Ophthalmology
Helen Carncross, M.D., Instructor, Clinical Ophthalmology

## Required Courses-Fourth Year

Didactic Ophthalmology.-Lectures; dispensary teaching; clinical lectures in the hospital. Meetings of the Journal Club. 1, twelve weeks; I. Professor Wood
Clinical Ophthalmology.-The common diseases of the eye; minor operations the general practitioner may be expected to perform. I; I or II. Professor Woon, Associate Professor Gamble, and assistants
Dispensary Instruction.-Diagnosis and treatment of the commoner diseases of the eye. 3 two-hour periods, three weeks each semester.
Professor Wood, Assistant Professor Loring, Assistant Professor Findlay, and instructors

## Optional Courses

Properly qualified students can arrange for special or advanced work in ophthalmology by applying to Professor Wood.

## PATHOLOGY AND BACTERIOLOGY

David Jorn Davis, B.S., M.D., Ph.D., Acting Professor of Pathology and Acting Head of the Department
William H Burmeister, A.B., M.D., Assistant Professor, Pathology
Thomas Harris Boughton, M.D., M.S., Instructor
Frederick Howard Falls, A.B., M.D., Instructor
Carl Gaffney, Technician, Bacteriology
Amy Weedon, Technician, Pathology

## Required Course-Second Year

General Pathology and Pathological Histology.-General pathology; gross and microscopic study of fresh and preserved pathological material. Lectures; recitations; demonstrations. 2; one and one-half semesters; laboratory work, 3 two-hour periods, one and one-half semesters.

Assistant Professor Burmeister, Dr. Boughton

## Required Courses-Third Year

Special Pathology.-Gross and microscopic examination of organs; post-mortem bacteriology; experimental pathology. The work is closely correlated with post-mortem examination (see autopsies) and also with clinical pathology. 2 two-hour periods; II. Professor Davis and assistants

Autopsies.-Cook County Hospital. Third-year students are required to attend 16 autopsies. 1 two-hour period; $I I$.

## Required Course-Fourth Year

Autopsies.-Fourth-year students are required to attend 16 autopsies. 1 two-hour period; I or $I I$.

## Optional Courses

Advanced Laboratory and Research Work.-Open to a limited number of qualified students. Hours to be arranged.

Professor Davis, Assistant Professor Burmeister
Diagnosis of Tumors.-Open to students who have had courses in general and special pathology. Hours to be arranged. $I$.

Division of Bacteriology

## Required Course-Second Year

General Bacteriology and Protozoology.-Pathogenic bacteria and protozoa; immunity. Lectures; demonstrations; laboratory. 160 hours. I.

Professor Davis, Dr. Moore

## Optional Course

Advanced Work and Research in Bacteriology.-Limited to qualified students. Hours to be arranged.

Professor Davis

## PHARMACOLOGY AND THERAPEUTICS

Bernard Fantus, M.D., Professor, Pharmacology and Therapeutics Alfred Ogle Shaklee, B.S., M.D., Assistant Professor, Pharmacology Watler Edward Simmonds, M.D., Assistant, Physical Therapy

## Required Courses-Second Year

Elementary Prescription-Writing and Pharmacy.-Each student prepares a typical specimen of each of the more important classes of pharmaceutic preparations, and practices prescribing them. 1; I.

Professor Fantus, Assistant Professor Sifaklee
Systematic Pharmacology.-Important drugs with predominant local action. Lectures and recitations, 1; II. Laboratory, 1 two-hour period; II.

Professor Fantus, Assistant Professor Shaklee
Non-Pharmacal Therapeutics.-Remedial measures other than drugs: psychotherapy, mechanotherapy, hydrotherapy, electrotherapy, radiotherapy, climatotherapy, dietetics. Laboratory in merchanotherapy and hydrotherapy; practise with electrotherapeutic and roentgenologic apparatus. Lectures and recitations, 3; II. Laboratory, 1; II. Professor Fantus, Dr. Simmonds

## Required Courses-Third Year

Systematic Pharmacology.-Important drugs with predominant systemic action. Lectures and recitations, 2; I. Laboratory, 1 three-hour period; $I$.

Professor Fantus, Assistant Professor Shaklee
General Therapeutics.-Remedial measures: diuresis, diaphoresis, catharsis, antipyresis, analgesia, anesthesia, hypnosis, antisepsis. Prescriptionwriting for hypothetical cases. Lectures; recitations, 2; II. Professor Fantus

## Optional Courses

Special Experimental Pharmacodynamics.-Open to a limited number of qualified students of the third or fourth year. Three hours laboratory a week, 48 hours a semester. Professor Fantus, Assistant Professor Shaklee

Biologic Drug Assay.-The valuation of the activity of drugs that cannot be assayed by chemical methods. Three hours laboratory a week, 48 hours a semester.

Professor Fantus, Assistant Professor Shaklee

Research.-Qualified students may do research laboratory work under direction of members of the staff.

Seminar.-Discussion of current pharmacologic and therapeutic literature and the results of research work in progress.

## PHYSIOLOGY AND PHYSIOLOGICAL CHEMISTRY

Grorge Peter Dreyer, A.B., Ph.D., Professor, Physiology and Physiological Chemistry, and Head of the Department Williám Henry Welker, A.C., Ph.D., Assistant Professor, Physiological Chemistry
Roy Gentry Pearce, A.B., M.D., Assistant Professor, Physiology Clayton S Smith, M.S., Ph.D., Instructor, Physiological Chemistry Grover Tracy, A.B., Assistant, Physiological Chemistry J Craig Small, B.S., Student Assistant, Physiological Chemistry Howard E Curl, A.B., Student Assistant, Physiology Albert Charles D’Vorak, B.S., Student Assistant, Chemistry

## Division of Physiology

## General Statement

The apparatus of this department includes sphygmographs, sphygmomanometers, medical battery, and that used for clinical examination of the blood.

## Required Courses-First Year

Physiology.-Lectures; class room experiments; demonstrations. 3; II. Professor Dreyer
Experimental Physiology.-Laboratory; recitations; conferences. 2 three-hour periods; II. Professor Dreyer and assistants

## Required Courses-Second Year

Physiology.-Lectures; class experiments; demonstrations. 2; I.
Professor Dreyer
Experimental Physiology.-Laboratory; recitations; conferences. 2 three-hour periods; I. Professor Dreyer and assistants

## Optional Courses

Advanced Laboratory.-Qualified students may take an optional course, consisting of a series of exercises introducing the graphic methods of physiological demonstration and research, and varying in kind and amount according to individual needs.

Journal Club and Seminar.-Reports; special topics.
Division of Chemistry
Required Courses-First Year
Organic Chemistry.-Biological chemistry; fats; proteins; carbohydrates. Lectures; demonstrations; conferences, 2; I. Laboratory, 2 threehour periods; $I$. Dr. Smith, Mr. Tracy

Physiological Chemistry and Toxicology.—Lectures; demonstrations; conferences, 2; II. Laboratory, 2 three-hour periods; II.

Assistant Professor Welker, Dr. Smith, Mr. Tracy
Prerequisite: A course in organic chemistry as outlined above.

## Optional Courses

Prerequisite: The required courses in organic and physiological chemistry.
Quantitative Urinary Analysis.-Lectures, 1; laboratory, 6.
Assistant Professor Welker, Dr. Smith, Mr. Tracy
Toxicology.- Lectures, 1; laboratory, $6 . \quad$ Dr. Smith, Mr. Tracy
Sanitary Chemistry.-Water and sewage analysis; purification. Lecture, 1 ; laboratory, 6.

Food Analysis.-Composition; adulteration; preservation. Lecture, 1; laboratory, $6 . \quad$ Assistant Professor Welker, Dr. Smith

Research.-Open to persons with the requisite scientific training for original investigation under the direction of a member of the staff.

Seminar.-Discussion of results of recent work in chemical biology. 1; $I, I I$.

## SURGERY

Daniel Atkinson King Steele, M.D., LL.D., Professor, and Head of the Department

Division of General Surgery
Daniel Atkinson King Steele, M.D., LL.D., Professor, Surgery and Clinical Surgery
Thomas Archibald Davis, M.D., Professor, Clinical Surgery
William McIntyre Harsha, A.B., M.D., Professor, Surgery and Clinical Surgery
Daniel Nathan Eisendrath, A.B., M.D., Professor, Surgery and Clinical Surgery
Albert John Ochsner, B.S., M.D., Professor, Surgery and Clinical Surgery
Charles Davison, M.D., Professor, Surgery and Clinical Surgery
Albert Edward Halstead, M.D., Professor, Surgery and Clinical Surgery
Charles Edward Humiston, M.D., Associate Professor, Clinical Surgery
Nelson Mortimer Percy, M.D., Associate Professor, Clinical Surgery
George Farnsworth Thompson, B.S., M.D., Assistant Professor, Surgery and Clinical Surgery
Frederick George Dyas, M.D., Assistant Professor, Surgery and Clinical Surgery
Frank Donald Moore, M.D., Assistant Professor, Surgery and Clinical Surgery
Victor L Schrager, M.D., Associate, Surgery
Charles Herbert Phifer, M.D., Instructor, Surgery
Howard Oscar Shafer, M.D., Instructor, Surgery
John Ross Harger, B.S., M.D., Instructor, Surgery and Minor Surgery
Henry Lester Baker, M.D., Instructor, Surgery
George Luther Davenport, M.D., Instructor, Surgery
Arrie Bamberger, M.D., Instructor, Surgery and Minor Surgery
Raymond William McNealy, M.D., Instructor, Surgery
Oscar Eugene Nadeau, B.S., M.D., Instructor, Surgery (Surgical Pathology)
Archie James Graham, B.S., M.D., Instructor, Surgery
George Washington Post, B.S., A.M., M.D., Assistant, Clinical Surgery
Charles C Clark, M.D., Assistant, Clinical Surgery
Robert Emmet Flannery, M.D., Assistant, Clinical Surgery
Max Meyerovitz, M.D., Assistant, Clinical Surgery
Carl Albert Meyer, M.D., Assistant, Clinical Surgery
Lyndon Harris, M.D., Assistant, Clinical Surgery

## Required Courses-Third Year

Surgery and Surgical Pathology.-Conferences; recitations. 2; I, II. Assistant Professor Moore, Assistant Professor Dyas, Assistant Professor Harger, Assistant Professor Thompson
Clinical Surgery.-University Dispensary. Bandaging; dressings; surgical appliances. 3 two-hour periods, three weeks; $I, I I$.

Assistant Professor Harger, Dr. Bamberger, Dr. Fischer, Dr. Post
Clinical Surgery.-Cook County Hospital. 2; I or II.
Assistant Professor Thompson
Clinical Surgery.-Cook County Hospital. 2; I or II.
Assistant Professor Humiston
Anesthetics.-Conferences; demonstrations. 4 one-hour periods.
Dr. Meyer

## Required Courses-Fourth Year

Practise of Surgery.-Lectures (See calendar below.) 1; I, II. Quiz: 1; I, II. Dr. Phifer, Dr. Davenport, Dr. McNealy, Dr. Baker, Dr. Shafer October
Surgery of the Head and Neck.-Professor Halstead
November
Surgery of the Thorax.-Professor Halstead
December
Surgery of the Stomach.-Professor Davis
January
Surgery of the Duodenum and Intestines.-Professor Harsha
February
Hernia and Post-Operative Treatment.-Professor Steele
March
Surgery of the Liver, Pancreas, and Spleen.-Professor Ochsner
April
Surgical Diseases and Injuries of the Bones.-Professor Davison
May
Surgery of the Genito-Urinary Tract.-Professor Eisendrath
Clinical Surgery.-University Hospital. 1 two-hour period; 8 weeks. Professor Steele, Dr. Baker, Dr. Clark
Clinical Surgery.-University Hospital. 1 two-hour period; 8 weeks. Professor Davison, Assistant Professor Moore, Dr. Meyerovitz
Clinical Surgery.-West Side Hospital. 1 two-hour period; 8 weeks. Professor T. A. Davis
Clinical Surgery.-Cook County Hospital. 1 two-hour period; 8 weeks. Professor Davison
Clinical Surgery.-Cook County Hospital. 1 two-hour period; $I$ or $I I$. Assistant Professor Dyas

Clinical Surgery.-College. 1 two-hour period; $I$ or $I I$.
Associate Professor Percy, Dr. Post, Dr. Flannery
Clinical Surgery.-St. Luke's Hospital. 4 two-hour periods; $I$.
Professor Harsha, Professor Halstead
Clinical Surgery.-Augustana Hospital. 4 two-hour perịods.
Professor Ochsner, Associate Professor Percy, Dr. Flannery
Surgical Pathology.-Laboratory. 1 two-hour period; 8 weeks.
Dr. Nadeau
Surgical Seminar.-Work in cooperation with the departments of medicine and obstetrics. For this work the student receives 48 hours credit 16 in each department, altho this work is in one department only. During the first semester, the groups meet informally and abstracts are prepared and submitted for criticism. During the second semester, each group is assigned one hour in which to present its work before the class.

Professor Steele and assistants
Division of Orthopedic Surgery
John Lincoln Porter, M.D., Professor, Orthopedic Surgery
Charles Mayer Jacobs, M.D., Associate Professor, Clinical Surgery (Orthopedic)
David Alexander, M.D., Instructor
Harrison Willis Maltby, M.D., Assistant
William Arthur Clark, M.D., Assistant
Required Courses-Third Year
Orthopedic Surgery.-Lectures. 1; I. Professor Porter
Clinical Orthopedic Surgery.-College amphitheater. 1; I or $I I$.
Professor Porter
Clinical Orthopedic Surgery.-Cook County Hospital. 1; I or II. Associate Professor Jacobs
Dispensary.- 3 two-hour periods; three weeks, I, II.
Required Course-Fourth Year
Clinical Orthopedic Surgery.-St. Luke's Hospital. 4 two-hour periods. Professor Porter

## Division of Genito-Urinary Surgery

Daniel Nathan Eisendrath, A.B., M.D., Professor, Surgery and Clinical Surgery (Genito-Urinary)
George French Strother Cary, M.D., Instructor
Cearles Morgan McKenna, M.D., Instructor
Harry Jerome Smejkal, M.D., Instructor
Elmer Wellpott Schnoor, M.D., Assistant
Required Courses-Third Year
Genito-Urinary and Venereal Diseases.-Lectures. 1; I.
Professor Eisendrath
Genito-Urinary and Venereal Diseases.-University Dispensary. Clinics;
conferences. 3 two-hour periods; three weeks, I, II.
Professor Eisendrate, Dr. Cary, Dr. McKenna, Dr. Schnoor

## Required Courses-Fourth Year

Clinical Surgery (Genito-Urinary).-College amphitheater. 2; eight weeks. Professor Eisendrath, Dr. Cary, Dr. McKenna, Dr. Schnoor

Clinical Surgery (Genito-Urinary).-Michael Reese Hospital. 4; I, II. Professor Eisendrath, Dr. Schnoor

Division of Operative Surgery
William Chester Smith, M.D., Instructor

## Required Course-Second Year

Operative Surgery.-Operations on the cadaver and on animals. 2; II. Dr. Smith

Division of Laryngology, Rhinology, and Otology
Norval H. Pierce, M.D., Professor of Surgery (Laryngology, Rhinology, and Otology) and Head of the Division
Joseph C. Beck, M.D., Associate Professor, Surgery (Laryngology, Rhinology, and Otology)
John Algernon Cavanaugh, M.D., Associate, Surgery (Laryngology, Rhinology, and Otology)
Llllian Ethel Taylor, M.D., Instructor, Surgery (Laryngology, Rhinology, and Otology)
Eugene Bermingham, M.D., Instructor, Surgery (Laryngology, Rhinology, and Otology)
Edward F Garraghan, M.D., Instructor, Surgery (Laryngology, Rhinology, and Otology)

## Required Courses-Third Year

Laryngology and Rhinology.-The diseases of the throat and nose. Lectures. 1; $I$. Associate Professor Beck
Laryngology and Rhinology.-College amphitheater. 1; I or II.
Associate Professor Beck, Dr. Cavanaugh, Dr. Taylor
Laryngology and Rhinology.-University Dispensary. 3 one-hour periods; three weeks, I, II.

Associate Professor Beck, Dr. Cavanaugh, Dr. Taylor, Dr. Birmingham

## Optional Course

Clinical Laryngology and Rhinology.-Cook County Hospital. 1. Associate Professor Beck

## Otology

Norval Pierce, M.D., Professor, Surgery (Otology and Clinical Otology)

## Required Course-Third Year

Otology.--Surgical anatomy, physiology, and pathology of the ear. Lectures. 1; six weeks.

Professor Pierce
Clinical Surgery (Otology).-Illinois Eye and Ear Infirmary. 4 onehour periods.

## SUMMARY OF HOURS

## First Year

| Subjects |  | FirstDidactic Laboratory |  |  |  |  | Second Semester Didactic Laboratory Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Anatomy: |  |  |  |  |  |  |  |  |  |
| Gross |  |  | 32 | 2 | 112 | 12 | 32 | 112 | 288 |
| Microscope |  |  | 32 | 2 | 160 |  | 32 | 64 | 288 |
| Chemistry : |  |  |  |  |  |  |  |  |  |
| Organic |  |  | 32 | 2 | 96 | 6 | - | $\cdots$ | 128 |
| Physiological |  |  | . | - | ... |  | 32 | 96 | 128 |
| Physiology |  |  | . |  | $\ldots$ |  | 48 | 96 | 144 |
| Total |  |  | 96 | 6 | 368 |  | 144 | 368 | 976 |
| Second Year |  |  |  |  |  |  |  |  |  |
| Subjects |  | First Semester Didactic Laboratory |  |  |  |  | Second Semester Didactic Laboratory Total |  |  |
| Anatomy, |  |  |  |  |  |  |  |  |  |
| Topographical |  |  | 32 | 2 | 96 | 6 | .. | .. | 128 |
| Bacteriology |  |  | 48 | 8 | 96 | 6 | . | . | 144 |
| Hygiene |  |  |  |  | . |  | 32 | 24 | 56 |
| Laboratory Diagno |  |  | . |  | . | . | .. | 64 | 64 |
| Non-Pharmacal Th | erapeutics |  |  |  | - | . | 48 | 16 | 64 |
| Pharmocology |  |  | - | - |  | - | 32 | 32 | 64 |
| Prescription Writing and |  |  |  |  |  |  |  |  |  |
| Pharmacy |  |  | . |  | 16 | 6 | . | - | 16 |
| Pathology ...... |  |  | 32 |  | 96 | 96 | 16 | 48 | 192 |
| Physical Diagnosis |  |  |  |  | .. |  | 16 | 32 | 48 |
| Physiology |  |  | 32 |  | 96 | 6 | . | .. | 128 |
| Surgery (Operative) |  |  |  |  | .. |  | . | 32 | 32 |
| Total |  |  | 144 |  | 400 |  | 144 | 248 | 936 |
| Third Year |  |  |  |  |  |  |  |  |  |
| Subjects | Didactic | First Semester Clinical Dispensary |  |  |  | Second Semester Didactic Clinical Dispensar |  |  | Total |
| Autopsies |  |  |  | .. |  | .. | 32 | .. | 32 |
| *Hygiene ........ | 32 | 24 |  | . |  | . | . | . | 56 |
| Laryngology and |  |  |  |  |  |  |  |  |  |
| Rhinology | 16 | 16 |  | 9 |  | . | .. | 9 | 50 |
| Internal Medicine. | 64 | 40 |  | 18 |  | 64 | 40 | 18 | 244 |
| Medical |  |  |  |  |  |  |  |  |  |
| Jurisprudence | . | .. |  | . |  | 16 | $\cdots$ | .. | 16 |
| Pathology ........ | . | . |  | - |  |  | 64 | . | 64 |
| Pediatrics ....... | 16 | .. |  | .. |  | 16 | 16 | . | 48 |
| Pharmacology and |  |  |  |  |  |  |  |  |  |
| Therapeutics ... | 32 | 48 |  | . |  | 32 | . | .. | 112 |
| Obstetrics | 32 | . |  | - |  | 32 | 20 | .. | 84 |
| Otology .......... | .. | - |  | - |  | 6 | 4 | . | 10 |

[^57]| Summary of Hours |  |  |  |  |  |  | 243 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| General Surgery.... | 32 | 32 | 18 | 32 | 36 | 18 | 168 |
| Orthopedic Surgery | 16 | 16 | 18 | .. | 16 | 18 | 84 |
| Genito-Urinary |  |  |  |  |  |  |  |
| Surgery ......... | 16 | . | 18 | .. | .. | 18 | 52 |
| Total | 256 | 176 | 81 | 230 | 252 | 81 | 1020 |
| Fourth Year |  |  |  |  |  |  |  |
| Subjects | Didactic $\begin{gathered}\text { First Semester } \\ \text { Clinical } \\ \text { Dispensar }\end{gathered}$ |  |  | Second Semester Didactic Clinical Dispensary |  |  | Total |
| *Autopsies ........ |  | 32 | .. | .. | .. |  | 32 |
| Dermatology ...... | 32 | 16 | 9 | . | . | 9 | 66 |
| Genito-Urinary |  |  |  |  |  |  |  |
| Surgery .. | - | 4 | . | .. | 16 | . | 20 |
| Gynecology ........ | 32 | 32 | 9 | . | 20 | 9 | 102 |
| Medicine | 96 | 50 | . | 48 | 66 |  | 260 |
| Neurology | 16 | 16 | 18 | 16 | 16 | 18 | 100 |
| Obstetrics | 32 | 24 |  | 32 | 24 | . | 112 |
| Ophthalmology .... | 12 | 16 | 18 | . |  | 18 | 64 |
| Pediatrics |  | 32 | 18 | . | 12 | 18 | 80 |
| Psychiatry ........ | -• | . | . | 16 | 8 | . | 24 |
| Roentgenology | . |  | . |  | 4 | - | 4 |
| General Surgery ... | 32 | 80 | - | 32 | 96 | - | 240 |
| Surgical Pathology | . | . |  |  | 16 | . | 16 |
| Total | 252 | 302 | 72 | 144 | 278 | 72 | 1120 |
| Grand total of hours for the four years............................ 4052 |  |  |  |  |  |  |  |
| Duplication of hours.............................................. . . 88 |  |  |  |  |  |  |  |
| Actual number of hours........................................ 3964 |  |  |  |  |  |  |  |
| FURTHER INFORMATION |  |  |  |  |  |  |  |
| For further information, including circular, address The Secretary of theCollege of Medicine, Congress and Honore Streets, Chicago, Illinois. |  |  |  |  |  |  |  |

*This subject will be presented in the third year for the year 1915-16 only.

## THE COLLEGE OF DENTISTRY

(For the faculty of the College of Dentistry, see page 40; for a description of the building, see page 59.)

## LOCATION

The College is situated on the corner of Harrison and Honore streets in Chicago, opposite the Cook County Hospital, in the center of the clinical field of Chicago. On the west is the West Side Hospital, and on the north the College of Medicine of the University of Illinois.

## PROSTHETIC LABORATORIES

The prosthetic laboratories are three in number, one for each class. They are equipped with new-model benches and each student is provided with two drawers, gas, compressed air, and electric light. Each laboratory is supplied with hot and cold water, electric lathes for grinding and polishing, molding benches, furnaces, and casting devices.

## INFIRMARY

The infirmary occupies the top floor. The equipment includes chairs of improved type, each chair furnished with an electric engine, electric light, compressed air, gas connection, and a stand for instrument case. A sterilizer is continuously in operation. There is an exhibit of specimens of drugs in their crude state and in the forms in which they are prepared for use in dentistry. There is a laboratory for prosthetic work, equipped with apparatus and tools for soldering, plate work, and polishing, and a laboratory for porcelain work with electric furnaces and porcelain ovens.

## LIBRARY

The library is housed with the Quine Library of the College of Medicine in the medical building adjoining. Through the courtesy of Mrs. Margaret Cook, wife of the late Dr. George Washington Cook, former Dean of the College of Dentistry, his dental library, comprising two hundred volumes, besides unbound volumes of dental journals, has been given to the College. A dozen dental journals are received regularly. The library is open from $9 \mathrm{a} . \mathrm{m}$. to $5 \mathrm{p} . \mathrm{m}$. daily during the school year, with a librarian in attendance.

## ADMISSION

An applicant for admission to the College of Dentistry must be at least 18 years of age. Women are admitted on the same terms as men.

Each candidate for admission must present a certificate of graduation from an accredited high school, or an equivalent; which equivalent is interpreted to mean 15 units* of preparatory work in an accredited high school or academy or a state normal school.

[^58]No "conditions" can be permitted; the full 15 units must be offered.
The foregoing requirements may be satisfied either (a) by certificate or (b) by examination.

Entrance credits will be accepted by certificate from the following sources:
(1) From high schools and academies in the State of Illinois which are accredited to the University of Illinois.
(2) From the state normal schools of Illinois and other state normal schools having equal requirements for graduation.
(3) From schools accredited by the North Central Association of Colleges and Secondary Schools.
(4) From schools accredited to the state universities which are included in the membership of the North Central Association of Colleges and Secondary Schools.
(5) From schools approved by the New England College Entrance Certificate Board.
(6) From high schools and academies registered by the Regents of the University of the State of New York.

Entrance credits may be made by examination:
(1) In the examinations conducted by the Registrar of the University of Illinois at the University in Urbana in January, July, and September of each year. For program see pages 81-82.
(2) In the examinations conducted by the Registrar of the University of Illinois at the College of Medicine in the fall. In 1916 these examinations will be held on September 20-22.
(3) In the examinations conducted in June of each year by the College Entrance Examination Board. See page 77.
(4) In the examinations conducted by the Regents of the University of the State of New York.

Applicants for admission coming from institutions of higher learning, whether candidates for the freshman class or for advanced standing, must present entrance credentials or pass entrance examinations as indicated above.

The College of Dentistry will receive no student who is not present within 10 days after the opening day of the session in each year, or in case of necessary delay by reason of illness, properly certified by the attending physician, within 20 days after the opening day.

## ADMISSION TO ADVANCED STANDING

Persons who can meet the requirements for admission to this college and who have studied dentistry in other schools for not less than one year may be admitted to advanced standing after satisfying the faculty that they have completed an amount of work equivalent to that which is exacted by this college in the respective classes.

Students who have had one or more years in the College of Medicine or in other medical colleges of equal rank, are allowed credit toward graduation for so much of the required curriculum in dentistry as was included in their medical curriculum. They must, however, be registered for full time. Graduates of the University of Illinois with degree of Bachelor of Arts or Bachelor of Science, who have taken courses in biology and chemistry in the University, can secure advanced standing in the curriculum in dentistry, provided they have done full work in the sciences required in the dental curriculum.

Graduates of recognized medical colleges may secure advanced credit for work and one year of time toward graduation, and are excused from lectures and examinations in general anatomy, chemistry, histology, pathology, and physiology, but are required to take lectures and examinations in dental subjects.

## LENGTH OF COURSE

The courses are graded and cover three years of college work. The teaching of one year is not repeated, and the curriculum is progressive, the several classes having separate laboratories and at no time taking lectures or demonstrations together.

If, for any cause, a regular student desires to extend his studies over a period of four or more years, a curriculum will be specially arranged for him.

## REQUIREMENTS FOR GRADUATION

The degree of Doctor of Dental Surgery will be conferred on students who have completed the curriculum, attended the required time, and passed satisfactory final examinations. To be eligible for the degree, the student must be twenty-one years of age, must possess a good moral character, and must have paid all fees.

The monthly report of attendance, and the standing of students in quizzes, recitations, laboratory work, and infirmary practise, both operative and prosthetic, are considered in making up the rating of final examinations.

## LICENSE FOR PRACTISE IN ENGLAND

On the recommendation of the Board of Examiners in Dental Surgery, the Council of the Royal College of Surgeons, in London, has added the College of Dentistry of the University of Illinois to the list of dental schools recognized by the College. This recognition implies that the Royal College of Surgeons will exempt graduates in dental surgery of the University of Illinois from the preliminary science examination for the license in dental surgery, and will accept such parts of the curriculum for the license as are completed in the College of Dentistry of the University of Illinois toward the curriculum of study required for a license.

## METHOD OF INSTRUCTION

Instruction is given by means of lectures, recitations, demonstrations, and laboratory work. The time of the student is about equally divided between laboratory and clinical work on the one hand and lectures and recitations on the other.

Students are admitted to the laboratories from the beginning of the first year. Laboratory work is closely correlated with lectures and clinical studies.

In the clinical work, methods of investigation and reasoning are taught. Diagnosis, prognosis, and indications for treatment receive no less attention than methods of construction and the technics of procedure.

## DESCRIPTION OF COURSES

## BACTERIOLOGY, PATHOLOGY, AND ORAL SURGERY

Frederick Brown Moorehead, A.B., D.D.S., M.D., Professor, Oral Surgery, Bacteriology, and Pathology, and Head of the Department David John Davis, B.S., M.D., Professor of Pathology<br>Louis Schultz, D.D.S., M.D., Assistant Professor, Oral Surgery and Pathology Frank Joseph Bernard, D.D.S., Instructor, Extracting<br>T Harris Boughton, M.S., M.D., Instructor, Bacteriology and Pathology<br>Kaethe W Dewey, M.D., Research Pathologist<br>Edwin Paul Swater, D.D.S., Clinical Assistant in Oral Surgery Anna Bolan, Nurse in Oral Surgery Clinic

General Bacteriology.-Classification of bacteria, products of bacterial growth, and methods of observing, cultivating, isolating, and identifying bacteria; sterilization, disinfection, pathogenic bacteria in diseased conditions of the mouth; cultural and staining technic; dental caries, pathological conditions of first and second dentition, sensitive dentin, hyperemia and congestion, pulp nodules, putrescent pulps, acute and chronic alveolar abscesses, diseases of the peridental membrane, necrosis of hard and soft tissues. Lectures; recitations; demonstrations; laboratory work. IIz-7; I; $2^{*}$.

Professor Davis and assistants
General Pathology.-Circulatory disturbances, retrogressive and progressive processes, inflammation, tumors; pathology of important organs; blood and urine analysis; disease processes involving the teeth and buccal cavity. Lectures; recitations; demonstrations of fresh and preserved specimens; laboratory. II2-7; II; 2.

Professor Davis and assistants
Special Bacteriology and Pathology.-Relation of foci of infections in the mouth to constitutional diseases; the pulp and peri-dental membrane. Lectures; recitations; demonstrations; laboratory. 96-3; I, II; 3.

Professor Moorehead, Assistant Professor Schultz, and assistants
Oral Surgery.-Major operations performed in the clinic; diagnosis and treatment of minor lesions.
(a) Lectures and recitations on etiology, diagnosis, treatment, and local and general anesthetics. 64-2; $I, I I ; 3$.
(b) Surgical Clinic.-Every Monday morning from 9:00 to 12:30. Diagnosis, case discussions, and operations. Reports. $I I 2-31 / 2 ; I, I I ; 3$.

Professor Moorehead, Assistant Professor Schultz, and assistants
Extracting Clinic.-Selection and application of forceps and elevators; demonstration of nitrous oxid, oxygen, novocain, conduction and infiltration; asepsis and after treatment. 192-6; I, II; 3.

Dr. Bernard

[^59]
## OPERATIVE DENTISTRY

Donald MacKay Gallie, D.D.S., Professor
Louis E Bake, D.D.S., Assistant Professor
John C McGuire, D.D.S., Superintendent of Infirmary, Instructor
Jacob Hyman Kaplan, D.D.S., Instructor
W Ira Williams, D.D.S., Instructor
Edward J Krejci, D.D.S., Instructor
Milzor W Deist, D.D.S., Instructor
Operative Dentistry.-Nomenclature; tooth forms; carving in ivory or bone; dissections of the pulp chamber and canals; longitudinal and transverse sections; instrument making and care; cavity preparation in ivory blocks and tooth forms; instruments for different cavities; manipulation, grasps, rests, and direction and control of force; treating, cleaning, and filling of root canals; filling materials, their application, preparation, and manipulation. 256-8; I, II; r. Assistant Professor Bake, Dr. Kaplan
Operative Dentistry.-Cavity nomenclature and preparation; use of the odontoype; inlay technic; chair positions; application of the rubber dam; use of clamps, wedges, and separation. Operative Clinic:-Beginning with the second semester, second year students are admitted to the infirmary, and given instruction in oral prophylaxis, followed by regular infirmary work. One lecture and recitation throughout the year; I28 hours, laboratory; 2.

Professor Gallie, Assistant Professor Bake
Operative Dentistry.-Review; management of patients and special cases; treatment and filling of children's teeth; erosion; atrophy; abrasions. 64-2; I, II; 3.

Professor Gajlie

## PROSTHETIC DENTISTRY

George Walter Dittmar, D.D.S., Professor
Solomon Perry Starr, D.D.S., Assistant Professor
Jacob Hyman Kaplan, D.D.S., Instructor
Edward J Krejci, D.D.S., Instructor
Milzor W Deist, D.D.S., Instructor
Prosthetic Dentistry.-Terminology; materials; impressions; plaster casts and models; base plates; articulation and occlusion; carving, polishing, and finishing of vulcanite dentures; models for dies; casting; counter die construction; swaging; soldering; casting aluminum and "fusible metal" plates. 256-8; I, II; 1.

Assistant Professor Starr, Dr. Kaplan
Prosthetic Dentistry.-Crown and bridge work; root preparation, band construction, and crown conformation; restoration of badly decayed roots for crowns; repairing and restoring portions of fractured roots; carving, swaging, and casting cusps; swaging seamless crowns; casting full metal and porcelain faced crowns, cap and pin crowns; grinding and backing facings; detachable porcelain crowns. Bridge work: casting; removable bridge work; tenso-friction attachments; splints and bar supports; selection of porcelain facings and crowns; grinding, polishing, staining. 224-7; I, II; 2.

Professor Dittmar, Assistant Professor Starr, Dr. Kaplan
Prosthetic Dentistry.-Plate denture construction; human dental mechanism; temporo-mandibular articulation; operations; occluding frames; registration of condyle paths and rotation points in the mandible; physiognomy and
temperament of individuals and construction of dentures with teeth of proper size, form, shade, and arrangement; grinding, shaping, and staining; continuous gum dentures and vulcanite and metallic bases; partial plates and removable bridges ; porcelain and forms of porcelain teeth; crowns and bridge construction; splints for the retention of loosened teeth and maxiliary fractures; velæ and obturators for the restoration of cleft palates. 32-I; I, II; 3. Professor Dittmar

## MATERIA MEDICA AND THERAPEUTICS

Edgar D Coolidge, D.D.S., Professor<br>Enward J Krejcr, D.D.S., Instructor

Materia Medica.-Drugs used in dentistry; terminology. 32-I; I, II; I. Dr. Krejci
Materia Medica.-Pharmaceutal preparations; classification of drugs; administering; conditions which modify their effects; action upon tissues and organs; poisons. Lectures; recitations. Text-book: Prinz's Dental Materia Medica and Therapeutics. 16-I; I; 2. Professor Coolidge
Therapeutics.-Prescription-writing; pathological lesions; dental caries; salivary deposits; oral hygiene and prophylaxis. Lectures; recitations. Textbooks: Prinz's Materia Medica and Therapeutics; Marshall's Mouth Hygiene. 16-I; II; 2.

Professor Coolddge
Therapeutics.-Pathologic conditions of the peridental membrane and pulp; treatment; dental caries; diseases of the dental pulp; hypersensitive dentin; pulp capping; hyperemia of the pulp; anesthetization and devitalization of the pulp, its removal, treatment and filling of root canals; pulp gangrene, suppuration, and alvelar abscess; discoloration and bleaching; the peridental membrane; pericementitis, apical and complete, septic and non-septic, phagademic pericementitis, gingivitis, pyorrhea, and stomatitis; oral prophylaxis; thesis. Text-book: Prinz's Dental Materia Medica and Therapeutics. 23-I; I, II, 3.

Professor Coolidge

## ORTHODONTIA

Frederick Bogue Noyes, B.S., D.D.S., Professor of Histology
Orthodontia.-Normal occlusion, mal-occlusions. Lectures, illustrated by lantern slides and the projectoscope. Text-book: Angle's Malocchesion of the Teeth. 32-I; I, II; 3.

Professor Noyes

## ANATOMY, HISTOLOGY, AND EMBRYOLOGY

Frederick Bogue Noyes, B.S., D.D.S., Professor of Histology
Albert Chauncey Eycleshymer, M.D., Ph.D., Professor of Anatomy
Clifford W Wells, B.S., M.D., Instructor, Histology
Roy Lee Moodie, A.B., Ph.D., Instructor, Anatomy
L R Woodward, Student Assistant, Histology
Systematic Anatomy.-Dissection of the entire body; respiratory and digestive systems and dissection of head and neck. Lectures; demonstrations; laboratory; recitations. 288-9; I, II; I.

Dr. Moodie
Topographical Anatomy.-Head and neck in serial section; topography of the organs and structures. Lectures; recitations; demonstrations; laboratory. II4-9; I; 2.

Professor Eycleshymer, Dr. Moodie

General Histology.-Cell structure and function; relation to intercellular substances and tissues; elementary tissues; histology of the circulatory system; the alimentary tract and glands; the urinary system; the respiratory system, and the skin, nails, and hair. Text-book: Bailey. Three hours laboratory work and one hour lecture or quiz a week. $128 ; 1$; 1 .

Professor Noyes, Dr. Wells
Dental Histology and Embryology.-The tissues of the teeth, the supporting tissues and the tissues of the oral cavity; the enamel ; operative procedures; cavity walls; general embryology; embryology of the teeth, mouth, and jaws. Text-book: Noyes's Dental Histology and Embryology. Three hours laboratory and one hour lecture and quiz a week. I28; I, II; 2.

Professor Noyes, Dr. Wells

## Graduate Work

Dental Histology.-In the summer of 1915 a special course of six weeks in dental histology was offered for those desiring to prepare themselves for the teaching of this subject in dental schools. The course consisted of three hours of laboratory work and one hour of lecture or quiz a week.

## PHYSIOLOGY AND CHEMYSTRY

George Peter Dreyer, A.B., Ph.D., Professor, Physiology and Chemistry
William Henry Welker, A.C., Ph.D., Assistant Professor, Chemistry
Clayton S Smite, B.S., M.S., Ph.D., Instructor, Chemistry
Grover Tracy, A.B., Assistant, Chemistry
J Craig Small, B.S., Student Assistant, Chemistry
Howard Curl, A.B., Student Assistant, Physiology
Albert Charles D’Vorak, B.S., Student Assistant, Chemistry

## Physiology

The students of the College of Dentistry take their work in physiology in the physiology laboratory of the College of Medicine. The work falls in the junior year when the prerequisites, including anatomy, histology, and chemistry, have been in large part completed.

Systematic Human Physiology.-Lectures; recitations. 96-3; I, II; . Professor Dreyer and assistants

Practical Physiology.-Demonstrations and laboratory running parallel with the didactic course. $64-2 ; I, I I ; 2$.

Professor Dreyer and assistants

## Chemistry

The instruction in chemistry is given in the laboratories of the College of Medicine.

General Inorganic Chemistry.-Metals and non-metals. Four hours lectures and recitations, six hours laboratory a week. Text-books: McPherson and Henderson's Course in General Chemistry; Remsen's Chemical Experiments. Mr. Tracy, Mr. Small, Mr. D’Vorak
Qualitative Analysis.-Metals and acids; the groups; solutions of unknown bases, unknown acids, and unknown bases and acids. Four hours lec-
tures and recitations, six hours laboratory a week. Text-book: Gooch and Browning's Outlines in Qualitative Chemical Analyses. 80; II, first half; i.

Mr. Tracy, Mr. Small, Mr. D’Vorak
Metallurgy.-Extraction and refining of metals; physical properties; ores, alloys, solders, and cements; refining of gold, silver, and tin. Four hours lectures and recitations and six hours laboratory a week. Text-book: Hodgen's Practical Dental Metallurgy. 80; II, second half; I.

Assistant Professor Welker, Mr. Tracy, Mr. Small, Mr. D’Vorak
Metallurgy.-(Advanced course, open to students who have completed satisfactory courses in inorganic chemistry, qualitative analysis, and metallurgy.) Hours to be arranged. Assistant Professor Welker, Mr. Smith

## DENTAL JURISPRUDENCE

Elmer DeWitt Brothers, LL.B., Lecturer
Dental Jurisprudence.-The dentist's individual and professional rights and obligations; responsibilities arising from the relation of dentist and patient; dental laws of the various states. Senior year.

Mr. Brothers

## RADIOGRAPHY

## John C McGuire, D.D.S., Instructor

Radiography.-The X-ray as a diagnostic agent; the radiograph; exposure and development. Senior year.

Dr. McGuire

## COMPARATIVE ANATOMY

## Elmer S Riggs, A.M., Lecturer

Evolution of the masticatory apparatus; food habits; digestive processes. 15-1; II; 3.

Mr. Rigas

## PRACTITIONERS' COURSE

Oral Surgery, Radiography, Prosthesis, and Therapeutics.-Class limited to twenty-five. Fee, $\$ 25$. Hours to be arranged.
Professor Moorehead, Professor Coolidge, Professor Dittmar, Assistant Pro-
fessor Schultz, Dr. McGuire, Dr. Krejci, and assistants

## SUMMARY OF CURRICULUM

## Freshman Year

| Departments | Didactic | Hours <br> Laboratory | Total |
| :---: | :---: | :---: | :---: |
| Materia Medica | 32 |  | 32 |
| Anatomy | 64 | 256 | 320 |
| Histology | 32 | 96 | 128 |
| Chemistry | 96 | 192 | 288 |
| Operative Technic |  | 256 | 256 |
| Dental Anatomy | 32 | .. | 32 |
| Prosthetic Technic |  | 256 | 256 |
| Total | 256 | 1056 | 1312 |



Students are requested to consult the head of each department before purchasing text books. The most recent editions are required in every case.

## FEES

Matriculation fee (paid first year) ........................................... 5.00
Registration fee (paid second and third years)............................ 5.00
Tuition, each year (including laboratory and dissection fees)............. 150.00
Locker fee ........................................................................ 2.00
Diploma fee (paid on graduation)................................................ 5.00
Fees are not returned to students who are suspended or expelled or to those who are absent for any cause except illness. Payments should be made in currency or in Chicago exchange drawn to the order of the University of Illinois.

Fees are Payable in advance.-Students unable to meet this requirement must make satisfactory arrangements with the Dean at the beginning of the course.

[^60]
## BOARD AND ROOMS

Board and rooms convenient to the College can be obtained at prices varying from four to six dollars a week; rooms without board, furnished or unfurnished, can be obtained at from six to ten dollars a month.

## FURTHER INFORMATION

For further information, address The Dean of the College of Dentistry, Harrison and Honore Streets, Chicago, Illinois.

## THE SCHOOL OF PHARMACY

For the faculty of the School of Pharmacy, see page 41 ; for a description of the building, see page 59 .

## HISTORY

The School of Pharmacy was originally the Chicago College of Pharmacy and was incorporated under that name September 5, 1859.

In October, 1859, the first course of lectures was instituted, occupying three evenings a week for a period of six months. The first class, of two students, was graduated in 1861. The war caused a suspension of teaching, and the school was not reopened until 1870 . The fire of 1871 destroyed the equipment, but in 1872 instruction was resumed for the second time and has since continued without interruption.

The College was formally united with the University May 1, 1896, becoming the technical School of Pharmacy of the University of Illinois.

## LOCATION

The School of Pharmacy occupies the four upper floors in a building located at Michigan Boulevard and Twelfth Street.

## EQUIPMENT

The east end of the building is occupied by three lecture rooms having a seating capacity of from one hundred fifty to three hundred persons.

There are six laboratories, one each for qualitative analysis, quantative analysis, special work in chemistry, microscopy, manufacturing pharmacy, and dispensing. The total capacity of the laboratories is sufficient for 348 students, working at one time.

The laboratories are supplied with compound microscopes, analytical balances, and special apparatus, and with collections of crude drugs, medicinal plants, chemicals, and pharmaceutical products.

The library contains over two thousand volumes, including, in addition to the usual works of reference, many rare books and complete files of the leading pharmaceutical journals.

## CURRICULUMS

## For the Degree of Graduate in Pharmacy

In the curriculum leading to the degree of Graduate in Pharmacy the instruction is so arranged as to require the attendance of each student on three days each week and from twenty to twenty-two hours weekly during two annual sessions of thirty weeks each. This arrangement is advantageous to drug clerks who desire to spend a part of their time in drug stores while attending school, thereby adding to their practical experience and at the same time earning a part or all of their living expenses.

The subjects taught are chemistry, general, pharmaceutical, and analytical; pharmacy, theoretical, manufacturing, and dispensing; botany; physiology; and materia medica.

## For the Degree of Pharmaceutical Chemist

To meet the demand for special training on the part of students who desire to pursue more extended courses in pharmaceutical chemistry, applied chemistry, and bacteriology, or to prepare themselves for positions under the Food and Drugs Act, this School offers a curriculum leading to the degree of Pharmaceutical Chemist. It comprises two annual sessions of thirty-six weeks each, with instruction on five or six days each week, amounting to about thirty-three hours weekly, or a total of 2,300 hours in the entire curriculum.

Beginning September I, 1916, the curriculunn for the degree of Pharmaceutical Chemist will be lengthened to three years for all students beginning the course at that time or subsequently.

This curriculum is partially concurrent with the shorter curriculum and includes all the didactic instruction given in the latter. It consists largely of laboratory practise. In addition to the subjects mentioned above it embraces organic analysis and proximate assays, new remedies, analysis of urine, food and sanitary analysis, bacteriology, and applied microscopy.

The systems of teaching includes lectures, illustrations, demonstrations, recitations, written and oral examinations, and individual practise and personal instruction in the various laboratories, much time being devoted to this important part of the student's work.

## ADMISSION

The regular session opened September 20, 1915. The shorter course ends April 26, 1916; the longer course closes June 9, 1916.

Applicants for admission to the curriculum leading to the degree of Pharmaceutical Chemist must be at least seventeen years of age and must be graduates of accredited high schools or furnish evidence of a preliminary education equivalent thereto.

Applicants for admission to the curriculum leading to the degree of Graduate in Pharmacy must be at least seventeen years of age. For 1915-16 they were required to offer two years' work in an accredited high school or the full educational equivalent. Beginning in September, 1916, the requirements for admission to the curriculum leading to the degree of Graduate in Pharmacy will be graduation from an accredited high school, including the completion of 15 acceptable units of high school work, or the full educational equivalent.

Admission as special students, not candidates for a degree, is restricted to registered apprentices, assistants, or pharmacists, not less than twenty-one years of age.

Students who have pursued courses of study in other colleges of pharmacy will be given credit for such portions of their work as are equivalent to the work required by this college.

## GRADUATION

Drug store experience is not made a requirement for the degree of Pharmaceutical Chemist. Students who have satisfactorily completed the curriculum will be awarded the degree on the recommendation of the faculty.

For the degree of Graduate in Pharmacy this School has always required practical drug store experience. The actual time of attendance at the School, amounting to fourteen months, is credited as part of the four years of practical experience required for the degree. Candidates must have attained the age of twenty-one years and have satisfactorily finished the work leading to the degree. Students who have successfully met the scholarship requirement, but are lacking in age or in practical experience, will receive a certificate and will be awarded the diploma when the requirements of age and experience are satisfied.

Persons competent to fill the general requirements of admission to the University may be granted credits upon other University courses for equivalent work completed at the School of Pharmacy.

## STATE REGISTRATION

To become a registered pharmacist in Illinois, it is necessary to pass an examination before the State Board of Pharmacy, no diplomas being recognized.

The diploma of this School is, however, accepted in lieu of examination for registration in several states and territories; and in other states, including New York and Pennsylvania, where graduation prerequisite laws are in force, this School is among the schools recognized, and its diploma admits to the examination.

The amendments to the Illinois Pharmacy Law, in effect July 1, 1907, give credit, as a part of the "practical experience in compounding drugs" required by the law, for the actual time of attendance at a recognized school of pharmacy but not to exceed two years for registered pharmacist or one year for registered assistant pharmacist.

## FEES AND EXPENSES

For a statement of the fees, see page 124. Fees are payable in advance. Students unable to meet this requirement must make satisfactory arrangements with the Actuary at the beginning of the course.

Board and Lodging.-Good board and lodging, within a short distance of the School, can be had for from five to six dollars a week.

Selection of Seats.-Seats in the lecture halls and desks in the laboratories will be assigned to students by the Actuary, in the order of enrollment. To enroll, junior students will fill out the matriculation blank and forward it to the Actuary, together with credentials for admission and the matriculation fee of five dollars; senior students will make a payment on tuition account of five dollars. It is of advantage to students to matriculate early.

Opportunities for Employment.-The Actuary keeps a register of students desiring employment and of pharmacists wishing to employ students. Students desiring employment are invited to correspond with him.

## FURTHER INFORMATION

Further information may be found in the special announcement of this School, which may be obtained from the Actuary, School of Pharmacy, Michigan Avenue and Twelfth Street, Chicago, Illinois.

## PART III <br> DESCRIPTION OF COURSES

# DESCRIPTION OF COURSES 

## EXPLANATION

The arrangement of subjects in the following Description of Courses is alphabetical. The connections of allied departments are indicated by cross references.

Following the description of each course of instruction will be found the requirements, if any, for admission to that particular course. The sequence indicated by these prerequisites must be followed. For instance, under Art and Design 5, Painting, the prerequisites given are Art and Design 1, 2, and 3. These three courses must be completed before Course 5 may be taken.

If a course not required for graduation is selected by fewer than five students it may be withdrawn for the semester.

Graduate courses are numbered upward from 100.
Credit is reckoned in semester hours, or simply hours. An hour is one class period a week for one semester, or the equivalent in laboratory, shop, or drawing room. Graduate work is not recorded in credit hours nor do the credit hours of undergraduate courses apply to graduate students enrolled in them.

The semester, and the number of hours each semester for which the course counts, are shown after each course; thus: I, II; (2). The Roman figures indicate semesters; the Arabic numerals in parenthesis indicate hours of credit for each semester for undergraduates. The omission of a course for the current year is indicated by enclosing the entire description of such a course in brackets.
" S ," which is prefixed to each of the courses offered in the summer session, means "summer" and is used to distinguish such courses from those of the same number offered during the regular university year. Summer courses do not always cover the same ground as those similarly numbered in the regular session. Students wishing to know in what respect such courses are similar will be gladly furnished the desired information by the Director of the Summer Session on application. All courses in the summer session that are granted graduate credit are marked with an asterisk (*). Courses numbered 100 and above are open only to graduate students.

ACCOUNTANCY<br>(See Business Organization and Operation.)<br>\section*{AGRICULTURE}<br>\section*{Summer Session Courses}<br>Louie Henrie Smith, Ph.D., Professor, Plant Breeding<br>Albert Woodward Jamison, M.S., Associate, Agricultural Extension<br>Daniel Otis Barto, B.S., Associate, Animal Husbandry<br>Karl John Theodore Ekblaw, M.S., Associate, Farm Mechanics<br>Simeon James Bole, A.M., Associate, Pomology<br>William Truman Crandall, M.S., Associate, Milk Production<br>William Herschel Smith, M.S., Instructor, Animal Husbandry

The work in the Summer Session is planned for teachers of agriculture in elementary and high schools, and also to enable those seeking degrees in agriculture to cover a portion of the required freshman subjects.
(For the courses in agriculture given during the winter session, see Agricultural Extension, Agronomy, Animal Husbandry, Dairy Husbandry, and Horticulture.)

S 1a. General Agriculture.-For description, see Agricultural Extension I. ( 2122 ). Not accepted as technical agriculture. Mr. Barto

S 1b. Orchard and Garden.-Principles of orcharding; the home orchard from planting to bearing; caring for fruit trees; the home vegetable garden. Lectures, recitations, field work. (2). Mr. Bole

S 3. Elements of Dairy Husbandry.-For description see Dairy Husbandry 3. (1).

Mr. Crandall
S 4. Country Life Problems.-Problems of the farm; duties of citizenship; social, economic, and educational work in rural communities. Lectures; discussions. ( $1 / 2$ ).

Mr. Jamison
S 5. Fundamentals of Live Stock Judging.--For description see Animal Husbandry 5. ( $21 / 2$ ). Mr. Smith

S 6a. Principles of Feeding.-For description see Animal Husbandry 6, part one. (2).

Mr. Smith
S 23. Poultry: Types, Breeds, and Varieties.-For description see Animal Husbandry 23. (21/2).

Mr. Barto
S 25. Farm Crops.-For description see Agronomy 25. (2 $1 / 2$ ).
Professor Smith
S 26. Farm Mechanics and Equipment.-For description see Agronomy 26. ( $21 / 2$ ). Mr. Ekblaw

## AGRICULTURAL EXTENSION

Fred Henry Rankin, Superintendent and Assistant to the Dean, with rank of Assistant Professor
Aretas Wilbur Nolan, M.S., Assistant Professor
Albert Woodward Jamison, M.S., Assistant Professor
Joseph Harvey Checkley, B.S., Assistant
Robert Enoch Hieronymus, A.M., LL.D., Community Adviser
James Henry Greene, M.S., State Leader, Junior Extension

1. Principles and Methods of High School Agriculture.-Adaptation of agricultural science and practise to high school conditions; order and methods
of presentation; laboratory work; apparatus; field work. Practise teaching provided through cooperation with the local high school. II; (5).

Assistant Professor Nolan
Prerequisite: Two years' work in agriculture.
3. Agricultural Extension Teaching.-The service of extension enterprises to the people; farmers' institutes; extension schools; farmers' clubs and cooperative work in rural communities. II; (1).

Assistant Professor Rankin, Assistant Professor Jamison
Prerequisite: Agricultural Extension 4.
4. Country Life Problems.-Problems of the farm; duties of citizenship; social, economic, and educational work in rural communities. Lectures. (Required of first-year students. Credit given to freshmen in the College of Agriculture only.) $I$; (1).

Dean Davenport and other lecturers; Assistant Professor Jamison in charge

## AGRONOMY

Crril George Hopkins, Ph.D., Professor, Agronomy Louie Henrie Smiti, Ph.D., Professor, Plant Breeding Jeremiah George Mosier, B.S., Professor, Soil Physics William Leonidas Burlison, Ph.D., Associate Professor, Crop Production Robert Stewart, Ph.D., Associate Professor, Soil Fertility Axel Ferdinand Gustafson, M.S., Assistant Professor, Soil Physics Ira Wilmer Dickerson, B.S., Associate, Farm Mechanics Karl John Theodore Ekblaw, M.S., Associate, Farm Mechanics Frederick Charles Bauer, B.S., Associate, Soil Fertility Albert Lemuel Whiting Ph.D., Associate, Soil Biology Walter Byron Gernert, Ph.D., Associate, Plant Breeding Chester Otis Reed, B.S., Instructor, Farm Mechanics Forrest Addison Fisher, B.S., Instructor, Soil Physics Marvin Edward Jahr, A.B., B.S., Instructor, Farm Mechanics Orr Milton Allyn, B.S., Instructor, Crop Production Elmer Tryon Ebersol, M.S., Instructor, Crop Production Clyde Ross Newell, M.S., Instructor, Farm Mechanics Harry Charles Gilkerson, B.S., Assistant, Soil Fertility Harrison Fred Theodore Fahrnkopf, B.S., Assistant, Soil Fertility Howard John Snider, B.S., Assistant, Soil Fertility Warren Rippey Schoonover, B.S., Assistant, Soil Biology<br>Edward Harvey Walworth, B.S., Assistant Crop Production Franḱ Archibald Wyatt, Ph.D., Assistant, Soil Fertility Friedel Chapin Richey, B.S., Assistant, Soil Physics Alfred Thorpe Morison, B.S., Assistant, Crop Production<br>\section*{Courses for Undergraduates}

Crops: Agronomy 7, 8, 18, 22, 25.
Soils: Agronomy 9, 10, 11, 12, 13, 18, 23.
Farm Mechanics and Buildings: Agronomy 1, 2, 3, 4, 17, 18, 19, 20, $26,27$.

1. Drainage.-Drainage and its surveying operations. Chaining, mapping, leveling, designing, setting grade stakes, laying tile. Lectures; laboratory, first half semester; field work second half semester. II; (3). Mr. Jahr

Prerequisite: Agronomy 9 or its equivalent.
2. Field Machinery.-Construction, operation, adjustment, purchase, and care of implements for soil, seed, and feed preparation, and for seeding, cultivating, larvesting, and handling farm crops. Lectures; quiz; laboratory practise in troubles, adjustments, and testing of field machines. I; (3).

Mr. Reed
Prerequisite: Agronomy 26 or registration therein.
3. Farm Power Machinery.-The horse as a motor, windmills, waterpower, steam engines, hot-air engines, electric motors-their theory, operation, and economy. Internal combustion engines and tractors-methods of ignition, theory, operation, and economy. Transmission of farm power and its application to farm operation. Lectures; laboratory. (Alternating with Mechanical Engineering 71 and 73 if desired.) $I I$; (3). Mr. Dickerson

## Prerequisite: Agronomy 26 or registration therein.

4. Farm Buildings.-Construction materials; construction, arrangement, design, and cost estimation of machine sheds, granaries, cribs, silos, poultry houses, swine houses, various types of barns, and farm residences. Recitations; drafting. I; (3).

Mr. Ekblaw
7. Advanced Farm Crops.-Crop ecology; rotations; distribution of labor; cost of production; products and by-products of farm crops; storage; markcting. Lectures; assigned reading; laboratory; demonstration. (The schedule is so arranged that this course may be taken in conjunction with Agronomy 22 (Plant Breeding) and students are advised to register for both courses.) II; (3).

Associate Professor Burlison
Prerequisite: Agronomy 25.
8. Special Farm Crops.-Special crops in which the student is interested. Reading; experiments by pot culture in the greenhouse or by plots in the field. (Under special arrangement part of this work may be done during summer vacation.) $I I ; *(2$ to 5$)$. Associate Professor Burlison

## Prerequisite: Agronomy 7.

9. Soil Physics and Management.-Origin and formation of soil material; mechanical composition and classification; moisture; texture as affecting capillarity, osmosis, diffusion, temperature, aeration, and as affected by plowing, harrowing, cultivating, rolling, and cropping; wasting by washing; fall and spring plowing and drainage as affecting moisture, temperature, and root development; specific gravity; porosity; water-holding capacity, capillary power; rotation; continuous cropping. Lectures; laboratory. I or II; (5).

Professor Mosier, Assistant Professor Gustafson, Mr. Fisher, Mr. Richey
Prerequisite: Chemistry 2a, one unit entrance physics and one year of university work. Regular students should take Chemistry 13a previous to this course, others consult instructor.
10. Special Work in Soil Physics.-Physical properties of special soils; centrifugal analysis; field observations of the effects of discing, harrowing, and rolling; time and depth of cultivation; soil moisture and temperature; washing of soils; methods of prevention. $I$ or $I I ; *(2-5)$.

Professor Mosier, Assistant Professor Gustafson, Mr. Fisher
Prerequisite: Agronomy 9, and approval of the soil physics division.

[^61]11. Soil Biology.-Bio-chemical activities of soil micro-organisms in relation to fertility; factors influencing the bacteria, protozoa, algæ, and fungi; isolation of organisms; action on insoluble mineral plant food; fermentation of crop residues; green and farm manures; nitrogen fixation; assimilation and preservation. Lectures; quiz; laboratory. II; (5).

Dr. Whiting, Mr. Schoonover
Prerequisite: Agronomy 12 and Bacteriology 5 or Bacteriology 19.
*12. Soil Fertility, Fertilizers, Rotations.-Fertility and yield; effect of different crops on the soil and on succeeding crops; rotations; systems of farming; manures and fertilizers; soils cropped continuously with different crops and with a series of crops; the fertility of soils from different sections of Illinois. Lectures; laboratory. II; (5).
Professor Hopkins, Mr Bauer, Mr. Gilkerson, Mr. Fahrnkopf, Mr Snider, Dr. Wyatt
Prerequisite: Chemistry 13a; Agronomy 9.
*12a. Soil Fertility, Fertilizers, Rotations.-(The same as Agronomy 12, for advanced students.) Lectures, quiz. II; (2).

Professor Hopkins, Mr. Bauer, Mr. Snider, Dr. Wyatt
Prerequisite: Graduate standing, or advanced undergraduate standing with the approval of the division.
13. Investigation of the Fertility of Special Soils.-Soils in which the student is interested. Elements of fertility; effect of fertilizers, as determined by pot cultures and by plot experiments; work of experiment stations and experimenters. $I ;(2,3,4,5) \dagger$. Associate Professor Stewart, Dr. Wyatt

Prerequisite: Agronomy 12.
16. German Agricultural Readings.-Soils and crops. The current numbers of German journals of agricultural science used as texts. II; (2).

## Professor Hopkins

Prerequisite: Two years' work in German; Agronomy 12.
17. Harvesting Machinery.-Expert work on grain binders, corn binders, mowers, hay rakes, loaders, and stackers. (For students preparing to do expert work in the field. Before registering in this course students should consult the instructor.) $I I$; (3).

Mr. Reed
Prerequisite: M. E. 71; Agronomy 2, and Agronomy 3, or registration therein.

18a-18b. Investigation and Thesis.- 1,11 ; (5-10) $\dagger$.
Professor Hopkins, Professor Mosier, Professor Smitr, Associate Professor Stewart, Dr. Whiting, Mr. Ekblaw
19a-19b. Research in Farm Mechanics.-(Consult instructor.) I, II; (1-5) $\dagger . \quad$ Mr. Ekblaw, Mr. Dickerson, Mr. Jahr, Mr. Reed, Mr. Newell
20. Farm Concrete Construction.-Materials; mixing and placing; simple comparative tests; specifications and estimates. Lectures; laboratory. II; (2). Mr. Ekblaw

[^62]22. Plant Breeding.-The improvement by breeding of field crops, including grains, grasses, and legumes. Lectures; assigned reading; demonstrations; laboratory. (Schedule is arranged so that this course may be taken in conjunction with Agronomy 7.) II; (2). Professor Smith, Dr. Gernert

Prerequisite: Botany 1; Chemistry 13a; Agronomy 25.
23. Plant Food Supplies.-The world's supply of plant-food materials; utilization and conservation. $I I$; (1).

Associate Professor Stewart
Prerequisite: Agronomy 12.
25. Farm Crops.-Plant growth; structure; habits and requirements; preparation of the seed bed; seed selection for productiveness; grading and fanning of grain as a means of improvement; storing; care of stored grain; market grades; judging; examination for purity; testing for vitality; weeds, identification, methods of distribution, eradication, control; diseases of farm crops and methods of prevention. I or $I I$; (4).

Associate Professor Burlison, Mr Walworth, Mr. Ebersol, Mr. Morison
Nore.-Students registering in a given lecture section must, if possible, register in the corresponding laboratory section.
26. Elementary Farm Mechanics.-Ropes; soldering; babbitting; belt lacing; pipe cutting; plumbing; sewage disposal; water, lighting, and heating systems; power transmission; elementary mechanics; equalizers. Design of farm power plant. $I$ or $I I$; (3).

Mr. Ekblaw, Mr. Newell
27. Drainage Design.-Designing tile drainage systems from levelnote data and contour maps and for drainage districts; estimating; drainage district laws; preparing bids on contract jobs; field work. $I ; *(1-5)$.

Mr. Jahr
Prerequisite: Agronomy 1, or C. E. 96, C. E. 31, or C. E. 32.

## Courses for Graduates

Students who wish to do their major work in agronomy must have had the major courses in that subject offered to undergraduates in the College of Agriculture of the University of Illinois, or the equivalent. While every one seeking a doctor's degree with agronomy as a major is required to have a knowledge of the whole field of agronomy, each student is expected to be especially prepared in some one of the following divisions of the field: soil fertility, plant breeding, soil physics, crop production, or soil biology.

Students who are taking their major work in other departments and choose agronomy as a minor, must have had previously the work in chemistry, botany, and other fundamental sciences prescribed in the undergraduate courses for students in agronomy in the College of Agriculture, or the equivalent.
101. Soil Investigations.-Systems of soil investigations; sources of error and methods of control; interpretation of results. $I I$; ( $1 / 2$ to I unit.).

Associate Professor Stewart
103. Soil History.-Ultimate effect upon the soil of systems of agricultural practise. $I I$; ( $1 / 2$ to $I$ unit).

Professor Hopkins
104. Seminar.-Current literature on the subject of soils and crops. I, II; ( $1 / 2$ unit).

Dr. Whiting and others

[^63]112. Plant Breeding.-Experiments at this station; methods and results reported from other states and from foreign countries. $I, I I$; ( $1 / 2$ to 2 units).

Professor Smith, Dr. Gernert
118. Investigation.-I, II; (I to 2 units).

Professor Hopkins, Professor Smith, Professor Mosier, Associate Professor Stewart, Dr. Whiring

## ANATOMY, HUMAN

(See under Zoology.)

## ANIMAL HUSBANDRY

## (Including Farm Management)

Herbert Windsor Mumford, B.S., Professor, Animal Husbandry Harry Sands Grindley, D.Sc. Professor, Animal Nutrition Walter Castella Coffey, M.S., Professor, Sheep Husbandry Henry Perly Rusk, M.S., Assistant Professor, Cattle Husbandry James Lloyd Edmonds, B.S., Assistant Professor, Horse Husbandry John A Detlefsen, D.Sc., Assistant Professor, Genetics
Walter Frederick Handschin, B.S., Assistant Professor, Farm Management Daniel Otis Barto, B.S., Associate, Animal Husbandry Walter Edward Joseph, Ph.D., Associate, Animal Husbandry Sleeter Bull, M.S., Associate, Animal Nutrition Harold Hanson Mitchell, Pl.D., Associate, Animal Nutrition William Herschel Smith, M.S., Associate, Animal Husbandry Extension Gilbert Gusler, B.S., Associate, Animal Husbandry Elmer Roberts, B.S., Instructor, Genetics Wilbur Jerome Carmichael, B.S., Instructor, Animal Husbandry Charles Ivan Nellin, M.S., Instructor, Animal Husbandry James Burton Andrews, B.S., Instructor, Animal Husbandry Roscoe Raymond Snapp, B.S., Instructor, Animal Husbandry Claude Harper, B.S., Assistant, Animal Husbandry James Wilbur Whisenand, B.S., Assistant, Animal Husbandry Earl Kirkwood Augustus, B.S., Assistant, Animal Husbandry Roy Harold Wilcox, B.S., Assistant, Animal Husbandry Maynard Elmer Slater, B.S., Assistant, Animal Nutrition Joseph Rossiter Ziesenheim, B.S., Assistant, Animal Nutrition John Benjamin Rice, B.S., Assistant, Animal Husbandry William Algernon Kingsmill Morkel, B.S., Assistant, Animal Husbandry Lawrence Emerson Thorne, B.S., Assistant, Agricultural Statistics and Genetics
William Garfield Kammlade, B.S., Assistant, Animal Husbandry

## Courses for Undergraduates

Beef Cattle: Animal Husbandry 11a, 11b.
Breeding, Feeding, Management, and Marketing: Animal Husbandry 8, 21, 28, 29, 30, 32; Farm Management 1.

General Judging: Animal Husbandry 1a, 2a, 4a, 5, 11a, 22.
Genetics: Animal Husbandry 30.
Horses: Animal Husbandry 4a, 4b, 17.
Meat: Animal Husbandry 10, 24.

Nutrition: Animal Husbandry 7, 31.
Poultry: Animal Husbandry 23.
Sneep: Animal Husbandry la, 1b, 25, 27.
Swine: Animal Husbandry 2a, 2b, 26.
Note.-Students registered in advanced courses such as $10,22,23,28,29,32$, and Farm Management 1 , are required to participate in a tour of inspection of representative markets, farms, herds, flocks, and studs.

1a. Sheep: Breeds and Market Classes.-Breeds used for mutton and wool production; types, characteristics, and adaptability; market classes and grades of sheep and wool. Lectures; judging. I; (2).

Professor Coffey, Mr. Harper
Prerequisite: Animal Husbandry 5 or its equivalent.
1b. Sheep: Breeding, Feeding, and Management.-Pure bred and grade flocks; feeding; housing; shepherding. Lectures; reference readings. I; (3). Professor Coffey, Mr. Harper

Prerequisite: Animal Husbandry 5, 8, and 21, or their equivalents.
It is advisable to take la and 1 b simultaneously.
2a. Swine: Breeds and Market Classes.-History of the leading breeds: types, characteristics; adaptability; market classes and grades; market reports. Lectures; judging. II; (2). Mr. Carmichael, Mr. Rice

Prerequisite: Animal Husbandry 5 or its equivalent.
2b. Swine Husbandry.-Economic production of market and breeding hogs. Breeding; feeding; housing; care; sanitation; common diseases; marketing. Lectures; assigned reading; quizzes. II; (3). Mr. Carmichael, Mr. Rice

Prerequisite: Animal Husbandry 5, 8, and 21, or their equivalents.
It is advisable to take 2 a and 2 b simultaneously.
4a. Market Classes of Horses and Mules and Breeds of Horses.Market classes, grades, and requirements: history of the leading breeds; types; characteristics; adaptability. Lectures; judging. II; (2).

## Assistant Professor Edmonds, Mr. Kammlade

Prerequisite: Animal Husbandry 5 or its equivalent.
4b. Breeding, Feeding, and Management of Horses.-Methods: care of stallions, mares, and foals; of work horses and drivers at labor and idle; fattening horses for market. Lectures; assigned readings. $I I$; (3).

Assistant Professor Edmonds, Mr. Kammlade
Prerequisite: Animal Husbandry 5, 8, and 21, or their quivalents.
It is advisable to take 4 a and 4 b simultaneously.
5. Fundamentals of Live-Stock Judging.-The names and location of external parts of the various kinds of live stock; the use of the score card; comparative judging; breed identification; types of farm animals. (Required in freshman year.) $I$ or $I I$; (3). Mr. Gusler and assistants
7. Principles of Animal Nutrition.-Composition and fuel value of feeding stuffs; organic and inorganic food stuffs; digestion: absorption; metabolism ; elimination of metabolic products; coefficients of digestibility and nutritive value of feeding stuffs. $I$; (5).

Professor Grindley, Dr. Joseph, Dr. Mitchell
Prerequisite: Animal Husbandry 8, 21 ; Chemistry 13a.
8. Principles of Breeding.-Evolution and genetics; origin of domesticated animals and plants; history of systematic breeding; old and new theories of breeding. (Required in sophomore year.) $I$ or $I I$; (1).

Assistant Professor Detlefsen, Mr. Roberts, and assistants
Note.-See Animal Husbandry 21.
9. Investigation and Thesis. $-I$ or $I I$; *(5-10).
10. Meat-Farm butchering, curing, and care of meats; yield, quality and values of meat and by-products, as related to breeding, feeding, and health of animals; classes, grades and cuts of meat in wholesale and retail markets. (The class will leave on its annual Chicago trip, Thursday morning, April 20, 1916. The cost will be about $\$ 8.00$.) $I I$; (3).

Professor Coffey, Mr. Augustus
Prerequisite: Two years of university work.
11a. Beef Cattle.-Breeds and market classes; history of the leading breeds; beef type from the standpoint of the butcher, the feeder, and the breeder; classification and value of each grade according to current market reports. Judging; lectures; quizzes; assigned readings. $I$; (2).

Assistant Professor Rusk, Mr. Snapp
Prerequisite: Animal Husbandry 5 or its equivalent.
11b. Beef Production.-Breeding and management of pure-bred herds; breeding for market; combined beef and milk production; economic factors in cattle feeding; influence of age, grade, breed, condition, and sex; equipment; pork and manure as by-products of beef production. Lectures; quizzes; assigned readings (text book). I; (3). Assistant Professor Rusk, Mr. Snapp

Prerequisite: Animal Husbandry 5, 8, and 21, or their equivalents.
It is advisable to take 11a and 11b simultaneously.
15. Dairy Cattle.-(See Dairy Husbandry 2 and 16.)
[17. Education and Driving of the Horse.-Mental qualities, peculiarities, and limitations of the horse; education and training for labor or the road; correct driving; responsibilities of the driver; courtesies of the highway. Lectures; readings; practise. $I I$; (2). Not given, 1915-1916.

Assistant Professor Edmonds
Prerequisite: Animal Husbandry 4 a and 4 b ; three semesters' work in the University or its equivalent.]
21. Principles of Feeding.-Classification, digestibility, and functions of feed nutrients; classification and values of feeding stuffs; feed requirements and calculation of balanced rations for farm animals. (Required in sophomore year.) I or $I I$; (2). Mr. Bull, Mr. Newlin, Mr. Ziesenheik

Prerequisite: Chemistry 1 or la, Chemistry 2 and 3, Animal Husbandry 5, and registration in Animal Husbandry 8.

[^64]22. Advanced Stock Judging.-Animal conformation, quality, and condition with reference to market and show-yard requirements; sclection of horses, beef cattle, sheep, and swine, for feed lot, market, and exhibition; judging at live-stock shows.-(Dec. 21, 22, and 23, 1915, will be spent in visiting breeders in northern Illinois and southern Wisconsin, also in a visit to the University of Wisconsin. The cost of this trip will be about $\$ 25.00$.) $I$; (3).

Professor Mumford and instructors in prerequisite courses
Prerequisite: Animal Husbandry 1a, 2a, 4a, 11a, or their equivalents.
23. Poultry: Types, Breeds, and Varieties.-Exhibiting and judging; principles of breeding; poultry houses and equipment; feeding, hatching, and brooding; market eggs and poultry; crate-fattening and dressing; diseases and their treatment. (A limited number of short trips are taken, the total cost of which will not exceed $\$ 10.00$.) $I I$; (5).

Mr. Barto
Prerequisite: Animal Husbandry 5, or its equivalent.
24. Meat.-Influence of type, condition, age, sex, and feeds on the yield and market grade of meat products. II; *(2-5). Professor Coffey

Prerequisite: Animal Husbandry 10, and 1 a or 2 a or 11a; three years' work in the University, or its equivalent.
[25. Wool.-Factors affecting quality, quantity, strength, and condition of wool. $I I ;{ }^{*}(2-5)$. (Offered in alternate years, beginning second semester, 1914-15. Not given, 1915-16.)

Professor Cofrey
Prerequisite: Animal Husbandry la, 1 b ; three years work in the University, or its equivalent.]
26. Swine Husbandry.-Special problems. $I I ;{ }^{*}(2-5$.$) Mr. Carmicaael$

Prerequisite: Animal Husbandry 2a, 2b; three years' work in the University, or its equivalent.
27. Sheep Husbandry.-Factors determining the importance of the industry in leading sheep-growing countries, particularly different parts of the United States. II; *(2-5). (Offered in alternate years; given second semester, 1915-16.)

Professor Coffey
Prerequisite: Animal Husbandry 1a, 1 b ; three years' work in the University, or its equivalent.
28. Advanced History of Breeds of Live Stock.-Horses, beef cattle, sheep, and swine. Methods of great breeders; performances and pedigrees of famous animals; breed type as exemplified in the University and other herds. Lectures; assigned readings; problems. (December 21, 22, and 23, 1915, will be spent in visiting breeders in northern Illinois and southern Wisconsin, also in a visit to the University of Wisconsin. The cost of the trip will be about $\$ 25.00 . . \quad I$; ${ }^{*}(3-5)$.

Professor Mumford and other members of the staff

[^65]
Horses .................................. Shires, Clydesdales, American Saddlers
Swine............................................... Poland Chinas, Chester Whites
Sheep.........................................................................ets, Oxford Downs Breeds offered, 1916-17
Beef cattle
Shorthorns, Aberdeen Angus Horses....................................Percherons, Belgians, Standard-breds
Swine Berkshires, Duroc Jerseys
Sheep Shropshires, Southdowns
Prerequisite: " $a$ " and " $b$ " courses in class of live stock elected. See note at the beginning of the description of courses in animal husbandry.
29. Systems of Live-Stock Farming.-Management, climate, soil, topography, location with reference to markets; the supply of land, labor, capital, and managing ability as factors in influencing the choice and adaptation of systems of production. Planning of farms for mixed and live-stock systems. (The class will visit some of the farms included in the farm management investigations being conducted by the department. This trip will cost about \$15.00) II; (2).

Assistant Professor Handschin
Prerequisite: Animal Husbandry 5, 8, and 21, and six hours' credit from 1b, $2 \mathrm{~b}, 4 \mathrm{~b}$ or 11 b ; Farm Management 1. See note at beginning of description of courses in animal husbandry.
30. Genetics.-Heredity, variation, elements of biometry, and their practical application to breeding. Lectures; demonstrations; laboratory. II; (5). Assistant Professor Detlefsen, Mr. Roberts
Prerequisite: Two years of university work, including ten hours of botany or zoology. Before registering, students must secure the approval of the instructor.
31. Principles of Animal Nutrition.-Carbohydrate, fat, protein, and mineral metabolism; income and expenditure of matter and energy; protein, mineral, and energy requirements for maintenance, growth, and production. Lecture; recitations; laboratory. II; (5).

Professor Grindley
Prerequisite: Animal Husbandry 7, Chemistry 5c.
32. Marketing Live Stock.-Markets and methods of marketing live stock and their products; advertising and sale of surplus pedigreed live stock. (Certain inspection trips will be required of the class. The expense will be about \$15.00) II; (2).

Professor Mumford, Mr. Wilcox
Prerequisite: Two years of university work. At least 4 credits in Animal Husbandry 1a, 2a, 4a, and 11a. See note at beginning of description of courses in animal husbandry.
33. Animal Husbandry Practicums.-The various operations necessary in the barn and stable management of live-stock. (One hour credit will be given for each two classes of live-stock elected.) II; *(1-2).

Heads of divisions
Prerequisite: Limited to senior students specializing in animal husbandry.

[^66]
## Courses for Graduates

Students entering graduate work in animal husbandry must have had training in the fundamental principles of the subject either in connection with or in addition to a curriculum in agriculture equivalent to that offered in this University.
103. Live-Stock Experimentation.-Objects, methods, and sources of error in experimental work dealing with the feeding, breeding, and management of farm animals; live-stock experiments at this and other experiment stations. Once a week; I, II; ( $1 / 2$ to $I^{I} / 2$ units.) Professor Davenport
110. Animal Nutrition.-The chemical and physiological changes and processes involved in the activities of animal life; recent publications. Three times a week; I, II; (I unit). Professor Grindley, Dr. Joseph, Dr. Mitchell
111. Animal Nutrition.-Methods of examination and analysis of feeding stuffs; animal substances including flesh, fat, bone, urine, feces, and manufactured animal products. Three to five times a week; $I$, $I$; ( 1 to 2 units).

Professor Grindley
112. Investigation.-Investigations along the following lines:
(a) Economic factors involved in meat production.
(b) Systems of live-stock farming.
(c) The valuation of pedigrees. (a), (b) and (c), once a week; I, II; (I to 2 units). Professor Mumford
(d) Animal nutrition. Digestion and metabolism experiments and biochemical studies connected with the nutrition of farm animals. Five times a week; I, II; ( ito 2 units). Professor Grindley, Dr. Joseph, Dr. Mitchell
(e) Genetics. Problems in heredity and variation. (May be taken during the summer.) Five tintes a week; $I, I I$; (I to 2 units).

Assistant Professor Detlefsen
116. Seminar.-I, II; ( $1 / 4$ unit).

Members of the staff
117. Genetics.-Genetic experiments; biological and mathematical methods employed; the validity of the conclusions. Three to five times a week; I, II; (I to 2 units).

Assistant Professor Detlefsen

## FARM MANAGEMENT

1. Elementary Farm Management.-The factors of production in the farm business; systems of farming, their distribution, and adaptation; farm organization; the distribution of capital invested; planning of the farm; farm administration or operation; planning of work; handling of labor; developing management efficiency. Lectures; quiz. (The trip required in this course is the same as in Animal Husbandry 29.) II; (3).

Assistant Professor Handschin, Mr. Wilcox
Prerequisite: Three semesters of required work; Economics 1 or 2 and Accountancy 11. It is also very important that the student have credit or be registered in Agronomy 12, and have at least 6 hours credit from Animal Husbandry $1 \mathrm{~b}, 2 \mathrm{~b}, 4 \mathrm{~b}$, or 11 b .

## ARCHITECTURE

Loring Harvey Provine, B.S., A.E., Professor, Architectural Engineering, and Acting Head of the Department
Nathan Clifrord Ricker, D.Arch., Professor
Newton Alonzo Wells, M.P., Professor, Architectural Decoration
James McLaren White, B.S., Professor, Architectural Engineering; Supervising Architect
Percy Ash, B.S., C.E., Assistant Professor, Architectural Design
William Caldwell Titcomb, A.B., B.S., Assistant Professor
Charles Richard Clark, M.Arch., Assistant Professor, Architectural Construction
Robert Taylor Jones, B.S., Associate
William Mathews Hekking, B.P., Associate, Freehand Drawing Joseph Mitchell Kellogg, M.Arch., Instructor, Architecturad Design William Sidney Wolfe, M.S., Instructor, Architectural Design Ralph Stanley Fanning, B.S., Instructor, Architectural Design William Macey Stanton, M.S., Instructor, Architectural Design Carl Victor Burger, B.Arch., Instructor, Drazeing
Lemuel Cross Dillenback, A.M., Instructor, Architectural Design Ralph Edifard Muehlman, Assistant, Architectural Design Winifred Fehrenkamp, B.L.S., Librarian

13, 14, 15, 16. History of Architecture.-From the Egyptian period to modern times; effects of political, economic, and local conditions; influence of materials, climate, and structural systems in different countries and periods; evolution of architectural forms. Illustrated lectures; quizzes. $I, I I$; (2).

Professor Ricker
Prerequisite: Sophomore standing in architecture or architectural engineering, or Architecture 31 and 32.

23-24. Freehand Drawing.-Charcoal drawing from the cast. Water color work. Six hours drawing a week. I, II; (2). Mr. Hekking

Prerequisite: Architecture 32.
25. Freehand Drawing.-Arrangement of form and color; rythm and sequence; harmony and contrast. Six hours drawing a week. $I$; (2).

Professor Wells
Prerequisite: Architecture 23-24, and registration in Architecture 65.
26. Freehand Drawing.-Charcoal, pen, pencil, and water color drawing from the cast and from still life. Out-of-door sketching. Six hours drazeing a week. II; (2).

Professor Wells
Prerequisite: Architecture 25, and registration in Architecture 66.
27. Freehand Drawing.-Sketching from still life; proportions. Six hours drawing a week. I; (2).

Professor Wells
Prerequisite: Architecture 25 and 26.
28. Freehand Drawing.-Water color; original decorative composition; out-of-door sketching. Six hours drawing a week. II; (2). 'Professor Wells

Prerequisite: Architecture 27.
31. Architectural and Freehand Drawing.-Instruments, pen, pencil, and brush; lettering; shades and shadows; perspective. Charcoal drawing from the cast. One lecture and ten hours drawing a week. I; (4).

Mr. Muehlman, Mr. Burger
Prerequisite: Registration in General Engineering Drawing 2.
32. Architectural and Freehand Drawing.-Elements of architecture; walls, moldings, doors, windows, the Orders, vaults, roofs, stairs. Wash rendering, stereotomy, charcoal drawing from the cast. One lecture and ten hours of drawing a week. II; (4). Mr. Muehlman, Mr. Burger
Prerequisite: Architecture 31.
33-34. Design.-(Elementary.) Rendered order and sketch problems involving simple composition; library research in composition. One lecture and nine hours drafting room a week. I, II; (3).

Assistant Professor Titcomb, Mr. Kellogg, Mr. Stanton
Prerequisite: Architecture 31, 32.
35-36. Design.-(Intermediate.) Rendered plan and sketch problems; library research in plan and interior elements. Fifteen hours drafting room a week, I, II; (5). Assistant Professor Titcomb, Mr. Kellogg, Mr. Stanton

Prerequisite: Architecture 33-34.
37. Design.-(Advanced.) Problems. Twenty-one hours drafting room a week. I; (7).

Assistant Professor AsH
Prerequisite: Architecture 35-36.
38. Advanced Design or Thesis.-An extended original problem in design or construction. Twenty-one hours drafting room a week. II; (7). Assistant Professor Aser
Prerequisite: Architecture 37.
43. Working Drawings.-The growth, cutting, seasoning, working, and finishing of woods; structural and decorative properties; detailing parts on a large scale; floors, walls, roofs, doors, windows, cornices, stairs, wainscoting, cabinet-work, interior finish; preparation of working drawings. Two lectures and four hours drawing a week. I; (3). Mr. Jones, Mr. Fanning

Prerequisite: General Engineering Drawing 2; Architecture 31, 32.
44. Working Drawings.-Materials for masonry construction; their uses, defects, qualities, and preparation; kinds of masonry and external finish; tools for stone cutting; brick masonry, its materials and bonds; terra cotta, manufacture and use; columns, beams, girders, and footings; joints and connections. Working drawings. Two lectures and four hours drawing a week. II; (3).

Mr. Jones, Mr. Fanning
Prerequisite: General Engineering Drawing 2; Architecture 43.
45. Graphic Statics.-(Elementary.) Trussed roofs; steel and masonry arches; domes; reactions, bending moments, shear, and deflection in beams. (For architects.) One lecture and six hours drawing a week. I; (3).

Mr. Wolfe
Prerequisite: Theoretical and Applied Mechanics 14, 15, 16.
46. Structures.-Wooden and steel roofs; determination of section of members; design of joints; mill and steel skeleton construction. One lecture and six hours drawing a week. II; (3).

Mr. Wolfe
Prerequisite: Architecture 45.
55. Building Sanitation.-Plumbing, trap ventilation, removal of wastes; water closets; drains and systems of water supply; sewage disposal; water supply and fixtures in dwellings. (For architects.) Cosgrove's Principles and Practise of Plumbing. Recitations; lectures; designs for special problems. $I$; (1).

Assistant Professor Clark
Prerequisite: Physics 9a-9b, 10a-10b; Architecture 43, 44.
59. Domestic Architecture.--(Given in connection with Household Science 2.) Lectures; criticism. I.

Assistant Professor Ash, Assistant Professor Clark, Mr. Kellogg
60. Special Lectures.-(For architects.) II; (1).

Assistant Professor Clark
Prerequisite: Senior standing.
65-66. Theory of Architecture.-Influence of function on architectural form; plan and elevation; problem analysis. Lectures; research; exercises. I, II; (1).

Professor Wells
Prerequisite: Architecture 33, 34, and registration in Architecture 25, 26.
67. Theory of Proportion.-Arrangement of form; architectural ornament and composition, proportion, and balance. Six hours drawing a week. I; (2).

Mr. Hekking
Prerequisite: Senior standing in architecture.
68. Specifications.-General and special clauses and their arrangement; classifying material to facilitate writing specifications; practise in writing several sets; relations of the architect, owner, and builder; office organization; building ordinances; professional ethics. II; (3). Assistant Professor Clark

Prerequisite: Senior standing in architecture.

## Courses for Graduates

Entrance upon graduate work in architecture presupposes the full undergraduate curriculum in that subject. Semi-weekly conferences are held and additional instruction given in all courses as may be required.
101. Architectural Construction.- Design of special structures; I, II. Professor Ricker, Professor Provine
102. Sanitation of Buildings.-The planning of sanitation, warming, and ventilation. $I, I I$.

Professor Ricker
103. Advanced Architectural Graphics.-Graphic statics. Unusual types of footings, columns, and trusses. I or II.

Professor Ricker, Professor Provine
104. Architectural Design.-Advanced course. I or II.

Assistant Professor Asi
105. Architectural Practise.-Contracts, specifications, and office methods; architectural jurisprudence. $I$ or $I I$.

Professor Ricker, Professor Provine
106. Advanced Architectural History.-Special research. $I$ or $I I$.

Professor Ricker

## ARCHITECTURAL ENGINEERING

33. Architectural Drawing.-Lettering; elements of architecture; walls, mouldings, doors, windows, shades and shadows, perspective, the Orders, vaults, roofs, stairs; wash rendering, stereotomy, charcoal, drawing from the cast. Lectures; sketching. Nine hours drawing a week. I; (3).

Mr. Dillenback, Mr. Stanton
34. Design.-(Elementary.) Rendered order and sketch problems; library research. Nine hours drawing a week. II; (3).

Mr. Dillenback, Mr. Stanton
43. Working Drawings.-The growth, cutting, seasoning, working, and finishing of woods; structural and decorative properties; floors, walls, roofs, doors, windows, cornices, stairs, wainscoting, cabinet-work, interior finish;
preparation of working drawings. (For architectural engineers.) One recitation and three hours drawing a zueek. I; (2). Mr. Jones, Mr. Fanning

Prerequisite: General Engineering Drawing 1, 2.
44. Working Drawings.-Materials for masonry construction; their uses, defects, qualities, and preparation; kinds of masonry and external finish; tools for stone cutting; brick masonry; bonds; manufacture and use of terra cotta; columns, beams, girders; joints and connections; preparation of working drawings. One recitation and three hours drawing a week. II; (2).

Mr. Jones, Mr. Fanning
Prerequisite: Architectural Engineering 43; General Engineering Drawing 2.
45. Graphic Statics.-Elements, and applications to forces; beams under fixed and moving loads. One lecture and six hours drawing a week. I; (3).

Mr. Wolfe
Prerequisite: Theoretical and Applied Mechanics 20; registration in Theoretical and Applied Mechanics 25.
46. Advanced Graphic Statics.-The analysis of masonry arches, domes, and vaults; large and unusual forms of roof trusses. One lecture and six hours drawing a week. II; (3).

Mr. Wolfe
Prerequisite: Architectural Engineering 45.
47. Architectural Engineering.-Design and working drawings of trusses, members and joints, plate girders, chimneys; investigations of wind bracing. Fifteen hours drawing a week or the equivalent. I; (5).

Assistant Professor Clark

Prerequisite: Theoretical and Applied Mechanics 26; Architectural Engineering 44, 46.
48. Architectural Engineering.-Design and detail of footings; investigation of framed structures; working drawings. Fifteen hours drawing a week or the equivalent. II; (5). Assistant Professor Clark
Prerequisite: Architectural Engineering 47.
57. Fireproof Construction.-Principles and design of fireproof construction; the advantages of each type. $I$; (2). Professor Provine

Prerequisite: Theoretical and Applied Mechanics 26, Architectural Engineering 44, 46, and registration in Architectural Engineering 47.
58. Fireproof Construction.-(Continuation of first semester's work.) Details and working drawings. Six hours drawing a week. II; (2).

Professor Provine
Prerequisite: Architectural Engineering 47, 57, and registration in Architectural Engineering 46.
68. Estimates and Specifications.-Methods of estimating, illustrated by problems; specifications, their general and special clauses, and arrangement; relations of architect, owner, and builder. Four recitations a week. II; (4).

Professor Provine
Prerequisite: Senior standing in architectural engineering.

# ART AND DESIGN 

Edward John Lake, B.S., Assistant Professor<br>Mary Minerva Wetmore, Instructor<br>Charles Earl Bradbury, B.P., Instructor<br>Grdeon Robert Forbes, M.L.A., Instructor

Mary Hill, Assistant in the Summer Session

1. Freehand Drawing.-Charcoal and pencil; perspective; light, shadows, shade, and refiections in monochrome; graphical representation and the reproductive processes in printing. Lectures; reference reading. $I$ or $I I$; (3).

Assistant Professor Lake, Mr. Bradbury, Mr. Forbes
2. Light and Shade.-Shaded drawing in monochrome in preparation for painting in oils and water-colors; values and composition. II; (2).

Mr. Bradbury
Prerequisite: Art and Design 1.
3a-3b. Drawing from the Antique.-Drawing from plaster models and from life of anatomical forms in monochrome in preparation for painting the human figure; anatomical proportion and construction; lectures on proportion, construction, composition, and action in the representation of the human figure. Either semester may be taken separately. I, II; (3). Mr. Bradbury

Prerequisite: Art and Design 1.
4a-4b. Water Color Painting.-Still-life; flowers, and sketching outdoors, with application to pictorial and decorative art. I, II; (3). Miss Wetmore

Prerequisite: Art and Design 1, 2.
5a-5b. Drawing from Life.-Monochrome, with application to pictorial and decorative purposes. $I, I I$; (3).

Miss Wetmore
Prerequisite: Art and Design 1, 3a or 3b.
6a-6b. Portrait in Oil Colors.-Painting in oil colors from costumed model ; portrait and character study. $I, I I$; (3). Miss Wetmore

Prerequisite: Art and Design 1, 3a or 3b, 5a-5b.
6c. Portrait in Oil Colors.-(Advanced course). A continuation of 6a-6b. II; (3).

Miss Wetmore
Prerequisite: Art and Design 1, 3a or 3b, 5a-5b.
7a-7b. Still-Life in Oil Colors.-Still-life; flowers and sketching outdoors in oil colors, with application to pictorial and decorative art. $I, I I$; (3).

Miss Wetmore
Prerequisite: Art and Design 1, 2.
7c. Still-Life in Oil Colors.-(Advanced course). A continuation of 7a-7b. II; (3).

Miss Wetmore
Prerequisite: Art and Design 1, 2.
8a-8b. Modeling.-Clay modeling of anatomical and decorative forms; plaster molds and models; sculptural art. I, II; (3). Assistant Professor Lake

Prerequisite: Art and Design 1.
10. Sketching.-Pen and pencil; monochrome wash or charcoal rendering from landscape, still-life, and figure; the requirements for reproduction. $I$ or $I I$; (1).

Mr. Bradbury
Prerequisite: Art and Design 1.
11. Pictorial Design.-The composition and appreciation of pictures. Lectures with occasional reports. I or $I I$; (1). Mr. Forbes
12. Design.-Lectures on the theory of pure design and the effect of material upon execution; the fitness of various forms of media for different sorts of design; space division and space relations; the theory of color; color schemes and exercises; conventionalization of natural forms for various functions; practise in execution. I or $I I$; (2). Mr. Forbes

Prerequisite: Art and Design 1.
13. Design.-(Advanced course). The styles of different periods; theory of pure design with practical problems; lectures and reading on the development of historic ornament. This course is directed toward giving the student a larger vocabulary for expressing himself through design. $I$ or $I I$; (3).

Mr. Forbes
Prerequisite: Art and Design 1, 12.
14. Design.-(Advanced Practise). Special field and medium selected by the student. I or $I I$; (3).

Mr. Forbes
Prerequisite: Art and Design 1, 12, 13.
19. History of the Fine Arts.-The periods and styles of the arts of architecture, sculpture, and painting previous to the Italian Renaissance. I; (2). Assistant Professor Lake

Prerequisite: One year of college work.
20. History of the Fine Arts.-The periods and styles of the arts of architecture, sculpture, and painting of the Italian Renaissance and to the present time. $I I$; (2).

Assistant Professor Lake
Prerequisite: One year of college work.

## Summer Session Courses

S 1. Elementary.-Form drawing from still-life, cast, and nature; outline and shading in pencil, charcoal, and crayon; lectures on perspective. (2). Miss Hill

S 20. Art for the Common Schools.-The planning and execution of work in the several divisions of common-school art study; design; blackboard drawing. Lectures on organization, equipment, and the administrative side of the supervisor's work. (For supervisors of drawing and public school teachers.) (2).

Miss Hill

## ASTRONOMY

Joel Stebbins, Ph.D., Professor
Frank Walker Reed, Ph.D., Instructor
Lars Alvin Welo, A.m., Research Assistant
The equipment of the department is contained in the Astronomical Observatory. The principal instruments are a 12 -inch refracting telescope by Warner and Swazey, and Brashear, a 30 -inch short focus reflector by Brashear, and a 3 -inch transit and zenith telescope. There are also two smaller equatorials, two Riefler clocks, and a considerable amount of minor apparatus such as chronometers, transits, sextants, spectroscopes, photometer, photographic outfit, and calculating machines. The astronomical library comprises about 1,500 volumes, and includes the important astronomical periodicals.

No major is offered in astronomy. Students may well make mathematics or physics their major, and take astronomy $7,8,14$, and 15 as a minor.

Upperclassmen without mathematical training may elect Astronomy 1. Astronomy 4 is for beginners but requires trigonometry. Other courses should be taken in the order: $3,15,14,7,8$.

## Courses for Undergraduates

1. Elementary Astronomy.-Lectures; recitations; one evening a week at the observatory. (Mathematics not required.) I; (3). Professor Steberns

Prerequisite: Sophomore standing.
3. Astronomy for Engineers.-Rough and accurate determinations of latitude, azimuth, and time, especially with the ordinary surveyor's transit; the art of computing. $I I$; (2).

Professor Stebbins
Prerequisite: Mathematics 7.
4. General Astronomy.-Lectures; recitations; two evenings a week at the observatory. $I I$; (5).

Dr. Reed
Prerequisite: Mathematics 4.

## For Advanced Undergraduates and Graduates

7-8. Theoretical Astronomy.-Celestial mechanics; theory of orbits; perturbations; canonical transformations. I, II; (3).

Dr. Reed
Prerequisite: Mathematics 9.
9-10. Celestial Mechanics.-Properties of canonical systems of differential equations; integration by series; periodic and asymptotic solutions; integral invariants. $I, I I$; (3).

Dr. Reed
Prerequisite: Mathematics 16; Astronomy 7-8.
14. Observational Astronomy.-The working methods of an astronomical observatory; individual problems. II; (3). Professor Stebbins Prerequisite: Astronomy 15.
15. Geodetic Astronomy.-The sextant, transit, and zenith telescope; methods similar to those of the United States Coast Survey. I; (3).

Professor Stebbins
Prerequisite: Mathematics 7.

## Courses for Graduates

101. Seminar and Thesis.-Three times a week; I, II; (I unit).

Professor Stebbins
102. Stellar Astronomy.-Orbits of binary stars; variable stars; theoretical photometry. Three times a week; I, II; (I unit). Professor Stebbins

## BACTERIOLOGY

(See also Botany.)
Joer Andrew Sperry, 2d., Ph.D., Instructor
Fred Wilbur Tanner, M.S., Assistant
Wililam Kean Robinson, M.S., Assistant
Cecil Robert Gross, B.S., Graduate Assistant
No major is offered for the present in bacteriology.

## Courses for Undergraduates

5. Introductory Bacteriology.-Morphology and physiology of bacteria and related microorganisms; cultivation and observation. I or $I I$; (5).

Dr. Sperry, Mr. Tanner, and assistants
Prerequisite: Chemistry 3; junior standing.
5a. Introductory Bacteriology for Medical Students.-Similar to course 5, with pathogenic organisms added. Open only to medical or premedical students. II; (6).

Dr. Sperry
Prerequisite: Chemistry 2a; junior standing.
6. Bacteriology for Sanitary Engineers.-Bacteriological and microscopical examination of water and sewage; filtration, sterilization, and filter control. $I$; (2).

Dr. Sperry, Mr. Tanner

## For Advanced Undergraduates and Graduates

8. Applied Bacteriology.-Decay of organic matter in nature; soil and sewage bacteria; food bacteria; water bacteria; pathogenic bacteria. II; (5).
Prerequisite: Bacteriology 5; Chemistry 9 , or the equivalent.
Mr. Tanner
18a-18b. Journal Meeting in Bacteriology.-(Required of all students specializing in bacteriology.) $I, I$; (1).

Dr. Sperry
Prerequisite: Bacteriology 5.
19. General Bacteriology.-(For graduate students in science.) I or II; (I unit).

Dr. Sperry, Mr. Tanner
26. Pathological Bacteriology.-The disease-producing organisms; their effects upon the animal, and the reaction of the host. Lectures; laboratory. II; (3).

Dr. Sperry
Prerequisite: Bacteriology 5; Physiology 1.
27. Epidemiology.-Transmission and the methods of prevention and control of infectious diseases. I; (2). Dr. Sperry

Prerequisite: Bacteriology 5.

## Courses for Graduates

The work outlined below is open only to graduate students who have had at least one year's work in bacteriology, and satisfactory training in chemistry.
103. Physiology of Bacteria.-Fermentation; the growth and death of bacteria. I; (I «nit).

Dr. Sperry
105. Classification of Bacteria.-Variability of species; characters; mutations; standard and biometrical classifications. II; (I unit). Dr. Sperry
107. Research in Bacteriology.-The physiology of bacteria; food bacteriology. $I$, $I I$; (I or 2 units).

Dr. Sperry

## BANKING

## (See Economics.)

## BIOLOGY

## (See Botany, Entomology, Physiology, and Zoology.)

## BOTANY

> (See also Bačteriology.)

William Trelease, D.Sc., LL.D., Professor
Thomas Jonathan Burrill, Ph.D., LL.D., Projessor, Emeritus
Charles Frederick Hottes, Ph.D., Professor
Frank Lincoln Stevens, Ph.D., Professor
Stella Mary Hague, Ph.D., Instructor
Walter Byron McDougall, Ph.D., Instructor
Joel Andrew Sperry, 2d., Ph.D., Instructor (Bacteriology)
Rosalie Mary Parr, A.M., Assistant
Harry Dwight Waggoner, A.M., Assistant
Nora Elizabeth Dalbey, A.M., Assistant
Forrest Ellwood Kempton, M.S., Assistant
Bert Edwin Quick, A.B., Assistant
William Eugene Pickler, A.B., Assistant
Robert Lesley Davis, B.S., Assistant
Fred Wilbur Tanner, M.S., Assistant (Bacteriology)
Harold Dudley Clayberg, M.S., Assistant
Lee Ellis Miles, A.B., Assistant
Walter Spurgeon Beach, M.S., Assistant
Esther Young, A.M., Assistant
William Kean Robinson, M.S., Assistant (Bacteriology)
Cecil Robert Gross, B.S., Graduate Assistant (Bacteriology)
Ernest Michael Rudolph Lamiey, A.M., Assistant in the Summer Session
Major: 20 hours exclusive of Botany 1, 4, and 4d, made up of courses grouped along one of five lines, according to the suggestions given below.

Minor: 20 hours chosen from chemistry, entomology (exclusive of la and 1 b ), geology, physics, physiology, and zoology. At least eight hours must be offered in one subject.

Courses offered are of four types; the first intended to meet the needs of beginners; the second laying a foundation for methods of accuracy in observation, manipulation, and experimentation through the study of some fundamentally important subdivision of the science; the third giving practise in methods of investigation by the study of advanced problems varied to suit the needs and interests of the student; and the fourth teaching independent research by means of thesis subjects leading to the discovery of new facts or laws.

The work of any semester may be credited separately except when a problem is left incomplete in one of the courses open to graduates.

For the convenience of undergraduates in the College of Liberal Arts and Sciences who elect major work in botany the following combinations of courses are suggested:-(a) General; 2a, 3b, 4a, 14a-14b, 23; (b) Specializing in morphology ; 2a, 2b, 3a, 4a, 4b, or 4c; (c) Specializing in pathology; 2a or 3a, 7a, 7b,
$16 \mathrm{a}-16 \mathrm{~b}, 4 \mathrm{a}$, or $17 \mathrm{a}-17 \mathrm{~b}$, or 21 ; (d) Specializing in physiology; $2 \mathrm{~b}, 3 \mathrm{a}, 3 \mathrm{~b}, 9 \mathrm{a}$, or 9 b ; (e) Specializing in taxonomy; 2a, 4a or 4b or 4c, 14a-14b, 16a-16b, or 17a-17b. Students taking botany as a foundation for agronomy are advised to select courses $1 \mathrm{a}, 3 \mathrm{a}, 3 \mathrm{~b}, 4 \mathrm{a}, 7 \mathrm{a}-7 \mathrm{~b}$, and advanced work on some special topic or topics under courses 9,15 , or $17 \mathrm{a}-17 \mathrm{~b}$. Students who expect to teach botany are advised to elect $2 \mathrm{a}, 3 \mathrm{~b}, 4 \mathrm{a}, 14 \mathrm{a}-14 \mathrm{~b}, 23$, and advanced work in one or more of the special courses $9 \mathrm{a}-9 \mathrm{~b}, 16 \mathrm{a}-16 \mathrm{~b}$, or 17a-17b.

## Courses for Undergraduates

1. General Botany.-The structure, physiology, natural history, and uses of plants. Lectures; quiz; laboratory. Students are advised to complete elementary chemistry before taking this course. I or II; (5).

Professor Trelease, Dr. McDougall, and assistants
2a. Morphology of Thallophytes.-The lower plants. Laboratory. I; (5).

Dr. Hague Prerequisite: Botany 1.
2b. Morphology of Cormophytes.-The higher plants. Laboratory. II; (5).

Dr. Hague
Prerequisite: Botany 1.
3a. Plant Anatomy, Histology, and Technics.-Plant structure; protoplasts; the nucleus; fixing, sectioning, staining, and examining tissues; modeling from serial sections; photomicrography. $I$; (5).

Professor Hotess
Prerequisite: Botany 1.
3b. Plant Physiology.-Applications to forestry and horticulture, and to crop judging and other phases of agronomy. II; (5). Professor Hotres

Prerequisite: Botany 1.
4. The Local Flora.-Morphology, identification, and classification of wild plants. Laboratory; field work. (For students desiring acquaintance with the plants of Illinois, and especially for those qualifying as teachers in the public schools.) II; (3).

Dr. Hagur
Prerequisite: Entrance botany or its equivalent.
4a. Taxonomy of Cormophytes.-Structure, identification, and classification. Laboratory; field work on flowering plants and weeds. II; (5).

Professor Trelease
Prerequisite: Botany 1.
4b. Taxonomy of Algae and Bryophytes.-Structure, identification, and classification. $I$; (5).

Dr. Hague
Prerequisite: Botany 1.
4c. Taxonomy of Fungi.-Structure, identification, and classification. II; (5). Professor Stevens

Prerequisite: Botany 1.
4d. Trees and Shrubs of the Campus.-Woody plants used for decorative purposes. $I$; (3).

Professor Trelease
7a. Plant Pathology.-Causal agents, symptoms, diagnosis, and treatment. $I$; (5).

Professor Stevens
Prerequisite: Botany 1.

7b. Methods in the Study of Fungi.-Isolation, cultivation, and inoculation of fungi and bacteria. II; (5). Professor Stevens

Prerequisite: Botany 1.
20. Plant Diseases.-More important diseases of commonly cultivated plants, diagnosis, and treatment. Lectures; laboratory. (Credit in the College of Agriculture only.) $I$; (3).

Professor Stevens
Prerequisite: Botany 1.
21. Crop Diseases.- Structure, identification, and treatment. $I I$; (3). Professor Stevens
Prerequisite: Botany 20 or 7a.
23. Plant Ecology.-The life of plants in their natural habitats, and in relation to environment, to animals, and to each other. Lectures; laboratory; field work. I; (3).

Dr. McDougall
Prerequisite: Botany 1.

## For Advanced Undergraduates and Graduates

Students who take courses open for credit to graduates are advised to register also for course $10 \mathrm{a}-10 \mathrm{~b}$, the weekly meeting devoted to current literature in botany, which is obligatory for candidates for an advanced degree with botany as a major subject.

Candidates for advanced degrees in botany must offer for admission to the graduate courses at least 20 hours in university botany, exclusive of Botany 1 , and inclusive of courses $2 \mathrm{a}, 3 \mathrm{~b}, 4 \mathrm{a}$, and either $7 \mathrm{a}, 9 \mathrm{~b}, 17 \mathrm{a}$, or 17 b , or its equivalent.

Graduate students who elect botany for minor credit must offer the equivalent of 10 hours in university botany, exclusive of Botany 1 , as a prerequisite to the courses listed for graduates and advanced undergraduates.

9a-9b. Plant Anatomy or Physiology.-Problems for those specializing in anatomy, physiology, or the application of these to plant breeding, crop production, and forestry. $I, I I ; *(3$ or 5$)$.

Professor Hotres
Prerequisite: 10 hours of botany, including course 3 a or 3 b , and junior standing.

10a-10b. Current Botanical Literature.-Weekly review supplementary to the seminar conferences. $I, I I$; (1).
Professor Trelease, Professor Hottes, Professor Stevens, Dr. Hague, Dr. McDougall
Prerequisite: Registration in some course in botany open for graduate credit.

14a-14b. Heredity, Variation, Evolution.-The cells and members of plants; adaptations and changes; heredity, evolution. I, II; (3).

Professor Hottes
Prerequisite: 10 hours of botany, and junior standing.

[^67]16a-16b. Taxonomy and Ecology of Thallophytes.-Advanced practise on selected groups: (1) Algæ and Bryophytes; (2) Fungi. $I, I I$; *(3 or 5).
(1) Dr. Hague; (2) Professor Stevens, Dr. McDougall

Prerequisite: 10 hours of botany, including either course 2 a or 4 b for Algæ and Bryophytes, or 4 c or 7 a for Fungi, and junior standing.

17a-17b. Taxonomy and Ecology of Cormophytes.-Advanced practise on selected taxonomic, ecological, or economic groups. Genera or families of Illinois plants, ecological association or adaptations, or plants economically important as weeds, forest resources, adjuncts to medicine, farm, orchard, or garden crops, or as the basis of foriculture, landscape architecture, street shading, or other decorative planting. $I, I ;^{*}(3$ or 5$)$. Professor Trelease

Prerequisitc: 10 hours of botany, including course 4a, and junior standing.
22a. Morbid Histology.-The parasites of plant tissues and their histology in condition of disease. $I$; *(3 or 5).

Professor Stevens
Prerequisite: Botany 3a, and 7 a or 7 b , and junior standing.
22b. Groups of Fungi and Crop Diseases.-II; *(3 or 5).
Professor Stevens
Prerequisite: 10 hours of botany, including 7a, or 7 b , and junior standing.

## Courses for Graduates

101. Cytology.-The influence of external agents on the cell. Special subjects for investigation. Reports; discussions of current literature and research results. $I, I I$; (I or 2 units).

Professor Hortes
102. Physiology.-The effects of external stimuli on growth and movement. Special subjects for investigation. Reports; discussions of current literature and research results. I, $I I$; ( $I$ or 2 units). Professor Hotres
104. Mycology.--Fungi. Individual assignments of subjects and problems in field and laboratory. I, $I I$; ( $I$ or 2 units). Professor Stevens
106. Plant Pathology.-Diseases of plants, and disease agents. Special subjects. I, $I I$; ( $I$ or 2 units). Professor Stevens
108. Taxonomy.- Monographic studies of critical groups. I, $I$; (I or 2 units).

Professor Trelease

## Summer Session Courses

S 3b. Plant Physiology.-Physiological processes of plants; the production of organic matter. Field trips; laboratory. (5).

Professor Hottes, Mr. Lamkey
Prercquisite: Entrance credit in botany or Botany 1.
*S 9a-9b. Plant Anatomy or Physiology.-For description see Botany 9a-9b. *(3 or 5).

Professor Hotres
Prerequisite: 10 hours of botany, including Botany 3 a or 3 b , and junior standing.
*S 102. Physiology.-For description see Botany 102. ( $1 / 2$ or x unit).
Professor Hottes

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## BUSINESS LAW

## (See Business Organization and Operation.)

## BUSINESS ORGANIZATION AND OPERATION

## (Including Accountancy and Business Law)

Lewis Emanuel Young, Ph.D., Assistant Professor
William Arthur Chase, LL.M., C.P.A., Lecturer, in charge of work in Accountancy
Robert Enoch Hieronymus, A.M., LL.D., Community Adviser (lecturer on commercial and civic organizations)
Hiram Thompson Scovill, A.B., Instructor Harrison McJohnston, A.M., Instructor
William B Castenholz, A.M., C.P.A., Instructor
Ananias Charles Littleton, A.B., Instructor
Edward Frederick Nickoley, A.M., Assistant
Roger Frank Little, A.B., LL.B., Lecturer, Business Lazu

## A. ACCOUNTANCY

## Courses for Undergraduates

la-1b. Principles of Accounting.-Accounting and bookkeeping. Accounting procedure from single to double entry, from individual accounts to partnership, corporation, and other accounts. (Credit for graduation is not given for either semester separately.) $I, I I$; (3).

Mr. Chase, Mr. Scomlle, Mr. Littleton, Mr. Nickoley
2a-2b. Advanced Accounting and Auditing.-Problems in accounting, the valuation of good will, depreciation, sinking funds, investments, partnership, adjustments, and resources. (Credit is not given for either semester separately.) $I, I I$; (3).

Mr. Chase, Mr. Scovill
Prerequisite: Accountancy la-1b; Economics 7 or 26, 22 or 27 ; and registration or credit in Economics 1.

3a-3b. Accounting Problems and Auditing.-(Must be taken throughout the year in order to secure credit.) $I, I I$; (3). Mr. Chase

Prerequisite: Accountancy 2a-2b, Economics 3, and credit or registration in Business Organization and Operation 1 and 2.

4a-4b. Cost Accounting.-(a) Cost accounting applied to factory procedure, overhead expense, the installation and control of cost systems, presentation of cost data; (b) cost accounting as a basis for manufacturing efficiency; (c) the construction of cost systems. $I, I I$; (3).

Mr. Castenholz
Prerequisite: Accountancy la-1b, Economics 1.
10. Shop Management and Shop Cost Records.-Cooperation between shop and cost departments; preparation and use of cost records; estimation of costs on contracts and calculation of profits. $I I$; (2).

Mr. Scovill
Prerequisite: Open only to students in engineering who have had Economics 1 or 2.
11. Farm Accounting.-Accounting and distribution of costs as applied to farm operations; proper investment of funds. I; (3). Mr. Scovill

Prerequisite: Open only to students in agriculture who have had Economics 1 or 2.
12. Commercial Administrative Accounting.-Accounts of corporations and partnerships; tabular bookkeeping; accounts of branches; adjustment accounts; organization of accounts; application and allotments; reserves and depreciation; expenses; profits; dividends; income tax; balance sheets; the interpretation of accounts. I; (2).

Mr. Chase
Prerequisite: Accountancy 1a-1b, Economics 1.
13. Municipal Accounting.-Municipal balance sheets and revenue accounts; cash book; journal; ledger; subsidiary books and rolls; passing accounts; warrants; vouchers; striking the rate; school accounts; bonds and sinking funds; budgets. $I I$; (2).

Mr. Chase
Prerequisite: Accountancy 1a-1b, Economics 1.

## Summer Session Course

S 15. Practise or High-school Teaching.-Not accepted in partial fulfillment of the requirement of Accountancy 1 in any university curriculum. (2).

Prerequisite: Elementary bookkeeping.
Mr. Scovill

## B. BUSINESS ORGANIZATION AND OPERATION Courses for Undergraduates

1. Business Organization and Operation.-Individual proprietorship, partnership, and corporation; the process of organizing a business; organization for operation and the reaction of form of organization on efficiency; gradation and interrelation of divisions and departments; departmental responsibility and authority, routine, and discipline. I; (3). Assistant Professor Young

Prerequisite: Economics 1 and Accountancy 2a-2b. For the present year students who have had Accountancy la-lb may be admitted on application to the instructor.

Note: The course is not open to students who have had the former Economics 6.
2. Organization and Control of Mercantile Distribution.-Typical distributive businesses; organization and administration of wholesale and retail establishments and commission houses. Cooperation in buying and selling; trade marks and patents; shipping combinations; trade agreements. II; (3).

Assistant Professor Young
Prerequisite: Business Organization and Operation 1 or, for the present year, former Economics 6.
3. Business Procedure.-Conventional business practises; cash and trade discounts; commissions; interest and discounts; forms and uses of checks, notes, drafts, and other instruments of credit and exchange; the rules and procedure of banking institutions; mercantile and credit agencies. Office organization and management. I; (2). Assistant Professor Young

Prerequisite: Business Organization and Operation 2. For the present year Economics 10 and Accountancy 1a-1b will be accepted instead of Business Organization and Operation 2. Senior engineering students who have had Economics 1 or 2 may be admitted by permission of the instructor.
4. Industrial Organization and Management.-Problems of organization and of administrative policy; supervision and management of industries and industrial units. Relations to labor, the community, and law. II; (2).

Assistant Professor Young
Prerequisite: Business Organization and Operation 2. For the present year Economics 10 and Accountancy $1 \mathrm{a}-1 \mathrm{~b}$ will be accepted instead of Business Organization and Operation 2. Senior engineering students who have had Economics 1 or 2 may be admitted by permission of the instructor.
7. Salesmanship.-Policies and practise of modern sales organizations; selling problems of manufacturers, wholesalers, and retailers; management of salesmen; the practise of individual salesmen. $I$; (3). Mr. McJohnston

Prerequisite: Economics 1 and Business Organization and Operation 1. For the present year former Economics 6 will be accepted in place of Business Organization and Operation 1.
8. Advertising.-Current practise; cooperation of advertising and personal selling; special problems; planning sales campaigns; choice of media; space buying and practise in writing copy. II; (3). Mr. McJohnston

Prerequisite: Business Organization and Operation 7.
9. Commercial and Civic Organizations.-(For students preparing for positions as secretaries of commercial or agricultural associations, civic or welfare clubs, and similar organizations). The history of trade and similar organizations; methods of organization; expansion and promotion; the relation of such associations to the life and welfare of the community and to one another; promotion of community welfare by common action; work and duties of the secretary and other officers; the legal status and recent results. II; (1).

Dr. Hieronymus
Prerequisite: Economics 1 and Business Organization and Operation 2 (for the present year former Economics 6 will be accepted instead of Business Organization and Operation 2) ; or Economics 2 and Farm Management 1; or Economics 1, Political Science 4, and Sociology 8.

## C. BUSINESS LAW

## Courses for Unđergraduates

1a-1b. Commercial Law.-The law of contracts, negotiable instruments, agency, partnerships, business corporations, sales of personal property, bailments and carriers, guaranty and suretyship, and insurance. $I, I I$; (3).

Assistant Professor Young
Prerequisite: Sixty hours of university credit, including Economics 1 and Accountancy 1a-1b.
2. Elementary Law.-Contracts, leases, landed property, etc. (Open to junior and senior students in Agriculture only). II; (3). Mr. Little

Prerequisite: Economics 2.

## CERAMIC ENGINEERING

Albert Victor Bleininger, B.S., Professor
Ralph Kent Hursh, B.S., Associate
Barney S Radcliffe, M.S., Instructor
Arthur Edwards Williams, B.S., Instructor
Ralph Raymond Danielson, B.S., Assistant
Charles Francis Geiger, B.S., Assistant
The courses offered by the department of ceramic engineering are designed to give a technical knowledge of the composition and properties of materials used in the manufacture of claywares, cements, glasses, and enamels, and to acquaint the student with the construction, equipment, and operation of ceramic plants.

## Courses for Undergraduates

1. Ceramic Materials.-The properties of clays and other ceramic materials; identification of the varieties met in practical work. Lectures; laboratory. II; (3).

Mr. Williams
Prerequisite: Chemistry 4.
2. Winning and Preparation of Clays.-Machinery and processes used in preparing clays for market or manufacture; cost data. I; (3). Mr. Radclipfe

Prerequisite: Chemistry 5b, Ceramic Engineering 1.
3. Industrial Calculations.-Chemical and physical calculations applying to the operation of furnaces, kilns, and dryers; temperature measurements; ceramic stoichiometry. I; (3).

Mr. Hursi
Prerequisite: Ceramic Engineering 1; Chemistry 5b; Physics la-1b and 3a-3b.
4. Drying and Burning.-Chemical and physical processes; types of construction and methods of operation of industrial dryers and kilns. $I$; (4). Professor Bleininger
Prerequisite: Ceramic Engineering 1, 3.
5. Ceramic Bodies.-Composition and properties of ceramic body mixtures; effects of various ingredients; development of special bodies. Lectures; laboratory. II; (5).

Mr. Radcliffe
Prerequisite: Ceramic Engineering 1, 2, 3.
6. Glazes.-Production of glazes and enamels; limits of composition; classification; properties and defects common to each class; effect of variation in composition; modes of application. Lectures; laboratory. I; (5).

Professor Bleininger, Mr. Danielson
Prerequisite: Ceramic Engineering 3, 4, 5.
8. Glass.-Raw materials, preparation, compounding, melting, and shaping; chemical principles involved in the manufacture and decoration of types of vitreous silicates. Lectures. II; (2).

Mr. Williams
Prcrequisite: Ceramic Engineering 3, 4, 5, 6.
9. Ceramic Construction.-Plans, specifications, and estimates for ceramic equipments and industrial plants. $I I$; (4).

Mr. Hurse
Prerequisite: General Enginecring Drawing 2; Ceramic Engineering 3, 4.
10. Cements.-Cements, limes, plasters; composition; reactions; methods of manufacture and testing. $I$; (3).

Mr. Hursh
Prerequisite: Ceramic Engineering 1, 2, 3.
11. Thesis.- $I$; (3). Professor Bleininger, Mr. Hursh, Mr. Williams
12. Designing and Shaping.-The standpoint of the manufacturer; die construction; templates; master and working molds for pressing, casting, and jiggering. II; (3).

Mr. Radcliffe, Mr. Danielson
Prerequisite: Ceramic Engineering 1.
13. Cement Laboratory.-Preparation of cementing substances; properties and reactions involved. $I I$; (3).

Mr. Hurse
Prerequisite: Ceramic Engineering 10.
14. Cement Laboratory.-The production of waterproof and sea resisting cements; cement colloids; polychrome pigments for fresco decoration; cement colors; cold water paints. $I$; (3).

Mr. Hurse
Prerequisite: Ceramic Engineering 10.
15. Glass Laboratory.-Soda-lime, potash-lime, lead, barium, and zinc silicates; boro-silicates; properties of fused and solidified glasses; practical glass problems. I; (3).

Mr. Williams
Prerequisite: Ceramic Engineering 6, 8.
16. Glasses and Enamels.-(Continuation of Ceramic Engineering 15.) Opaque, colored, and optical glasses; enameling of metals. II; (3).

Prerequisite: Ceramic Engineering 15.
17. Silicates.-Formation; properties; experimental methods. $I$; (3).

Mr. Hursh
Prerequisite: Ceramic Engineering 1, 3.

## Courses for Graduates

Registration in graduate courses in ceramic engineering presupposes the full undergraduate curriculum in that subject, or sufficient training in allied subjects to warrant the expectation that the student will be able to do the work elected.

Graduates of curriculums other than ceramic engineering who have the necessary prerequisites may take the following courses for minor credit: 3, 5, $6,8,10,13,14,15,16$.
101. The Formation of Silicates.-I; (I to 2 units).

Professor Bleininger
102. Technology of the Clay Industries.-Mineralogical constitution of clays; plasticity and the colloidal state; pyro-chemical and physical changes; composition and constitution of bodies, glazes, and enamels. II; (I to 2 units).

Professor Bleininger
103. Technology of Cements.-Composition; constitution; hydration and dehydration of cementing compounds; catalyzers. $I I$; ( 1 to 2 units).

Professor Bleininger
104. Technology of Glass.-Glassy silicates; limiting compositions; physical and chemical properties of glasses. II; (I to 2 units).

Professor Bleininger

## CHEMISTRY

William Albert Noyes, Ph.D., Ll.D., Professor and Director
Samuel Wilson Parr, M.S., Professor
Harry Sands Grindley, D.Sc., Professor Enward Bartow, Ph.D., Professor
Clarence William Balke, Ph.D., Professor
Edward Wight Washburn, Ph.D., Professor
Datid Ford McFarland, Ph.D., Assistant Professor
George McPhail Smith, Ph.D., Assistant Professor
Clarence George Derick, Ph.D., Assistant Professor
Henry Charles Paul Weber, Ph.D., Assistant Professor
Duncan Arthur MacInnes, Ph.D., Associate
George Denton Beal, Ph.D., Associate
B Smith Hopkins, Ph.D., Associate
Howard Bishop Lewis, Ph.D., Associate
Henry John Broderson, Ph.D., Instructor
Charles Henry Hecker, Ph.D., Instructor
George Wallace Sears, Ph.D., Instructor
Hubert Leonard Olin, Ph.D., Instructor
Jessie Yereance Cann, Ph.D., Instructor
*Harry Peach Corson, Ph.D., Instructor
Oliver Kamm, Ph.D., Instructor
Grrard van Rossen, Ph.D., Instructor
Laurence Crane Johnson, Ph.D., Research Assistant
Raymond Washington Hess, A.B., Assistant
Harry Cleveland Kremers, M.S., Assistant
Ernest Edward Charlton, M.S., Assistant
Edwin Arthur Rees, A.M., Assistant
Ross Earlby Gilmore, A.M., Assistant
Silas Alonzo Braley, M.S., Assistant
Ralph Waldo Tippet, A.M., Assistant
John Fredercick Gross Hicks, B.S., Assistant
Glenn Seymour Skinner, A.M., Assistant
Jay Thomas Ford, A.B., Assistant
Terrence Onas Westhaefer, A.B., Assistant
Carl Nathan Dafidson, A.B., Assistant
Don Warren Bissele, B.S., Assistant
Walter Gerald Karr, B.S., Assistant
Ernest Henry Vollweler, A.B., Assistant
Frank F Footitt, A.B., Assistant
Josepf Marvin Brafam, M.S., Assistant
Albert Waffle Owens, B.S., Assistant
Floyd Elba Rowland, A.m., Assistant
William Alexander VanWinkle, B.S., Assistant
Scott Champlin Taylor, M.S., Assistant
Henry Joserf Weiland, M.S., Research Assistant
Paul Anders, Assistant, Glass Blowing
Albert Durand Shepard, B.S., Graduate Assistant
Harry Glenn Portz, B.S., Graduate Assistant
Henry Rhodes Lee, A.B., Graduate Assistant

[^69]James Keel Reed, A.B., Graduate Assistant
Ruth Eliza Okey, M.S., Graduate Assistant
Herbert August Winkelmann, M.S., Graduate Assistant
Lloyd Hilton Reyerson, B.S., Graduate Assistant
Harry James Beattie, A.M., Graduate Assistant
Mary VanRensselaer Buell, A.B., Graduate Assistant
Leonard Francis Yntema, A.B., Graduate Assistant
Ralph William Hufford, A.B., Graduate Assistant
*Loran Ogden Potterf, A.M., Graduate Assistant
Alfred Riceiard Powell, A.M. Graduate Assistant
Lansing Sadler Wells, B.S., Graduate Assistant
Helen Updegraff, B.S., Graduate Assistant
William Robert Bruce, A.B., Graduate Assistant
Louis Jordan, A.B., Graduate Assistant
Margaret Campbell Perry, A.B., Graduate Assistant
Joun Bernis Brown, B.S., Graduate Assistant
James Harris Olewine, B.S., Graduate Assistant
Charles George MacArthur, A.M., Assistant in the Summer Session David Preston Hollis, Assistant in the Summer Session

Major: 20 hours, exclusive of Chemistry 1, 1a, 1b, 4, and 16, and inclusive of courses in quantitative and organic chemistry.

Minor: 20 hours, chosen from bacteriology, botany, geology, mathematics, philosophy, physiology, physics, and zoology.

Students taking chemistry at the University are advised to give at least one year to the subject, and this should include Chemistry 1 or $1 \mathrm{a}, 2 \mathrm{a}$, or 3a. Those continuing in the second year should take Chemistry 5 a and $5 \mathrm{~b}, 5 \mathrm{c}$ or 13 a . In the third year Chemistry 14 or $9,9 \mathrm{a}$, and 9 b , or $9 \mathrm{c}, 31$, and 33 should be taken. With these, more special courses may be taken if desired, but, in general, students are not advised to take the special courses unless they have had the fundamental work represented by the selection given above. Students who desire a training for professional work in chemistry, either as teachers or in its industrial applications, will naturally follow the curriculum in chemistry or the curriculum in chemical engineering.

Students who find it impossible to take more than one semester's work are requested to register for Chemistry 1 or 1 la in the second semester rather than in the first.

1. Inorganic Chemistry.- The non-metallic elements. Noyes's Textbook of Chemistry. I or II; (5).
Professor Balke in charge: Professor Noyes, Dr. Hopkins, Dr. Hecker,
Dr. Sears, Dr. Cann, and assistants
Note: Students who have credit for high school chemistry should register for Chemistry la.

1a. Inorganic Chemistry.-Lectures; recitations; laboratory. (For students who have had one year of high school chemistry.) $I$ or $I I$; (3). Professor Balke in charge: Professor Noyes, Dr. Hopkins, Dr. Hecker, Dr. Sears, Dr. Cann, and assistants
Prerequisite: One year of entrance chemistry. Students whose preparation proves to be inadequate for continuing this course will be required to change their registration to Chemistry 1.

[^70]1b. Inorganic Chemistry.-Lectures; recitations; laboratory. (For students in engineering). $I$ or $I I$; (4).
Professor Balke in charge: Professor Noyes, Dr. Hopkins, Dr. Hecker, Dr. Sears, Dr. Cann, and assistants
Note: Students who have credit for high school chemistry should register for Chemistry la.

2a. Inorganic Chemistry and Qualitative Analysis.-The general chemistry and qualitative analysis of the more common metals and inorganic compounds. Lectures; recitations; laboratory. $I$ or $I I$; (5).
Professor Balke, Assistant Professor Webber, Dr. Hopkins, Dr. Hecker, Dr. Sears, Dr. Cann, and assistants
Prerequisite: Chemistry 1 or 1 a.
3a. Inorganic Chemistry and Qualitative Analysis.-(For students in chemistry and chemical engineering.) I or $I I$; (6). Professor Balke, Dr. Sears

Prerequisite: Chemistry 1 or la.
4. Qualitative Analysis and Chemistry of the Metallic Elements.-Lectures; laboratory. (For students in engineering.) $I$ or $I I$; (4).
Assistant Professor Weber in charge; Dr. Hopkins, Dr. Cann, Dr. Sears, and assistants
Prerequisite: Chemistry la or 1 b .
5a. Elementary Quantitative Analysis.-Gravimetric and volumetric analysis; stoichiometrical relations. Lectures; recitations; laboratory. Talbot's Quantitative Chemical Analysis. I or II; (5). (4 for mining engineers). Assistant Professor Smith in charge: Dr. Olin, and assistants
Prerequisite: Chemistry 5a or 3a.
5b. Quantitative Analysis.-Continuation of 5a. The analysis of silicates, metallic compounds, and alloys; advanced qualitative analysis. Lectures; recitations; laboratory. Treadwell-Hall: Analytical Chemistry, Vol. II. II; (5).

Assistant Professor Smith in charge
Prerequisite: Chemistry 5a.
5c. Food Analysis.-Quantitative organic analysis; examination of food products: alcohols, carbolyydrates, fats and oils, cereals, nitrogenous bodies, preservatives, and colors. Sherman's Organic Analysis; Sherman's Food Products; "Bulletin 1o7, rev., U. S. Bureau of Chemistry." II; *(3 to 5). Dr. Beal

Prerequisite: Chemistry 5a or 13a; 9 or 14a-14b.
$6 \dagger$. Chemical Technology.-Technological chemistry as illustrated in those industries having a chemical basis for their principal operations and processes; trade journals. Lectures; recitations. Rogers and Aubert's Industrial Chemistry. II; (3).

Assistant Professor McFarland
Prerequisite: Chemistry 5a and 14a-14b.
7†. Metallurgy.-Generai metallurgy; iron and steel. Lectures; assigned reading; recitations. Fulton's Principles of Metallurgy; Stoughton's Iron and Steel. I; (3). Assistant Professor McFarland

Prerequisite: Chemistry 5a. (Senior students in engineering courses may be admitted to this course by special arrangement, without this prerequisite).

[^71]7a. Metallurgy of the Non-Ferrous Metals.-Copper, lead, zinc, gold, and silver. $I I$; (3).

Assistant Professor McFarland
Prerequisite: Chemistry 5a or 13a.
[8. Iron and Steel Analysis.-Analyses of all the constituents by both rapid, or technical, and standard methods. II; (3). Not given, 1915-16.

Assistant Professor Smith

## Prerequisite: Chemistry 5b.]

9. Organic Chemistry.-The more typical and simple organic compounds; important derivatives of carbon. (For students of the medical preparatory and household science curriculums and others desiring a short course.) II; (3).

Assistant Professor Derick
Prerequisite: Chemistry 2a or 3a; registration in chemistry 9c; or equivalent.

9a. Organic Synthesis and Ultimate Analysis.-Ultimate organic analysis; preparation of typical organic compounds. Laboratory. $I$ or $I I$; (2).

Assistant Professor Derick, Dr. Kamm, and assistants
Prerequisite: Registration in Chemistry 14a-14b, or equivalent.
9b. Organic Synthesis and Qualitative Organic Analysis.-Continuation of 9 a , to accompany Chemistry 14 b . $I$ or $I I$; (2).

Assistant Professor Derick, Dr. Kamm, and assistants
Prerequisite: Chemistry 9a; registration in Chemistry 14b, or equivalent
9c. Organic Synthesis.-Typical organic compounds. Laboratory. (For students in the medical preparatory and household science curriculums and others desiring a brief course.) II; (2).

Assistant Professor Derick, Dr. Kamm, and assistants
Prerequisite: Chemistry 2a or 3a; registration in Chemistry 9, or equivalent.
10a. Water Chemistry.-The history, sources, contamination, and standards of purity of potable waters and waters for industrial purposes. Lectures; practise in analytical methods. II; (3). Professor Bartow

10b. Water Chemistry.-(A modification of 10a for students in sanitary engineering, registered in connection with Chemistry 2a.) $I I$; ( $11 / 2$ ).

Professor Bartow
11a-11b. Research.-Thesis, embodying a review of the literature of the subject; account of work done in the laboratory. The subject should be determined upon and reading begun in the junior year. A minimum of five semester hours is required. (Required for seniors.) I, II; (5).

Professor Noyes in charge
13a. Elementary Quantitative Analysis.-Gravimetric and volumetric; fertilizer and milk analysis. Lectures; recitations; laboratory. Talbot's Quantitative Chemical Analysis. (For students in agriculture.) I or II; (5).

Assistant Professor Smith in charge, Dr. Olin, Dr. Beal, and assistants
Prerequisite: Chemistry 2a, or 3a.
13b. Advanced Agricultural Analysis.-Fungicides, limestone, phosphate rock, fuel, and water; determination of the alkali metals; special methods. Treadwell-Hall, Analytical Chemistry, Vol. II. (For students specializing in agricultural chemistry or agricultural experiments.) II; (5).

Dr. Beal in charge
Prerequisite: Chemistry 5a or 13a.

14a-14b. Organic Chemistry.-Lectures; recitations. Noyes's Organic Chemistry. I; (4):II; (2). Professor Noyes
Prerequisite: Chemistry 5a; should be accompanied by Chemistry 9a and 9b.
15. Physiological Chemistry.-Enzymes; carbohydrates; salivary digestion; gastric digestion; fats; pancreatic-digestion; intestinal digestion; bile; putrefaction products; feces; blood; milk; epithelial and connective tissues; muscular tissue; nervous tissue; urine. Qualitative and quantitative work on gastric juice, blood, urine, and milk; the clinical aspects of these topics treated thoroly for prospective students of medicine. Lectures; demonstrations; conferences; practical work; assigned reading. Mathew's Psysiological Chemistry; Hawk's Practical Physiological Chemistry. (Open to graduates and undergraduates.) $I$; *(5 or 7). Dr. Lewis

Prerequisite: Two years' work in chemistry, including 9 and 9c or 14a, 14b, 9 a and 9 b .

15a. Problems of Metabolism.-Colloids; animal oxidations; osmosis; adsorption; selective activity of cells; metabolism; activities of gastro-intestinal tract; enzymes; inorganic nutrition. Lectures; demonstrations; conferences. II; (2).

Dr. Lewis
Prerequisite: Chemistry 15.
16. Chemistry for Engineers.-The proximate analysis of coal; determination of calorific power; technical analysis of furnace gases; examination of boiler waters; lubricating oils. (For mechanical engineers.) $I I$; (3).

Professor Parr, Dr. Broderson
Prerequisite: Chemistry 1.
17. Teachers' Course.-Methods of teaching elementary chemistry. I; (1). Professor Balke
21. Qualitative Organic Analysis.-Identification of pure organic compounds and mixtures. I or $I I$; (2). Assistant Professor Derick, Dr. Kamm

Prerequisite: Chemistry $9 \mathrm{a}, 9 \mathrm{~b}$; or equivalent.
22. Animal Chemistry (Animal Nutrition).-The chemical composition of animal products and feeding stuffs. Lectures; conferences; assigned reading; laboratory. $I$ or $I I$; (5).

Professor Grindley
Prerequisite: Two years' work in chemistry.
27. Qualitative Analysis of the Rare Elements.-The rare elements and their compounds; identification and separation of the elements; formation, solubilities, and chemical reactions of their salts. Assigned reading; laboratory. 11; (3).

Professor Balke
Prerequisite: Two years' work in chemistry.
31. Elementary Physical Chemistry.-Physical chemistry and electrochemistry. Lectures; recitations; problems. Washburn's Introduction to the Principles of Physical Chemistry. II; (4). Professor Washburn

Prerequisite: Chemistry 1, 2, 3; Physics 1a-1b or 7a-7b; Mathematics 7 or 8.

[^72]33. Elementary Physical Chemistry.-Molecular weight of gases and solutions; chemical equilibrium; the electrical conductivity of solutions and the attendant phenomena within the solution; thermochemistry. (Laboratory to accompany course 31.) $I I$; (2). Dr. MacInnes, Dr. van Rossen

Prerequisite: Chemistry 5a; Physics $8 \mathrm{a}-8 \mathrm{~b}$ or $3 \mathrm{a}-3 \mathrm{~b}$.
35. Electrochemistry.-(A continuation of Chemistry 31. See also Chemistry 102b.) Theory and application. Lectures; recitations; laboratory. Allmand's Applied Electrochemistry. I; (3). Dr. MacInnes

Prerequisite: Chemistry 31, 33.
36. The Phase Rule and Its Applications.-Equilibria in heterogeneous systems. Lectures; seminar. $I I$; (2).

Dr. Hecker
Prerequisite: Chemistry 31, 33; Mathematics 8 or 7 and 9.
37. Experimental Problems in Physical and Electrochemistry.-Laboratory; conferences. I; (4).

Professor Washburn, Dr. MacInnes
Prerequisite: Chemistry 35 or 102b.
61. Industrial Chemistry Laboratory.-The preparation and purification of chemical products from raw materials on a scale sufficient to afford data for determining the economy of the processes employed. Typical forms of chemical machinery: filter presses, vacuum pan, centrifugal separators, steam jacketed kettles; reports and estimates upon apparatus and plant for the production of some particular product on a commercial scale. (Should be accompanied by either Chemistry 6 or 109.) II; (3). Assistant Professor McFarland

Prerequisite: Chemistry 5a and 14a-14b.
65. Technical Gas and Fuel Analysis.-Examination of gases, gas mixtures, flue gases and fuels; determination of calorific values; calculation of efficiencies. $I$; (2).

Dr. Broderson
Prerequisite: Chemistry 5a.
66. Technology of Gases.-The manufacture, constituents, and uses of the various forms of gaseous fuel; calorimetry; photometry; the more exact methods of analysis. Lectures; reading; reports; laboratory. II; (1).

Dr. Broderson
Prerequisite: Chemistry 65.
69. Metallurgical Laboratory and Assaying.-The fire assay of gold, silver, lead, and copper ores, mattes, and bullion; special experiments; fuxes, slags, and charge calculations; coal, oil, and gas furnaces; measurement of high temperatures. Fulton's Manual of Fire Assaying. I; (2).

Assistant Professor McFarland
Prerequisite: Chemistry 5a.
70. Advanced Assaying and Ore Testing.-Ores of platinum, tin, copper; bullion assay; free milling, amalgamation, and cyaniding tests. (A continuation of Chemistry 69.) $I I$; (2). Assistant Professor McFarland

Prerequisite: Chemistry 69.
71. Advanced Methods of Metallurgical Analysis.-Laboratory. I; (2). Assistant Professor McFarland
Prerequisite: Chemistry 5b.
72. Paints, Oils, Turpentines, Varnishes, and Protective Coverings for Wood and Metals.-Lectures; laboratory. I; (2). Professor Parr

Prerequisite: Chemistry 5a and 14a-14b.
73. Asphalt, Tar, Petroleum, Residues, and Creosote Oils.-Sources, characteristics, composition, and examination; materials used in road construction; wood preservation. (For students in highway engineering.) II; (2).

Professor Parr
Prerequisite: Chemistry 3 or 4.
76. Calorimetry of Fuels.-The heat values of solid, liquid, and gaseous fuels. (An advanced course.) II; (2). Professor Parr, Dr. Broderson

Prerequisite: Chemistry 65.
77. Composition and Classification of Coal.-Classification, changes in composition, weathering, spontaneous combustion, formation of mine gases. Lectures; assigned reading. $I I$; (1). Professor PaRR

Prerequisite: Chemistry 65.
78. Metallography.-Constitution and microstructure of metals and alloys and the relations between their properties, chemical and mechanical treatment, and structure. Lectures; reading; laboratory. $I I$; (2).

Assistant Professor McFarland
80. The Elements of Glass Blowing.-Laboratory: II; (1). Mr. Anders
86. The Chemistry of the Higher Order Compounds.-Complex compounds from the standpoint of the coordination-valence theory as developed by Wemer. $I$; (2).

Assistant Professor Smith
Prerequisite: Chemistry 9a, 9b, 14a-14b.
92a-92b, 93a-93b. Journal Meeting.-(For juniors, seniors, and graduates.) $I, I$; (1). Assistant Professors McFarland and Derick in charge
95. History of Chemistry.-Lectures; assigned reading. Pattison Muir's History of Chemical Theories and Lan's. I; (2).

Assistant Professor Smith
Prerequisite: Chemistry $14 \mathrm{a}-14 \mathrm{~b}$ and 31.

## Courses for Graduates

Graduate students whose major subject is in some department other than chemistry, before taking graduate work for credit in this department, must have had the equivalent of 15 university credits in chemistry, and the work covered must have included satisfactory work in general chemistry and in qualitative and quantitative analysis. Such students are advised to take Chemistry 31, 33, (or 102, 102a), 5b, 5c. $14 \mathrm{a}-14 \mathrm{~b}, 9 \mathrm{a}$ and 9 b . Courses of a more special nature will not, as a rule, be accepted for graduate work unless preceded by one of the above courses.

For students in agriculture, Chemistry 5 a and 13 a will not be accepted for graduate credit.

Graduate students who are candidates for an advanced degree in chemistry must have had the equivalent of 30 university credits in chemistry, properly distributed.

For students in chemistry, 5a, 13a, 9, and 9c will not be accepted for graduate credit and 9a, 9b, 14a-14b, 31 and 33 will be accepted only from students entering the Graduate School with the equivalent of 30 university credits in chemistry.
[102. Advanced Physical Chemistry.-This course and 102a cover a period of two years. The subject is treated from the standpoint of molecular kinetics and thermodynamics. The purpose is to develop power to handle a physico-chemical problem rather than merely to impart a knowledge of the phenomena and the principles involved. Lectures; seminar. Nernst's Theoretische Chemie, 7th edition. Twice a week; I, II; ( $3 / 4$ zunit). Not given, 1915-16. Professor Washburn
Prerequisite: Chemistry 1, 2; Physics 1a-1b, 3a-3b; Mathematics 8a or 7 and 9. An elementary knowledge of organic and physical chemistry is desirable.]

102a. Advanced Physical Chemistry.-Chemical equilibrium; the Phase Rule; certain portions of thermochemistry; photochemistry. (A continuation of 102, with which it alternates.) Nernst's Theoretische Chemie. Twice a week; I, II; ( $3 / 4$ unit).

Professor Washburn
Prerequisite: The same as course 102.
102b. Advanced Electrochemistry.-Solution; thermodynamics; elec-tro-motive force; transformation of chemical and electrical energy. Twice a week; II; (3/4 unit).

Dr. Macinnes
Prerequisite: Chemistry 102; Mathematics 8a or 7 and 9.
102c. Advanced Physical and Electrochemistry.-Special problems. Laboratory. Twice a week; $I$; ( $1 / 2$ to 1 unit). Professor Washburn

Prerequisite: Chemistry, 31, 33; registration in Chemistry 102b, or completion of Chemistry 102, 102a, or 102b; Mathematics 8 or 7 and 9.

102d. Electrochemistry.- (For students in electrical engineering.) Once a week; I; (1/2 unit).

Dr. MacInnes
102e. Special Topics in Physical Chemistry.-Subject for 1915-16: Radiochemistry. Soddy, The Chemistry of the Radio Elements. Once a week; I; (1/2 unit).

Professor Washburn
Prerequisite: Chemistry 102 or 102a.
103. Advanced Inorganic Chemistry.-Descriptive inorganic chemistry; the rarer elements; the periodic system. Lectures, with or without laboratory. Two to five tinnes a week; I, II; ( $1 / 2$ to $11 / 4$ units).

Professor Balke
103a. Advanced Analytical Chemistry.-Special topics. Lectures, with or without laboratory. Two to five times a week; $I I$; ( $1 / 2$ to $11 / 4$ units).

Assistant Professor Smirh
Prerequisite: Chemistry 5b, 9a, 9b, 14a-14b, 31, 33.
103b. Special Topics in Inorganic Chemistry.—Subject for 1915-16: The chemistry of the higher order compounds. Werner, Neuere Anschauungen auf dem Gebiete der Anorganischen Chemie; assigned reading from later publications. Lectures; seminar. Treice a week; $I$; ( $3 / 4$ unit).

Assistant Professor Smith
Prerequisite: Chemistry 9a, 9b, 14a-14b.

103c. Special Topics in Inorganic Chemistry.-Seminar. Subject for 1915-16: The determination of atomic weights. Twice a week; II; ( $3 / 4$ unit).

Professor Balke
103d. Advanced Qualitative Analysis.-Methods of separation; qualitative reagents; reactions of some of the less common elements. (Designed especially for those intending to teach qualitative chemistry.) Lectures, with or without laboratory. One to three times a week; I; (1/2 to I unit).

Assistant Professor Weber
[104. Advanced Organic Chemistry.-Seminar. The open chain compounds of carbon, hydrogen, and oxygen atoms from the standpoint of the atomic linking theory; tautomerism, stereochemistry; the carbohydrates. Lectures; discussions; laboratory. Three times a week; I, II; ( $3 / 4$ unit). Not given, 1915-16.

Assistant Professor Derick]
104a. Advanced Organic Chemistry.-(Continuation of 104, with which it alternates). The closed chain compounds of the carbon, hydrogen, and oxygen atoms and of the organic compounds of nitrogen; the ureids, alkaloids. Lectures; discussion; laboratory. Three times a week; I, II; ( $3 / 4$ unit $)$.

Assistant Professor Derick
104b. Advanced Quantitative Organic Analysis.-Proteins, alkaloids, glucosides, volatile oils, and other constituents of animal and vegetable tissues; plant analysis; toxicological analysis; chemical and physical methods of organic analysis. Lectures; seminar. (May be accompanied by laboratory work on a selected group of compounds.) Twice a week; I, II; ( $3 / 4$ unit). Dr. Beal

104c. Special Topics in Organic Chemistry.-Seminar. A. von Weinberg's Kinetische Stereo-Chemie der Kohlenstoff Wesbindungen. Once a week; II; (I/4 unit).

Assistant Professor Derick
105. Advanced Physiological Chemistry.-The structure and distribution of the proteins; intermediary metabolism and the glands of internal secretion. Lectures; demonstrations; assigned reading; discussions. Twice a week; II; ( $3 / 4$ unit).

Dr. Lewis
105a. Advanced Physiological Chemistry.-Difficult biochemical preparations; the use of the newer analytical methods. Laboratory. One to five times a week; I or II; ( $3 / 4$ unit).

Dr. Lewis
105b-105c.-Advanced Physiological Chemistry.-Seminar. The recent development of physiological chemistry. Two hours a zveek, I, II; ( $3 / 4$ unit). Dr. Lewis
106. Animal Chemistry (Animal Nutrition.)-The recent advances in the chemistry of nutrition of the lower animals; the chemistry of the functional products; the flesh, fat, milk, and wool of the more common domesticated animals. Lectures; conferences; assigned reading; laboratory. Five times a week; I, $I$; ( 1 to $11 / 2$ units). Professor Grindley

Prerequisitc: Two years' work in chemistry.
107. Special Problems in Technology of Fuels.-I; (I unit).

Professor Parr
Prerequisite: Chemistry 77.
107a. Gas Manufacture--Carbonization processes, ovens, and by-products. Once a week; $I$; ( $1 / 2$ unit).

Professor Parz
108. Advanced Metallography.-Constitution and microstructure of metals and alloys; the relations between their properties, chemical and mechanical treatment, and structure. Assigned reading; laboratory. Twice a week; I; ( $3 / 4$ unit).

Assistant Professor McFarland
Prerequisite: Chemistry 7 and 78 or equivalent.
109. Advanced Industrial Chemistry.-Seminar. Some of the more important chemical industries; the development and chemical control of processes. Twice a week; I, II; ( $3 / 4$ unit). Assistant Professor McFarland

Prerequisite: Chemistry 6, 9, 14a-14b, 21 or equivalent.
110. Water Supplies.-The sources of contamination of water supplies and the purification of water for potable or technical use. Three to five times a week; I, II; (1/2 to 11/4 units).

Professor Bartow
111. Research.-A thesis is usually required of students taking the master's degree and is always required of students taking the degree of Doctor of Philosophy. (For a description of undergraduate work leading to a thesis, see Chemistry 11.) Work may be taken in the following subjects:
Physical and Electrochemistry Professor Washburn, Dr. MacInnes Inorganic Chemistry

Professor Balke, Assistant Professors Smith, Weber
Analytical Chemistry Assistant Professor Smith
Food Chemistry
Dr. Beal
Organic Chemistry . Professor Noyes, Assistant Professor Derick
Water Chemistry Professor Bartow
Animal Chemistry (Animal Nutrition) Professor Grindley
Physiological Chemistry
Dr. Lewis
Industrial Chemistry Professor Parr, Assistant Professor McFarland

## Summer Session Courses

Note: All the courses in chemistry offered in the Summer Session are equivalent to the courses of the same numbers given during the academic year.

S 1. Elementary Chemistry.-For description see Chemistry 1. (5).
Professor Balke, Dr. Hopkins
S 1a and S 1b. Inorganic Chemistry.-For description see Chemistry la and Chemistry lb. (4). Professor Balke, Dr. Hopkins

S 2. Descriptive Inorganic Chemistry.-(A continuation of S 1.) The metallic elements, their compounds, and properties. Illustrated lectures; recitations. (2).

Professor Balke
Prerequisite: Chemistry 1.
S 3. Qualitative Analysis.-Lectures; recitations; laboratory. (3). Assistant Professor Weber
Prerequisite: Chemistry 1.
*S 5a.-Elementary Quantitative Analysis.-For description see Chemistry 5a. (5).

Dr. Beal, Dr. Sears
Prerequisite: Chemistry 1 and 3.
*S 5c. Food Analysis.-For description see Chemistry 5c. (5).
Dr. Beal, Dr. Sears
*S 9a. Organic Synthesis.-For description see Chemistry 9a. (2). Assistant Professor Derick, Mr. Kamm
Prerequisite: Registration in Chemistry S 14.
*S 9b. Organic Synthesis.-(Continuation of S 9a.) (2).
Assistant Professor Derick, Mr. Kamm
Prerequisite: Chemistry S 9a and registration in Chemistry S 14b.
*S 14a. Organic Chemistry.-For description see Chemistry 14a. This course may be substituted for Chemistry 9 of the academic year. (3).

Assistant Professor Derick, Mr. Kamm
Prerequisite: Chemistry 2 and 3.
*S 14b. Organic Chemistry.-For description see Chemistry 14b. (3).
Assistant Professor Derick
Prerequisite: Chemistry S 14a or equivalent.
*S 11 and *S 111. Research.-For description see Chemistry 1la-11b, and Chemistry 111.
Professor Balke, Assistant Professor Derick, Assistant Professor Weber, Dr. Beal, Mr. MacArthur
*S 13a. Agricultural Analysis.-For description see Chemistry 13a. (5).

Dr. Beal, Dr. Sears
*S 15. Physiological Chemistry.-For description see Chemistry 15. (5 or 7 ) $\%$. Mr. MacArthur

S 17. Teachers' Course.-Methods in teaching elementary chemistry; a review of fundamental principles. (1). Professor Balke

Prerequisite: One year's work in chemistry.

## CIVIL ENGINEERING

Frederick Haynes Newell, B.S., D.Eng., Professor
Ira Osborn Baker, B.S., C.E., D.Eng., Professor
Charles Alton Ellis, A.B., Professor, Structural Engineering
Allen Boyer McDaniel, B.S., Assistant Professor
James Elmo Smith, B.S., C.E., Assistant Professor
Wilbur M Wilson, M.M.E., C.E., Assistant Professor, Structural Engineering Carroll Carson Wiley, B.S., C.E., Associate
Neal Bryant Garver, B.S., C.E., Associate
George Wellington Pickels, Jr., B.C.E., C.E., Instructor
William Horace Rayner, B.S., C.E., Instructor
Raymond Earl Davis, B.S., C.E., Instructor
Clarence Stanley Sale, B.S., Instructor
Benjamin Lester Bowling, Assistant in Cement Laboratory
27. Plane Surveying.-Compass, transit, and level; computation of areas and partitioning of land; United States land survey methods, re-establishment of corners and boundaries, and interpretation of deeds; farm and city sur-

[^73]veying. Problems with tape, compass, transit, and level. Breed and Hosmer's Principles and Practice of Surveying, Vol. I. Davis's Manual of Surveying. I; (3).

Mr. Rayner, Mr. Davis
Prerequisite: General Engineering Drawing 1, 2; Mathematics 4.
28. Higher Surveying.-Transit and plane-table in topographic surveys; methods; determination of latitude, longitude, and azimuth by stellar and solar observations; topographic drawing; a complete topographic survey based on a system of triangulation. Breed and Hosmer's Principles and Practice of Surveying, Vol. II. Davis's Manual of Surveying. II; (3).

Mr. Pickels, Mr. Rayner, Mr. Davis
Prerequisite: Civil Engineering 27; Physics 1a, 3a, and registration in Physics 1b, 3b.
31. Surveying.-Compass, level, transit, and plane-table; determination of distances by pacing, and with chain and tape, and of areas with compass and transit; profile leveling; problems with plane-table. (For students in landscape architecture.) Raymond's Plane Surveying. I; (3). Mr. Pickels

Prerequisite: Mathematics 4; Architecture 31, 32.
32. Topographic Surveying.-The stadia; conventional topographical signs; contour construction; grading and drainage problems; preparation of the plane-table. A large scale topographic map of a portion of the campus. (For students in landscape architecture.) Raymond's Plane Surveying. II; (3).

Mr. Pickels
Prerequisite: Civil Engineering 31.
33. Surveying.-Compass, level, transit, and plane-table; determination of distances by pacing, and with chain and tape; determination of areas with compass and transit; differential leveling; a survey for a large scale map with plane-table. United States land survey methods; problems in strike and dip. (For students in geology.) Breed and Hosmer's Principles and Practice of Surveying, Vol. I; Davis's Manual of Surveying. I; (3). Mr. Rayner

Prerequisite: Mathematics 4; General Engineering Drawing 1.
34. Topographic Surveying.-Stadia measurements; azimuth determinations from solar and stellar observations; lettering, conventional topographic signs; contour construction; its relation to geologic formations; survey for small scale map with plane-table, barometer, and pacing methods. (For students in geology.) Breed and Hosmer's Principles and Practice of Surveying, Vol. II; Davis's Manual of Surveying. II; (3).

Mr. Rayner
Prerequisite: Civil Engineering 33, and junior standing in geology.
51. Railroad Surveying.-Economic location, construction, and maintenance of railways. Curves, turnouts, and earthwork. Preliminary and location surveys of a line of sufficient length to secure familiarity with the methods in actual practise. Preparation of a complete set of maps, profiles, and estimates. Pickels and Wiley's Railroad Surveying. I; (5).

Assistant Professor Smith, Mr. Wiley, Mr. Pickels
Prerequisite: Civil Engineering 27, 28.
52. Roads and Pavements.-Construction and maintenance of earth, gravel, macadam, concrete, and bituminous roads; street pavements, and their
adaptation to country roads; road-building machinery; effect of travel on road surfaces; dust prevention and street cleaning. Baker's Roads and Pavements. II; (3).

Assistant Proiessor Smith, Mr. Wiley
Prerequisite: Mathematics 4; General Engineering Drawing 1, 2; Civil Engineering 27, 28, 51.
53. Railroad Surveying.-First eleven weeks of Civil Engineering 51, for municipal and sanitary engineering juniors. $I$; (3).

Mr. Pickels
Prerequisite: Civil Engineering 27, 28.
55. Roads and Pavements.-(For students in landscape gardening.) Baker's Roads and Pavoments. I; (2).

Mr. Garver
53. Graphic Statics.-Determination of stresses in roof and bridge trusses and in three-hinged arches. (For mining engineers.) Malcolm's Elements of Graphic Statics. II; (2). Assistant Professor Smith

Prcrequisite: Theoretical and Applied Mechanics 20, 25.
60. Structural Stresses.-The determination of stresses in roofs, bridges, and steel-skeleton buildings, by algebraic and graphic processes. Johnson, Bryan, and Turneaure's Modern Framed Structures, Part I. II; (4).

Professor Ellis, Assistant Professor Wilson
Prerequisite: Mathematics 2, 4, 6; Theoretical and Applied Mechanics 20, 21, 29; General Engineering Drawing 1, 2.
62. Structural Details.-Design of details for roofs, bridges, and steelframe buildings; detail drawings and shop bills. II; (2). Cargenie's Pocket Companion, last edition.

Mr. Garver
Prerequisite: Registration in Civil Engineering 60.
70. Seminar.-Preparation of one major and two minor papers upon assigned topics; discussion. II; (1).

Professor Baker, Mr. Davis
Prerequisite: Junior standing in civil engineering.
76. Surveying.-United States public land surveys; principles of reestablishing corners; use of transit in finding distances, areas, and in laying out buildings; use of the level in finding profiles and contours. Raymond's Plane Surreying. II; (2).

Mr. Pickels
Prercquisite: Mathematics 4; General Engineering Drawing 1, 2; Physics 1a-1b, 3a-3b.
77. Masonry Construction.-Baker's Masonry Construction. I; (4). Professor Baker, Assistant Professor McDaniel
Prerequisite: Theoretical and Applied Mechanics 20, 21, 29, 10; Civil Engineering 60.
79. Cement Laboratory.-Standard tests for hydraulic cement. $I$; (1).

Professor Baker, Assistant Professor McDaniel, Mr. Bowling
Prerequisite: Theoretical and Applied Mechanics 20, 21, 29, 10 ; Civil Engineering 60; registration in Civil Engineering 77.
80. Contracts and Specifications.-The law of contracts; general and technical clauses used in engineering specifications. Johnson's Engireering Contract's and Specifications. II. (2).

Professor Baker, Assistant Professor McDaniel
Prerequisite: Senior standing in engineering.
81. Theory of Reinforced Concrete.-Reinforced concrete beams, columns, and slabs. Hool's Reinforced Concrete Construction. I; (2).

Professor Ellis, Assistant Professor McDaniel
Prerequisite: Registration in Civil Engineering 77, 79, 83, and 85, or 91.
82. Reinforced Concrete Design.-Plain and reinforced concrete arches, culverts, dams, bridges, and retaining walls. Hool's Reinforced Concrete Construction, Vol. II. II; (4).

Assistant Professor McDaniel
Prerequisite: Civil Engineering 81.
83. Steel Bridge Design.-Determination of stresses and sections of a plate girder and a truss span; stress sheet, general design drawings, and estimate of weights. (For railway civil engineers, and civil engineers taking the general civil engineering option.) Kirkham's Structural Enginecring. I; (3).

Assistant Professor Wilson
Prerequisite: Civil Engineering 60, 62.
85. Steel Bridge Design.-(For civil engineers taking the structural engineering option.) Kirkham's Structural Engineering. I; (5).

Assistant Professor Wilson
Prerequisite: Civil Engineering 60, 62.
87. Advanced Bridge Analysis.-Continuous, draw, cantilever, suspension, and metal-arch bridges. Johnson, Bryan and Turneaure's Modern Framed Structures. Part II. I; (2).

Professor Ellis
Prerequisite: Civil Engineering 60, 62; and registration in Civil Engineering 83,85 , or 91.
88. Steel Building Design.-Stresses and sections of the steel frames of mill and office buildings; footings and grillages; design drawings and estimates of weights. II; (3).

Assistant Professor Wilson
Prerequisite: Civil Engineering 60, 62.
89-90. Hydro-Economics.-The occurrence of water in nature; its conservation, regulation, and use for power and in industries; irrigation, drainage, transportation, domestic supply; the legal title to the use of water. $I, I I$; (2).

Professor Newell
Prercquisite: Senior standing.
91. Highway Bridge Design.-Types of highway bridges; determination of location, size, and type. Steel bridges, beam, low-truss, and through-truss; methods and cost of construction. I; (4). Mr. Garver

Prerequisite: Civil Engineering 60, 62.
92. Concrete Bridges and Culverts.-Reinforced-concrete slab, girder, and arch bridges; falsework and forms; estimates of quantities; costs. II; (2). Mr. Garver
Prerequisite: Civil Engineering 77, 79, 81, 91.
93. Road Construction.-Merits of different types of roads and pavements; design; plans, specifications, and estimates. $I$; (3). Mr. Wiley

Prerequisite: Civil Engineering 52; Theoretical and Applied Mechanics 21, 29.
94. Highway Administration.-Road construction and maintenance in Europe and America; taxation and methods of financing road work; the relation of highway improvement to social and economic welfare. $I I$; (3).

Mr. Wiley
Prerequisite: Senior standing in civil engineering
96. Road Laboratory.-Examination and testing of bituminous and non-bituminous road materials. II; (2). Mr. Wiley, Mr. Bowling

Prerequisite: Civil Engineering 52, 77, 79; registration in Chemistry 73.
97-98. Thesis.-A problem in investigation or design, subject to the approval of the head of the department. Only students with high standing are permitted to take a thesis. $I$; (1): $I I$; (2).

Prerequisite: Senior standing in civil engineering

## Courses for Graduates

101. Irrigation and Drainage.-The survey, examination, construction, maintenance, and operation of works for irrigation and drainage of agricultural lands; water rights. Twice a week; $I, I I$; ( $1 / 2$ unit). Professor Newell
102. Reinforced Concrete Design.-Elastic theory and the design of reinforced concrete structures; specifications for design; concrete forms; typical structures; methods and costs of construction. Twice a week; I, II; (I unit or more).

Assistant Professor McDaniel
107. Bridge Engineering.-Deflections; the statically indeterminate frame; swing bridges and arches; special graphic methods; suspension bridges; secondary stresses; impact. Two or three times a week; I, II; (I unit or more).

Professor Ellis

124. Steel Building Construction.-Steel framing of fireproof office buildings, hotels, and industrial buildings; wind bracing; eccentrically loaded columns; analysis of special details; erection methods and costs. Treice a week; $I, I I$; (I unit or more).

Assistant Professor Wilson

## THE CLASSICS

Herbert Jewett Barton, A.M., Professor, Chairman
Charles Melville Moss, Ph.D., Professor
William Abbott Oldfathfr, Ph.D., Professor
Arthur Stanley Pease, Ph.D., Professor
Howard Vernon Canter, Ph.D., Assistant Professor
Rodney Potter Robinson, A.M., Assistant
GREEK
Major: 20 hours, excluding Greek 1a-1b, 17, 18, and 19.
Minors: 20 hours chosen from foreign languages (Latin being especially recommended), English literature, history, and philosophy.

## LATIN

Major: 20 hours, excluding Latin $1 \mathrm{a}, 6 \mathrm{a}$, and 12.
Minors: 20 hours chosen from foreign languages (Greek being especially recommended), English literature, history, and philosophy.

## CLASSICS

Major: 20 hours in Greek and Latin, excluding Greek la-1b, 16, 17, 18, 19, and 20, and Latin 1a, 6a, 12, 13, and 19. At least six hours shall be carried in the secondary language and the remaining hours in the primary language.

Minors: 20 hours chosen from foreign languages, English literature, history, and philosophy.

## GREEK

## Courses for Undergraduates

The courses in translation naturally follow each other in the following sequence: $1 \mathrm{a}-1 \mathrm{~b}, 3,7$ (5), 6 (8). Courses $1 \mathrm{a}-1 \mathrm{~b}, 3$, and 4 are intended for students who cannot present Greek for entrance to the University, but who desire to commence the study of the language. Course $2 \mathrm{a}-2 \mathrm{~b}$ may be taken after course la-1b and course 14 after courses 5 or 7. Courses $16,17,18$, and 19 are open to sophomores, juniors, and seniors; 20 is open to those who have completed one year in history or classics.

1a-1b. Grammar and Reader.-First semester: Attic forms; reading of simple prose. Second semester: Xenophon's Anabasis, Book 1. I, II; (4). Professor Oldfather
2a-2b. New Testament Greek.-First semester: Reading of selections. Second semester: Lectures on canon and text. I, II; (2). Professor Moss

Prerequisite: Greek 1.
3. Second Year Greek.-Xenophon's Anabasis, Books II-IV; grammatical drill. $I$; (3).

Professor Pease
Prerequisite: Greek 1.
4. Second Year Greek.-Homer, six books of the Iliad. II; (3).

Professor Moss
Prerequisite: Greek 3.
[5. Herodotus.-Selections, including portions of Books VI-VIII; Greek lyric poets. II; (3). Not given, 1915-16. Professor Moss

Prerequisite: Greek 4.]
6. Thucydides.- The Sicilian Expedition, Books VI-VII. I; (3).

Professor Pease
Prerequisite: Greek 4.]
7. Greek Drama.-Three plays from the great dramatists. II; (3).

Professor Pease
Prerequisite: Greek 4.
14. Greek Prose Composition.-II; (1). Professor Moss

Prerequisite: Greek 5 and 6 or 7 and 8.

## Greek Life and Literature in English

(Courses $16-20$ presuppose no knowledge of Greek and are open to all students except freshmen.)
16. The Private and Public Life of the Greeks.-Lectures illustrated by photographs and slides; prescribed readings; $I$; (1).

Professor Moss
17. Greek Poetry in Translations.-I; (2). Professor Moss
18. Greek Prose in Translations.-I; (2).
19. Greek Drama in Translations.- II; (2).

Professor Moss
Professor Moss
20. Greek History.-(This course is described by the department of history as History 5.) I; (3).

Professor Oldfather
Prerequisite: One course in history or the classics. Not open to freshmen.

## Courses for Graduates

[104. Homer and the Homeric Question.-Lectures and reading in alternate hours. I, II; (I unit) Not given, 1915-16. Professor Oldfatier]
105. Plato and Aristotle.-Selections from the political and ethical writings. $I, I I$; (I unit).

Professor Oldfather
107. Greek Oratory.-One or more speeches of each of several orators; lectures; reports. I, II; (I unit).

Professor Moss
110. Bibliography and Criticism.-Once a week; $1, I I$; ( $1 / 4 \mathrm{mnit}$ ).

Professor Oldfather, Professor Pease, and others

## LATIN

1a-1b. Ovid and Virgil.-First semester: Selections from the Amores, Heroides, and Metamorphoses. Second semester: Selections from the Aeneid. I, II; (4). Assistant Professor Canter, Mr. Robinson

Prerequisite: Three entrance units in Latin.
2a-2b. Livy, Plautus, and Terence.-First semester: Selections from Livy, the story of Hannibal. Second semester: the Rudens of Plautus and the Phormio of Terence. I, $I I$; (4). Professor Barton

Prerequisite: Four entrance units in Latin.
3. Sallust and Cicero.-Selections from the Jugurthine War; De Senectute. $I$; (3).

Assistant Professor Canter
Prerequisite: Latin 2a-2b.
4. Horace and Catullus.-Selections. II; (3). Professor Barton

Prerequisite: Latin 2a-2b.
5a-5b. Latin Composition.-Grammatical drill and practise in the simpler forms of expression. $I, I I$; (1). Assistant Professor Canter

Prerequisite: Latin la-lb or its equivalent.
6. Cicero.-Selections from the Orations. I; (4). Mr. Robinson

Prerequisite: Two entrance units in Latin.

## Roman Life and Literature in English

(Courses 12 and 13 presuppose no knowledge of Latin; open to all students except freshmen).
12. Virgil and Horace in English Translations.-The Aeneid and selections from Horace. $I$; (2).

Professor Barton
13. Roman Life.-The family, organization of society, education, marriage, amusements, with some attention to the monuments. Lectures illustrated by photographs and slides; assigned readings. $I I$; (1). Professor Barton
19. Roman History.-(This course is described by the department of history as History 6. Not open to freshmen.) II; (3). Professor Canter
9. Teachers' Course.-The purpose and methods of preparatory Latin instruction; the teacher's preparation. $I I$; (2). Professor Barton

Prerequisite: 18 hours in Latin. A portion of this requirement may be waived in the case of those who have taught Latin.
10. Latin Composition.-The leading principles; imitation of assigned models. I; (2).

Professor Barton
Prerequisite: 12 hours in Latin, including Latin $5 \mathrm{a}-5 \mathrm{~b}$ or its equivalent.

## Courses for Advanced Undergraduates and Graduates

[7. Horace and Juvenal.-Selections from the Satires and Epistles of Horace; selected Satires of Juvenal. I; (3). Not given, 1915-16.

Professor Pease
Prerequisite: 12 hours in Latin.]
8. Tacitus.-The Annals, Books I-VI. I; (3). Professor Pease

Prerequisite: 12 hours in Latin.
[14. Seneca.-Selections from his letters and tragedies. II; (3). Not given, 1915-16.

Professor Barton
Prerequisite: 15 hours in Latin.]
16. Martial and Suetonius.-Selections; lectures on literary history. II; (3). Professor Oldfather

Prerequisite: 18 hours in Latin.
22. Late Latin.-Rapid reading of selections from the Latin writers from Minucius Felix to Cassiodorus. II; (2).

Professor Pease
Prerequisite: This course is open to seniors and graduates who have had two years of college Latin or who otherwise satisfy the instructor of their ability to do the work required.

## Courses for Graduates

Students desiring to take graduate work in Latin should have had at least three years of college Latin in addition to the Latin presented to meet entrance requirements.
102. Roman Oratory.- Twice a week. II; (1/2 unit). $\begin{aligned} & \text { Assistant Professor Canter }\end{aligned}$
103. Cicero.-De Natura Deortm and De Divinatione. Twice a week; I; ( $1 / 2$ unit).

Professor Pease
104. Latin Paleography.- Tzuice a week. I; (I/2 unit). Professor Pease
106. Terence-Twice a week. I; ( $1 / 2$ unit). Professor Pease
107. Latin Epigraphy.-Twice a week. II; ( $1 / 2$ unit). Professor Pease
108. Tacitus.-The Histories. Twice a week. I; (1/2 unit).

Professor Barton
109. Virgil.- Twice a week. II; (1/2 unit).

Professor Pease
110a-110b. Bibliography and Criticism.-Once a week. I, II; (I/4 unit). Professor Oldfather and others
[112. Roman Historiography.-Twice a week. II; (I unit). Not given, 1915-16. Assistant Professor Canter]
[113. Plautus.-Twice a week. I; (I unit). Not given, 1915-16.
Professor Oldpather]
114. Caesar.-Twice a week. II; ( $1 / 2$ unit). Professor Oldfather

## Summer Session Courses

S 1. Terence.-Reading of three plays; discussions of the language and verse of comedy. ( $21 / 2$ ). Assistant Professor Canter

Prerequisite: Three or four years of high school Latin.
S 2. The Private Life of the Romans.-The house, marriage, dress, education, and amusements of the Romans. Illustrated lectures; assigned readings. (1).

Assistant Professor Canter
S 3. Teachers' Course.-For description see Latin 9. (11/2).
Assistant Professor Canter
S 4. Greek History and Private Life.-Illustrated lectures; assigned readings. (2). Associate Professor Oldfather

## Courses for Advanced Undergraduates and Graduates

*S 16. Suetonius.-The biographies of Julius Caesar and Nero. Lectures; assigned readings. (2). Associate Professor Oldfather

Prerequisite: Three years of college Latin or the equivalent.
*S 114. Caesar.- The historical works, especially the Bellum Gallicum, in their literary and historical setting. ( $\mathrm{I} / 2$ or I unit).

Associate Professor Oldfatier

## COMMERCIAL LAW <br> (See Business Organization and Operation.)

## COMPARATIVE LITERATURE

Joseph Eugene Gillet, Ph.D., Associate in Comparative Literature and German

1. Tragedy.-Theory and practise from classical times to the present day. Lectures; readings; reports. $I$; (3). Dr. Gillet

Prerequisite: Two years of college work, or the permission of the instructor. Foreign language is not required.
2. Comedy.-Theory and practise from classical times to the present day. Lectures; readings; reports. $I I$; (3).

Dr. Gillet
Prerequisite: Two years of college work, or the permission of the instructor. Foreign language is not required.

## COMPARATIVE PHILOLOGY

Leonard Bloomfield, Ph.D., Assistant Professor

## For Graduates and Advanced Undergraduates

1. Introduction to the Study of Language.-Phonetics; the development of forms of speech; dialects and the spread of languages; the study and teaching of language. I; (3). Assistant Professor Bloompield

Prerequisite: The consent of the instructor.
2. Comparative Philology of the Indo-European Languages.-Greek, Latin, and the Germanic languages, including English. II; (2).

Assistant Professor Bloomfield
Prerequisite: The consent of the instructor.
3-4. Elementary Sanskrit.-Reading and grammar. $I, I I$; (3).
Assistant Professor Bloomfield
Prerequisite: The consent of the instructor.

## DAIRY HUSBANDRY

Harry Alexis Harding, Ph.D., Professor, Dairy Bacteriology
*Wilber John Fraser, M.S., Professor, Dairy Farming
Martin John Prucha, Ph.D., Assistant Professor, Dairy Bacteriology
Nelson William Hepburn, M.S., Assistant Professor, Dairy Manufactures
LeRoy Lang, M.S., Associate, Dairy Manufactures
William Truman Crandall, M.S., Associate, Milk Production
Ray Stillman Hulce, M.S., Associate, Milk Production
Harrison August Ruehe, B.S., Associate, Dairy Manufactures
Edward Frederick Kohmann, Ph.D., Associate, Dairy Chemistry
William Wodin Yapp, M.S., Instructor, Dairy Husbandry
Paul William Allen, M.S., Assistant, Dairy Bacteriology
William Barbour Nevens, B.S., Assistant, Dairy Husbandry
Leighton J True, B.S., Assistant, Dairy Manufactures
Harold Gosser, B.S., Assistant, Dairy Husbandry

## Courses for Undergraduates

1. Milk Testing.-The Babcock test; official testing; inspectors' methods; tests for purity and adulteration; lactometer; acid tests; tests for preservatives; butter analysis; moisture, salt, and fat tests. Lectures; assigned readings; laboratory practise. (Alternates with Dairy Husbandry 16 in first semester if desired.) $I$; (3).

Assistant Professor Hepburn, Dr. Kohmann
2. Dairy Cattle.-The relation of dairy type to milk and butter-fat production; origin and history of breeds; characteristics, type, and adaptability to markets and climatic conditions; prominent families and individuals; herd improvement; selection of animals on performance, breeding, and physical conformation; grading up by use of superior sires. Lectures; recitations; judging. II; (4).

Mr. Crandall
Prerequisite: Dairy Husbandry 3, Animal Husbandry 5.
3. Elements of Dairy Husbandry.-The dairy herd; dairy sanitation; milk testing; milk; milk products. Lectures; demonstrations. (Required of all freshmen in the general curriculum in agriculture.) I or $I I$; (1).

Mr. Hulce and members of the department
4. Ice-Cream Making.-Freezers; methods of freezing; mixing and freezing ice cream, sherbets, and other frozen products; plans for factories; flavoring extracts, fillers, and binders; standards; condensed milk; its relation to the ice-cream industry; use of refrigerating machinery. (This course includes one inspection trip, costing from $\$ 10$ to $\$ 15$.) $I$ or $I I$; (3).

Mr. Ruehe
Prerequisite: Dairy Husbandry 1.

[^74]7. Creamery Butter-making and Factory Management.-Types of creameries; raw product received; grading; pasteurization; use of commercial starters; ripening; churning; salting; working. Butter composition; uniformity and methods of control; scoring. Accounting and business methods; cooperative and centralized management; sale of by-products; refrigerating; location and creamery plans; disposal of sewage. Lectures; assigned readings; laboratory practise. (This course includes one inspection trip, costing from $\$ 10$ to $\$ 15$.) II; (5). Assistant Professor Hepburn, Mr. Lang

Prerequisite: Dairy Husbandry 1.
8. City Milk Supply.- Production, transportation, and delivery. II; (2).

Professor Harding, Mr. Lang
Prerequisite: Dairy Husbandry 1.
11. Dairy Bacteriology.-The bacteria of milk and its products; methods of introduction, effect, and control. Lectures. $I$; (2). Professor Harding Prerequisite: Bacteriology 5.

12a-12b. Dairy Bacteriology.-The bacteria of milk and its products. Laboratory. I, II; (4).

Professor Harding, Mr. Allen
Prerequisite: Bacteriology 5.
16. Dairy Cattle Feeding and Management.-Compounding rations for dairy cows; station feeding tests; effects of feeds on milk products; calf raising, feeding, and general care; barn and silo arrangement. Opportunity is given to study the feeding of the University dairy herds, and the types of silos in use. (Alternates with Section A, Dairy Husbandry 1, if desired.) I; (3). Mr. Hulce

Prerequisite: Animal Husbandry 6.
17. Advanced Study of Dairy Breeds.-The origin and history of dairy breeds; characteristics and producing abilities; prominent families and individuals; pedigree work; performance records; advanced registry; problems of the breeder of pure-bred dairy cattle. Lectures; assigned readings; seminar work. (The student may specialize in the breed in which he is interested.) I; (2).

Mr. Crandall
Prerequisite: Dairy Husbandry 2 and 16, and the permission of the instructor.
[21. Systems of Dairy Farming.-Relation of the cow and the herd to profits; how to establish and perpetuate a dairy herd; economy of crops and rations; systems of cropping; organization; location and arrangement of buildings and lots; accounts, records, and inventories; markets; care and disposal of milk. $I$; (5). Not given, 1915-16.

Professor Fraser
Prerequisite: Dairy Husbandry 2 and 16.]
22. Farm Dairying and Cheese Making.-Ripening and setting milk; the curd; pressing and curing cheese; soft cheese; practise in making the common varieties. Butter making under farm conditions; marketing; handling of cream; the hand separator; various makes of machines; plans for farm dairy houses. I; (4).

Assistant Professor Hepburn, Mr. Lang
Prerequisite: Dairy Husbandry 1.

## Courses for Graduates

[101. Economic Milk Production.-Differences in the efficiency of dairy cows, their cause and effect, and their relation to successful dairy farming. Truice a week. I, II; (I unit). Not given, 1915-16. Professor Fraser]
[102. Research.-The investigations in progress in the dairy herds of the State. I, II; ( I unit). Not given, 1915-16. Professor Fraser]
[103. Research.-Dairy feeding problems. I, II; (I unit). Not given, 1915-16. Professor Fraser]
104. Dairy Bacteriology.-Assigned topics. I, II; (2 units). Professor Harding, Assistant Professor Prucha

## DRAWING, GENERAL ENGINEERING

Harry Willard Miller, M.E., Assistant Professor
Robert Kent Steward, C.E., Associate
Francis Marion Porter, M.S., Associate
Harvey Herbert Jordan, B.S., Associate
Rufus Crane, A.B., B.S., Instructor
Clarence Allen Atwell, B.S., Instructor
Merton Ford Banks, B.S., Assistant
Robert Emmet Murphy, Assistant, half-time

1. Elements of Drafting.-Lettering; isometric oblique and perspective drawing, orthographic projection; machine sketching; working drawings. Lettering: mechanical styles and the making of name plates and titles. Mechanical drawing: 12 plates from copy and 6 plates from models, with tracings of each. Dimensioned sketches from parts of standard machines; complete working drawings. Tracings duplicated in blue-print form. Time sketches of equipment. Miller's Mechcnical Drafting. I or II; (4).

Assistant Professor Miller and department staff
2. Descriptive Geometry.-The point, line, and plane; the properties of surfaces; intersections and developments (for architects, perspective instead of intersections and developments). Practical problems; recitations. Three drawing room plates, 2 hours each, 5 problems a plate, and 2 home plates, 5 problems each a week. Miller's Descriptive Geometry. I or II: (4).

Assistant Professor Miller and department staff
Prerequisite: Solid geometry, college algebra, plane trigonometry.
21. Advanced Descriptive Geometry.-Review of course 2; the cylinder, cone, convolute and warped surface; intersections of these surfaces in pairs, and by planes; planes tangent; developable and approximately developable surfaces and doubly curved and complex surfaces of revolution; practical applications and methods. II; (2).

Mr. Porter
Prerequisite: General Engineering Drawing 1. 2.

## Summer Session Courses

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## ECONOMICS

(See also Business Organization and Operation, and Transportation.)
David Kinley, Ph.D., LL.D., Professor
Maurice Henry Robinson, Ph.D., Professor
Ernest Ludlow Bogart, Ph.D., Professor
Nathan Austin Weston, Ph.D., Assistant Professor
Simon Litman, Dr. Jur. Pub. et Rer. Cam., Assistant Professor
Ralph Emerson Hellman, Ph.D., Assistant Professor
Charles Manfred Thompson, Ph.D., Associate
Joen Giffin Thompson, Ph.D., Instructor
Charles Leslie Stewart, Ph.D., Instructor
Willam Henry Dreesen, A.b., Assistant
Edward Lawrence McKenna, A.m., Assistant
Grorge Burr McMillen, A.B., Assistant
Major: For students in the College of Liberal Arts and Sciences twenty hours, made up of Economics 1 and any other courses for which it is a prerequisite.

Minor: Twenty hours in any one or two of the following subjects: history, philosophy, political science, and sociology.

Economics 7, 22, and 26 are open to freshmen without previous requirement. Economics 27 is also open to freshmen, but requires credit in course 26 or an approved high-school course in commercial geography.

Note: Economics 1 and 3 are the fundamental courses in economics. They are prerequisites for most of the advanced courses and students expecting to do advanced work in economics should take them both in their sophomore year.

Economics 2, although open to all students who have had 30 hours of university work, is primarily for students in the Colleges of Agriculture and Engineering and in curriculums in household science, chemistry, chemical engineering, and other sciences. It may not be used as a prerequisite for advanced courses in economics except as indicated.

## Courses for Undergraduates

1. Principles of Economics.-(See note preceding the description of courses in economics above.) $I$; (5).
Assistant Professor Hellman, Dr. C. M. Thompson, Dr. J. G. Thompson, Dr. Stewart, and assistants
Prerequisite: Thirty hours of university work.
2. Principles of Economics.-(See note preceding the description of courses in economics above.) $I I$; (3).
Professor Robinson, Assistant Professor Heilman, Dr. C. M. Thompson, Dr. J. G. Thompson
Prerequisite: Thirty hours of university work.
3. Money and Banking.-The history and theory of money, credit, and banking. (See note preceding the description of courses in economics.) II; (3). Assistant Professor Weston, Dr. Stewart, and assistants

## Prerequisite: Economics 1.

7. English Economic History.-The industrial development of England; the manorial system; the gilds; the commercial policy and expansion of
the seventeenth and eighteenth centuries; the industrial and manufacturing growth of the nineteenth century. (Open to freshmen and sophomores only.) I; (3).

Professor Bogart, Dr. C. M. Thompson
16c. Agricultural Economics.-The application of the principles of economics to the problems of agriculture. II; (3). Dr. J. G. Thompson

Prerequisite: Economics 1 or 2.
22. The Economic History of the United States.-The explorations and settlements that led to the colonization of this continent; the growth of industry, agriculture, commerce, transportation, and labor from the agricultural communities of the colonies to the industrial and commercial society of today. (Open to freshmen and sophomores only.) II; (3).

Professor Bogart, Dr. C. M. Thompson, Dr. Stewart, and assistants
26. Economic Resources.-Environment influences affecting commercial and industrial development; products and industries of different countries; the extent and distribution of the resources and the industrial and commercial activities of the United States. (Open to freshmen and sophomores only.) I; (3). Assistant Professor Litman, Dr. Stewart, and assistants
27. Modern Industries.-The raw materials of commerce; their geographical distribution and economic significance; the leading industries which utilize these materials; sources of power; investment of capital; employment of men and of machinery; the progressive stages of production; the distribution of finished commodities. (Open to freshmen and sophomores only.) II; (3).

Assistant Professor Litman and assistants
Prerequisite: Economics 26, or an approved high school course in commercial geography.
32. Marketing Farm Produce.-Prices of farm products; seasonal aspects; middlemen; speculation; transportation; terminal problems; regulative and protective legislation; crop statistics; public markets; direct sales; contrast between European and American marketing conditions. II; (2).

Dr. Stewart
Prerequisite: Economics 1 or 2.
33. Economics of Insurance.-The historical development and economic aspects of insurance. $I$; (2).

Professor Robinson
Prerequisite: Economics 1 and 3.
34. Property Insurance.-Technical characterisitcs and economic effects of fire, marine, title, and credit insurance and corporative suretyship. II; (2).

Professor Robinson
Prerequisite: Economics 1 and 3.

## Courses for Undergraduates and Graduates

4. Financial History of the United States.-Federal finances to the end of the Civil War; monetary, banking, and fiscal events since the War, and their influence on business. $I$; (3).

Assistant Professor Weston
Prerequisite: Economics 1 and 3 and senior standing.
5. Public Finance.-Public expenditures; financial administration; taxation; public debts. $I$; (3).

Professor Bogart

Prerequisite: Economics 1 and 3. Siudents who have had 6 hours in history and Political Science 1, and who present a statement from the department of political science showing that they are taking political science as a major, may be admitted without Economics 3.
8. The Money Market.-Money and credit; the functions of money broker and banker; the concentration of financial dealings at such centers as New York and London; international payments and the determination of rates of foreign exchange; the seasonal demands for money; causes of fluctuation in rates of discount; monetary panics and crises; investments; the financial aspects of dealings on the stock and produce exchanges. $I I$; (2).

## Assistant Professor Weston

Prerequisite: Economics 1 and 3, Business Organization and Operation 1, senior standing. For the present year former Economics 6 will be accepted instead of Business Organization and Operation 1.
9. Practical Banking.-Banking practise in the United States. I; (2). Assistant Professor Weston

Prerequisite: Economics 1 and 3, Business Organization and Operation 1, senior standing. For the present year former Economics 6 will be accepted instead of Business Organization and Operation 1.
10. Corporation Management and Finance.-The growth, causes, and forms of corporations; the promotion, financiering, incorporation, and capitalization of corporate consolidations; their organization and securities; relation of stockholders and directors; analysis of reports; stock speculation; relations of industrial corporations to international competition; receiverships and reorganizations; social and political effects. I; (3). Professor Robinson

Prerequisite: Economics 1 and 3.
11. Industrial Consolidation.-Industrial consolidation; the growth of monopoly, monopoly prices and methods, the ability of trusts to effect prices, wages, interests, and profits; and the proposed plans for controlling trusts. II; (3).

Professor Robinson
Prerequisite: Economics 10.
12a-12b. Labor Problems.-The relations of employer and employed; the development of trade unionism; policies of trade unions regarding wages, machinery, strikes, and collective bargaining; methods of industrial peace; unemployment and its remedies; labor legislation. $I$, $I I$; (3).

Assistant Professor Heilman
Prerequisite: Open to graduates and seniors who have had economics 1 and 3. Students who have had 6 hours in history and Sociology 1 and who present a statement from the department of sociology showing that they are taking sociology as a major, may be admitted without Economics 3.
13. Economic Development of Europe Since the Industrial Revolu-tion.-The economic history of France, Germany, and England since the industrial revolution. II; (3).

Professor Bogart
Prerequisite: Sixty hours of university work, including Economics 1 and 3. Students who present a statement from the department of history showing that they are taking history as a major, may be admitted without Economics 3.
14. Agricultural Cooperation.-The organization, financing, and management of cooperative associations for the promotion of farming. (Open to junior and scnior students of agriculture only.) II; (2). Dr. Stewart

Prerequisite: Economics 1 or 2.
15. Rural Credit.-The credit and banking needs of farmers and rural communities and means of supplying them. (Open to junior and senior students of agriculture only.) $I$; (2).

Dr. Stewart
Prerequisite: Economics 1 or 2.
17. Economic History of Agriculture.-Land tenure and landed property; large, medium, and small farms or estates; economic conditions and results of extensive and intensive culture; agricultural credit and markets and labor; state of agricultural class; organization in agriculture, and its relation to other industries and to the state. $I I$; (2).

Dr. J. G. Thompson

## Prerequisite: Economics 1 or 2.

19. United States Industry, 1820-1860.-Growth, distribution, and character of the population, with reference to the public domain and the westward movement; development of inland communication and transportation; foreign conmerce and the carrying trade; distribution, extent, and methods of agriculture; manufacturing, labor and labor saving machinery; currency and banking; the tariff. I; (2).

Dr. C. M. Thompson
Prerequisite: Open to graduates and seniors who have had Economics 1 and are taking a major in one of the social sciences.
20. United States Industry Since 1860 .-Improved methods of agriculture and the effect of exploiting new lands; the factory system; organized labor; evolution of "big business"; growth of urban centers; mining; economic effects of immigration; monetary questions; railroads and the regulation of interstate trade; foreign commerce; the tariff. II; (2). Dr. C. M. Thompson

Prerequisite: Open to graduates and seniors who have had Economics 1 and are taking a major in one of the social sciences.
21. Socialism and Economic Reform.-Proposed reforms affecting the economic basis of society. The theories of socialism, communism, and syndicalism; recent modifications of the Marxian philosophy; the socialist movement in its political aspects; communistic experiments; social insurance. $I I$; (2).

Assistant Professor Heilman
Prerequisite: Economics 1 and 3. Students who have had 6 hours in history and Sociology 1 and who present a statement from the department of sociology showing that they are taking sociology as a major may be admitted without Economics 3.
23. Mechanism and Technics of Domestic Commerce.-Internal trade; wholesale and retail trade organizations; markets, fairs, auctions, stock and produce exchanges; department, mail-order, and cooperative stores; commercial travelers; commercial competition; modern advertising; mercantile credit. I; (3). Assistant Professor Litman
Prerequisite: Economics 1 and 3.
29. Foreign Commerce and Commercial Politics.-Problems of international trade; changes in theories and in policies; economic systems (mercan-
tile, free trade, protective); classes of customs tariffs; commercial treaties; history of tariff legislation in the United States. II; (3).

Assistant Professor Litman
Prerequisite: Economics 28.
[31. Organization of Foreign Commerce.-Exporting and importing; ocean transportation; line and charter traffic; institutions for furthering export trade; the consular service; entry of goods; the work of the custom house. II; (3). Not given, 1915-16.

Assistant Professor Litman
Prerequisite: Economics 28.]
51. Public Utilities.-Relations of the public to public service corporations; methods of regulation; methods of control over accounting, capitalization, and service; valuation and rate making; comparisons of recent decisions of commissions; tendencies in regulation. $I$; (3). Assistant Professor Heilman

Prerequisitc: Open to graduates and seniors who have had Economics 10.

## Courses for Graduates

Students entering upon graduate work in economics must have had a thoro course in the principles of the science and should also have studied some special part of the field, such as public finance or money and banking.
[101. Economic Theory.-Twice a week. I, II; (I unit). Not given, 1915-16. Professor Kinley]
102. Theory of Money, Credit, and Prices.-Twice a week. I, II; (I unit). Professor Kinley
104. Foreign Commerce of the United States.-The foreign commerce of the United States as shown in government publications. Twice a week. II; (I unit).

Assistant Professor Litman
105. Public Finance.-The history and theory of public revenue and expenditure. Twice a week. I, II; (I unit). Professor Bogart
107. The Corporation in Eccnomic Evolution.-Twice a week. I, II; (I unit).

Professor Robinson
[109. Theory of Industrial Consolidations.-The nature of industrial consolidations; the conditions and causes responsible for their development and their effects upon the production and distribution of wealth. Twice a weeck. I, II; (I unit). Not given, 1915-16. Professor Robinson]
118. Seminar.- $I, I$. Professor Kinley
120. History of Economic Thought.-Twice a week. I, II; (I unit).

Dr. J. G. Thompson
[122. Advanced Economic History of the United States.-Twice a week. I, $I$; (I unit). Not given, 1915-16. Professor Bogart]

## Summer Session Courses

S 2. Principles of Economics.-(2).
*S 5. Public Finance.-(1) ( $1 / 4$ unit). Dr. C. M. Thompson

Professor Bogart
Prerequisite: At least 8 hours of economics, (including Economics 2) or 5 hours of economics and 6 of history and political science.

S 26. Economic Resources of the United States.-(2). Mr. Scovill

S 37. Salesmanship and Advertising.-(2).
Mr. McJohnston
Prerequisite: Economics 1 and 6, or the equivalent
*S 122. Economic History of the United States.-( $1 / 2$ unit).
Professor Bogart

## EDUCATION

William Chandler Bagley, Ph.D., Professor<br>Charles Hughes Johnston, Ph.D., Professor<br>Horace Adeleert Hollister, A.M., Professor<br>Guy Montrose Whipple, Ph.D., Professor<br>Joseph Clifton Brown, A.M., Principal of the Training School<br>Wilford Stanton Miller, A.M., Assistant and Secretary<br>Margaret Vara Cobb, A.M., Assistant<br>Harriet Josephine Berninger, A.B., Assistant

Lotus Delta Coffman, Ph.D., Professor in the Sunmer Session Harold Ordway Rugg, Ph.D., Instructor in the Summer Session

The courses of the department fall into two general divisions: courses primarily for professional training and courses more specifically designed for general culture. The first division includes courses $1,4,9,10,11,15,18$, and 20 ; the second division, courses $2,5,12,13$, and 16 .

Major: 20 hours made up from any of the courses offered by the department.

Minor: 20 hours made up from either (a) courses in any one or two university subjects represented in the high school program; or (b) courses in any one or two of the following departments: psychology, sociology, philosophy, and political science; or (c) from one subject in (a) and one in (b).

## Introductory Courses

1. Introduction to Education.-(a) The American public-school system; (b) the principles and aim of education; biological basis, heredity, and environment; instinct, habit, and habit-formation; memory, and the higher mental processes. (This course is required of all students who are given the official indorsement of the Appointments Committee for teaching positions in secondary schools.) I or II; (4).

Professor Bagley, Mr. Miller
Prerequisite: Junior standing.
2. History of Education.- Evolution of educational theory, institutions, and practise as related to the contemporary developments of the Greek, Roman, medieval, and modern civilizations. II; (5). Professor Johnston

## Intermediate Courses

10. The Technics of Teaching.-Types of classroom exercises and preparation of teaching plans; the hygiene of instruction; classroom management; professional ethics. Observation of teaching in neighboring high schools. (This course is required of all students who are given the official recommendation of the Appointments Committee for teaching positions in secondary schools.) $I$ or II. (3).

Professor Bagley, Mr. Brown
Prerequisite: Education 1.
16. Social Education.-The school as a social factor in its relation to
the home, the church, and the state; the relation of education to child labor, vocation, and crime; the school as a community center; the social composition of student-and teaching-populations; educational extension. $I$; (3).

Mr. Brown
Prerequisite: Two years of university work.
25. Educational Psychology.-Instinct; habit and acquisition of skill; perception and memory; conception, judgment, and reasoning. Lectures; demonstrations. I; (3).

Professor Whipple
Prerequisite: Psychology 1 or Education 1.

## Courses for Advanced Undergraduates and Graduates

4. Problems of Educational Administration.-The interpretation of present tendencies as exemplified in the school systems of typical citics and states, and in recent educational experiments in administration, discipline, and methods of teaching. $I$; (3).

Mr. Brown
Prerequisite: Education 1, 2.
5. Comparative Education.-Organization, administration, and basic nationa! ideals of the school systems of the United States, Germany, England, and France, with reference to secondary education and to the training of teachers. I; (3).

Professor Johnston
Prerequisite: Education 1.
6. Principles of High-school Education.-The evolution of high schools and of the fundamental conceptions of secondary education; proposed reorganization; relation of high schools to the state systems; legal status; articulation with the elementary school, the college, the technical school, the community, and the home; the teaching staff; reconstruction of curriculums; "controls" of instruction; direction of "student activities." (This course is planned for those who expect to teach in secondary schools.) $I$; (3).

## Professor Johnston

## Prerequisite: Education 1.

27. High-school Curriculums.-Important historic curriculums for secondary education; modern curriculum-making; professional supervision; textbooks, apparatus, and teaching devices; the psychology of high-school subjects; the constructing of curriculums for typical communities. $I I$; (3).

Professor Johnston
Prerequisite: Education 1 or 6 (preferably both).
13-14. Educational Classics.-Educational writings of Plato, Aristotle, Quintilian, Montaigne, Vittorino, Da Feltre, Milton, Locke, Comenius, Rousseau, Pestalozzi, Froebel, and Herbert Spencer. (Required for advanced degrees in education. In 1915-16 the modern period will constitute course 13; the ancient period course 14.) I, II; (3). Professor Whipple, Mr. Brown

## Prerequisite: Education 1, 2.

15. School Hygiene.-Hygienic aspects of school architecture and equipment; heating, ventilation, and lighting of school buildings; hygiene of posture, exercise, and fatigue, and of reading and writing; program of studies and daily time table; mental health of teachers and pupils; contagious diseases
and the relation of school authorities to health authorities. (Graduate credit subject to approval of Executive Faculty.) II; (2). Professor Whipple

Prerequisite: Education 1 or normal-school graduation, or two years of teaching experience, with at least junior standing.
18. Method in Educational Research.-Statistical and other methods. (This course is ordinarily required of all candidates for advanced degrees.) I; (2).

Mr. Brown
Prerequisite: Education 1.
20a. Theory of Supervision.-The training of teachers in service; measuring educational products; qualities of merit and causes of failure in teachers; selection of teachers; organization of teachers' meetings and other agencies for improving the service. II; (3). Professor Bagley

Prerequisite: Education 1.
[20b. Theory and Practise of Supervision.-Identical with 20a except for the addition of a period each week devoted to the observation and criticism of teaching in elementary and high schools. $I I$; (3). Not given, 1915-16.

Prerequisite: Education 1.]
41. Vocational Education.-Social significance; institutions and methods in elementary and secondary schools; federal, state, and municipal provisions; recent legislation; present tendencies. I; (3). Professor Johnston

Prerequisite: Education 1 or an equivalent satisfactory to the instructor.
42. Auxiliary Education.-Institutions and methods for training defectives and delinquents; Binet-Simon tests and other methods of mental diagnosis; morons and moral delinquents; sensory defectives (blind and deaf); public institutions of auxiliary education and their administration. $I I$; (2).

Professor Whipple
43. Mental Tests.-Tests of sensory capacities; attention; memory; learning; suggestibility; inventiveness; diagnosis of mental age; general intellectual status; mental retardation. Laboratory. II; (2). Professor Whipple

Prerequisite: Education 25 or the equivalent, and the consent of the instructor.
45. Problems in Educational Psychology.-II; (2). Professor Whipple

## Courses for Graduates

101. Seminar in Educational Theory--Topic, 1915: The higher mental processes in relation to a philosophy of education. I; (I unit).

Professor Bagley, Professor Bode
[104. Seminar in Administration and Supervision.-Once a week. $I I$; (I unit). Not given, 1915-16.]
[105. Seminar in History of Education.-Not given, 1915-16.]
106. Seminar in Secondary Education.-Organization, administration, and special methods of secondary education. Reports and discussions of technical investigations in the fields of high school administration and pedagogy. $I I$; (I unit).

Professor Johnston
[108. The History of Vocational and Industrial Education.- $I I$; (I unit). Not given, 1915-16].
[111. Practise Teaching.-Not given, 1915-16.]
112. Principles of Education.-(For graduate students who are not majoring in education and who have not taken undergraduate courses in education.) Survey of the American public-school system; leading principles and doctrines of educational science; technics of teaching and problems of class management. Twice a week. II; ( $1 / 2$ unit).

Professor Bagley
[119. The Elementary Curriculum.-The functions and values of ele-mentary-school studies; time allotments; construction of curriculums. Twice a week. II; (I unit). Not given, 1915-16.]
125. Seminar in Educational Psychology.-Once a week. I; (I unit). Professor Whipple
Departmental Conference.-All graduate students majoring in education are expected to meet with the department staff every alternate Monday from 7 to $9 \mathrm{p} . \mathrm{m}$. $I, I I$; (no credit).

## Summer Session Courses-Education and Psychology <br> Courses for Undergraduates

S 1a. Principles of Education.-The function of education; formal and informal education; the relation of physical and mental development to the art of teaching. (3).

Mr. Miller
Prerequisite: Junior standing, (but, in the discretion of the instructor, open to teachers who cannot meet this requirement).

S 1b. The Educational System.-The school system of the United States; its present organization, its origin, its distinctive characteristics as compared with other systems; its present problems. Lectures; readings. (1). Professor Bagley
Prerequisite: Junior standing (but, in the discretion of the instructor, open to teachers who cannot meet the requirement).

S 2. History of Education.-For description see Education 2. (2 $1 / 2$ ). Mr. Rug.
Prerequisite: Junior standing (but, in the discretion of the instructor, open to teachers who cannot meet this requirement).

S 10a. The Technics of Teaching.-Education S 10a and S 10b are equivalent to Education 10, which is one of the courses required by Senate ruling for the official recommendation of the Appointments Committee. For description see Education 10. (2).

Professor Hollister
Prerequisite: Education 1, or its equivalent.
S 10b. Class Management.-Education 10a and S 10b are equivalent to Education 10 which is one of the courses required by Senate ruling for the official recommendation of the Appointments Committee. For description see Education 10. (1).

Professor Bagley
Prerequisite: Education 1, or its equivalent.
S 25. Educational Psychology.-For description see Education 25. (2).

Professor Whipple
Prerequisite: Junior standing, (but, in the discretion of the instructor, open to teachers who cannot meet this requirement).

## Courses for Undergraduates and Graduates

*S 4. School Organization and Administration.-The establishment of schools and provisions for their administration; units of control; maintenance; training and selection of teachers. (2). Professor Hollister

Prerequisite: Education 1 or equivalent (but, in the discretion of the instructor, open to teachers who cannot meet this requirement).

## *S 6. The Principles of High-School Education.-For description see Education 6. (2). <br> Professor Johnston

Prerequisite: Education 1, or equivalent. (High-school teachers and principals may, in the discretion of the instructor, be admitted to the course without the prerequisite.)
*S 18. Method in Educational Research.-For description see Education 18. (1 $1 / 2$ ).

Mr. Rugg
Prerequisite: Education 1.
*S 20. Supervision.-The limitations, types, functions, standards, and devices of supervisors; the subject limits and time limits of the course of study, and its adaptation to types of mind; the rating of teachers; improvement of teachers in service; the technics of criticism. Lectures; readings; investigation of special problems. (For principals, superintendents, and supervisors.) (2).

Professor Coffman
Prerequisite: Education 1, or equivalent. (Superintendents, principals, and supervisors may, in the discretion of the instructor, be admitted to the course without the prerequisite.)
*S 21. Units, Scales, and Standards.-Units, scales, and standards for measuring educational achievement or determining progress in arithmetic, spelling, handwriting, reading, composition, drawing, history, and geography. Lectures; readings; investigation of a special problem. For school superintendants. (2).

Professor Coffman
Prerequisite: Education 1 or equivalent. (Superintendents, principals, and supervisors may, in the discretion of the instructor, be admitted to the course without the prerequisite.)
*S 41. Vocational Education.-For description see Education 41. (2). Professor Johnston
Prerequisite: Education 1 or equivalent. (Superintendents, principals, and supervisors may, in the discretion of the instructor, be admitted to the course without the prerequisite.)
*S 43. Mental Tests.-For description see Education 43. (1).
Associate Professor Whipple
Prerequisite: Education 25 or its equivalent, and the consent of the instructor.
*S 44. History of Industrial and Vocational Education.-Relation to general school education; earlier historic movements and the contribution of the educational classics; industrial training in America; agricultural and industrial high schools; secondary and higher technical schools; continuation schools. (11/2).

Mr. Rugg
Prerequisite: Education 2 or its equivalent.

## Courses for Graduates

*S 106. High School Government.-Legal provisions; theories of student control; supervision and inspection. ( $1 / 2$ unit). Professor Hollister

Prerequisite: Graduate standing.
*S 119. Seminar in Elementary Education: The Elementary Curricu-lum.-The administration of the elementary curriculum; its origin and development. ( $\mathrm{I} / 2$ unit).

Professor Cofrman
Prerequisite: Graduate standing.
*S 125. Seminar in Educational Psychology.-(1/2 unit).
Associate Professor Whipple
Prerequisite: Graduate standing.
*S 127. High School Curriculums.-Curriculum organization and special methods in the high school; comparisons with foreign secondary school systems. ( $1 / 2$ unit).

Professor Johnston
Prerequisite: Graduate standing.
*S 129. The Theory of Educational Values.-Educational values; common elements in the elementary and secondary programs. Lectures; readings; discussions. ( $1 / 2$ unit).

Professor Bagley
Prerequisite: Graduate standing.

## ELECTRICAL ENGINEERING

Ellery Burton Paine, M.S., E.E., Professor; Acting Head of the Department Morgan Broors, Ph.B., M.E., Professor
Edward Hardenbergh Waldo, A.B., M.S., M.E., Assistant Professor
Philip Sheridan Biegler, B.S., E.E., Assistant Professor
Trygue D Yensen, M.S., E.E., Research Assistant Professor
Leonard Vaughan James, M.S., E.E., Associate
Ira William Fisk, M.S., E.E., Associate
Abner Richard Knight, M.E., Associate
Charles Ruby Moore, B.S., Associate
John William Davis, B.S., Instructor
4. Elementary Electrical Engineering.-Electrical machinery; selection, installation, and operation; distribution of power; motor applications. II; (2).

Professor Brooks
Prerequisite: Physics la-1b, 3a-3b; junior standing.
8. Electric Currents and Apparatus.-Direct and alternating current circuits and machines; storage batteries. (For chemical engineers.) II; (3). Professor Brooks, Mr. Davis
Prerequisite: Physics 1a-1b, 3a-3b; registration or credit in Mathematics 7; registration in Electrical Engineering 68.
11. Direct Current Apparatus.-Generators, motors, distribution circuits; storage batteries. (For mechanical engineers.) $I$; (3).

Professor Broors
Prerequisite: Physics 1a-1b, 3a-3b, Mathematics 8 or 9.
12. Alternating Current Apparatus.-Generators and motors, transformers, distribution systems. (For mechanical engineers.) II; (3).

Professor Brooks
Prerequisite: Electrical Engineering 11, 61.
25. Direct Current Apparatus.-Electric and magnetic circuits; direct current generators and motors. I; (4). Mr. James, Mr. Fisk, Mr. Kniget

Prerequisite: Physics la-1b, 3a-3b; Mathematics 9.
26. Alternating Currents.-Mathematical and graphical treatment of periodic currents; phenomena in transmission lines and transformers. $I I$; (4). Mr. James, Mr. Fisk, Mr. Kniget
Prerequisite: Electrical Engineering 25.
35. Alternating Current Apparatus.-Transformers and generators. $I$; Professor Paine, Mr. James, Mr. Fisk (4).

Prerequisite: Electrical Engineering 26, 76.
36. Alternating Current Apparatus.-Synchronous, induction, and commutator motors; rotary converters; distributed inductance and capacity; transient phenomena. II; (4). Professor Paine, Mr. James, Mr. Fisk

Prerequisite: Electrical Engineering 35, 85.
55. Electrical Design.-Electromagnets and dynamos, direct and alternating; transformers. Gray's Electrical Machine Design. I; (2).

Assistant Professor Waldo, Mr. Kniget
Prerequisite: Electrical Engineering 26; registration in Electrical Engineering 35.
56. Electrical Design.-Induction motors and converters; power plant design. Gebhardt's Steam Pozev Plant Engineering. II; (4).

Assistant Professor Waldo, Mr. Kniget
Prerequisite: Electrical Engineering 35, Mechanical Engineering 2.
61. Direct Current Laboratory.-Circuits and machines. (For mechanical engineers.) $I$; (1).

Assistant Professor Biegler, Mr. Moore, Mr. Davis
Prerequisite: Registration in Electrical Engineering 11.
62. Alternating Current Laboratory.-Alternating current circuits and machines. (For mechanical engineers.) $I I$; (1).

Assistant Professor Biegler, Mr. Moore, Mr. Davis
Prerequisite: Registration in Electrical Engineering 12.
64. Electrical Engineering Laboratory.-Testing of dynamos and motors. $I I$; (1). Assistant Professor Biegler

Prerequisite: Registration in Electrical Engineering 4.
68. Electrical Engineering Laboratory.-Direct and alternating current circuits and machines. II; (1.)

Mr. Davis
Prerequisite: Registration in Electrical Engineering 8.

71-72. Electrical Engineering Laboratory.-The construction of special apparatus or some other work approved by the department. (Elective for juniors and seniors.) $I, I i^{*}(1$ to 3$)$. Mr. Moore
75. Electrical Engineering Laboratory.-Direct current laboratory accompanying Electrical Engineering 25. I; (2).

Assistant Professor Biegler, Mr. Davis

Prerequisite: Registration in Electrical Engineering 25.
76. Electrical Engineering Laboratory.-Determination of the flux and E.M.F. waves of alternators. Alternating current circuits, instruments. II; (2.)

Assistant Professor Biegler, Mr. Davis
Prerequisite: Electrical Engineering 25, 75; registration in Electrical Engineering 26.
85. Electrical Engineering Laboratory.-Advanced alternating current testing. I; (2). Assistant Professor Biegler, Mr. Moore, Mr. Davis

Prerequisite: Electrical Engineering 76; registration in Electrical Engineering 35.
86. Electrical Engineering Laboratory.-Advanced alternating current testing. II; (2). Assistant Professor Biegler, Mr. Moore, Mr. Davis

Prerequisite: Electrical Engineering 85; registration in Electrical Engineering 36.
90. Lighting.-Electric lamps and other illuminants, and their effective use; interior wiring; methods of distribntion. (For architects.) II (half semester only); (1).

Professor Brooks
Prerequisite: Junior standing.
92. Lighting and Wiring.-First haif of semester same as Electrical Engineering 90. Further study of distribution, fusing, underwriters' rules; motors. (For architectural engineers.) II; (2). Professor Brooks

Prerequisite: Junior standing.
95-96. Seminar.-Electrical railroading; illumination; telegraphy; telephony; storage batteries; electric metallurgy. $I, I$; (1). Professor Paine

Prerequisite: Junior standing.
98. Thesis.-First semester, preliminary reading and investigation; second semester, completion. II; (3). Department staff

## Courses for Graduates

Entrance upon graduate work in electrical engineering presupposes the full undergraduate curriculum in that subject.
101. Advanced Alternating Currents.-The theory of transient phenomena; polyphase circuits; measuring apparatus. Treice a week; I, II; ( $I^{1 / 2}$ units).

Professor Paine
103. Electrical Design.-Plans for an electrical machine or apparatus of specified character; or for the arrangement of an electrical plant; or for the installation of such machinery or apparatus. Trvice a week; I, II; (I unit). Assistant Professor Waldo

[^76]104. Telegraphy and Telephony.-Once a week; I, II; (I unit).

Professor Brooks
105. Electrical Engineering Research.-Investigation of electrical phenomena, or tests of some electrical machine, or of a plant of such machines. Twice a week; I, II; (I to 3 units).

Professor Paine
106. Illumination.-Once a week; I, II; (I unit). Professor Broors

## ENGINEERING

(See Architecture, Ceramic Engineering, Civil Engineering, Drawing, Electrical Engineering, Mechanical Engineering, Meceanics, Mining Engineering, Municipal and Sanitary Engineering, Physics, Railway Civil Engineering, Railway Electrical Engineering, and Railway Mechanical Engineering.)

## THE ENGLISH LANGUAGE AND LITERATURE

(Including Rhetoric and Public Speaking)
Stuart Pratt Sherman, Ph.D., Professor, Chairman
Daniel Kilmam Dodge, Ph.D., Professor
Thomas Arkle Clark, B.L., Professor
Edward Fulton, Ph.D., Associate Professor
Edward Chauncey Baldwin, Ph.D., Assistant Professor
Harry Gilbert Paul, Ph.D., Assistant Professor
Franklin William Scott, Ph.D., Assistant Professor, Secretary
Harrie Stuart Vedder Jones, Pl.D., Assistant Professor
Jacob Zeitlin, Ph.D., Associate
Charles Henry Woolbert, A.M., Associate
Herbert LeSourd Creek, Ph.D., Associate
Clarence Valentine Boyer, Ph.D., Associate
Gertrude Schoepperle, Ph.D., Associate
Harry Franklin Harrington, A.M., Associate
Martha Jackson Kyle, A.M., Associate
Arthur Ray Warnock, A.B., Acting Instructor
Clarissa Rinaker, Ph.D., Instructor
Easley Stephen Jones, A.M., Instructor
Mervin James Curl, A.M., Instructor
Harrison McJohnston, A.M., Instructor
Harold MI Hillebrand, Ph.D., Instructor
Earle Stanley Alden, A.M., Instructor
Robert Calvin Whitford, A.M., Instructor
Lynn Harold Harris, Ph.D., Instructor
Ralph Earle Tieje, 'A.M., Instructor
Carl Sawyer Downes, Ph.D., Instructor
William Eben Schultz, Ph.D., Instructor
Allene Gregory, Ph.D., Instructor
Sigurd Osdorn Hustvedt, Ph.D., Instructor
Roger Sherman Loomis, B.Litt., A.M., Tutor
Sadie Annis Harbarger, A.M., Assistant
Ruth Kelso, A.M., Assistant
Lew R Sarett, A.B., Assistant
Emerson Grant Sutcliffe, A.B., Assistant

Thomas Blaine Stanley, A.B., Assistant
Raymond Ephraim Dixon, A.M., Assistant
James Manley Phelps, A.B., Assistant
Robert Bruce Weirick, A.M., Assistant
Clyde Byron Beck, A.B., Assistant
Carryl Nelson Thurber, A.B., Assistant
Myrtle Amy Cruzan, A.B., Assistant
Beatrice Virginia Copley, A.B., Assistant
Major: 20 hours in English excluding Rhetoric 1, 2, and English 10, and including at least 10 hours in English literature, at least 3 hours in composition, and at least 1 one-year course, or its equivalent, from the advanced group of courses.

Minor: 20 hours in either (a) one foreign language; or (b) in any two foreign languages; or (c) in one foreign language and philosophy; or (d) in one foreign language and history.

## A. LITERATURE AND LANGUAGE

## Elementary Courses

1-2. Survey of English Literature.-(Credit is not given for either semester separately, nor for the course in addition to course 10 or course 20.) I. II; (4).

Professor Sherman, Assistant Professor Baldwin, Dr. Creek, Dr. Schoepperle,
Dr. Rinaker, Dr. Hillebrand
Prerequisite: One year of college work.
10-11. Introduction to Literature. - First semester: The forms of poetry. Second semester: The forms of prose literature. (This course is intended only for those who expect to include a considerable amount of literature, in English or in some other language, in their curriculum. Credit is not given for the course in addition to course 1 or course 20. One semester's work is credited toward a major in English. Credit is not given for the first semester separately.) $I, I I$; (3).

Professor Dodge, Assistant Professor Paul, Dr. Zeitlin
Prerequisite: The minimum entrance requirements in English.
12-13. American Literature.-(Credit is not given for either semester separately.) $I, I$; (2).

Assistant Professor Paul
Prerequisite: English 1-2 or 10-11.
17. The English Language.-History, characteristics, and usage of modern English. I; (3).

Associate Professor Fulton
Prerequisite: Rhetoric 1-2.
20. Chief English Writers.-(Offered only for those whose program admits of but one semester's work in English, and who therefore may not register for English 1. It is not accepted, like course 1, as a prerequisite for more advanced courses. Credit is not given for the course in addition to course 1 or course 10.) $I$ or $I I$; (4).

Dr. Boyer, Mr. Jones, Mr. Loomis, Mr. Whitford, Dr. Downes
Prerequisite: One year of college work.
23. Introduction to Shakespeare. $-I$ or $I I$; (3).

Professor Sherman, Dr. Hillerrand
Prerequisite: English 1-2 or 10-11.

## Intermediate Courses

Prerequisite: Eleven hours of English literature, or eight hours of English literature and eight hours of a foreign language.

21-22. Literary Study of the Bible.-Hebrew literature as an expression of the life of the race that produced it; the ethical and artistic debt of modern life to ancient Hebrew thought. (Either semester may be taken separately.) I, $I$; (3).

Assistant Professor Baldwin
24. English Literature of the Victorian Period.-II; (3). Miss Kyle
29. English Literature From 1557 to 1688, Exclusive of the Drama.I; (3).

Assistant Professor Baldwin
31. English Literature From 1688 to 1789.-II; (3).

Assistant Professor Paul
32. The Critical Essayists of the 19th Century.-II; (3).

Associate Professor Fulton
33. English Literature From 1789 to 1837.-I; (3).

Dr. Zeitlin

## Advanced Courses for Undergraduates and Graduates

Prerequisite: Sixteen hours of English literature. These courses, however, are open to any junior or senior with the approval of the instructor concerned.
3. The Poetry of Milton.-Origins, forms, artistic and ethical values; Milton's place in English literary history. II; (3).

Assistant Professor Baldwin
4. History and Principles of English Versification.- $I$; (2).

Dr. Creek
5. Shakespeare.-Intensive study of a few plays, with special emphasis on Hamlet. II; (3).

Professor Dodge
25-26. Chaucer and His Contemporaries.-(The first semester, dealing with Chaucer exclusively, may be taken for separate credit.) $I, I I$; (3).

Assistant Professor Jones
8-9. Old English (Anglo-Saxon).-Grammar; short poems; Beowulf. (The first semester may be taken separately.) $I, I I$; (3). Professor Dodge

27-28. Studies in the History of Journalism.-First semester: English literary periodicals and the periodical essay in the eighteenth century. Second semester: The magazine in America.

Assistant Professor Scort
41-42. Teachers' Course.-Methods of teaching English literature and composition in the high school. (This course is not credited toward advanced degrees, or toward a major in English. Either semester may be taken separately.) $I, I I$; (2).
18. Modern English Grammar.-Sentence structure and analysis; grammatical categories; peculiarities of English syntax. II; (3).

Dr. Zeitlin

35-35. The English Drama (Exclusive of Shakespeare). - First semester: From the beginning to 1600 . Second semester: From 1600 to 1700. (Either semester may be taken for separate credit.) $I$, $I I$; (3).

Professor Dodge, Professor Sherman
38. The Arthurian Tradition in England.-The historical Arthur; Celtic tales; Old French romances (in translation); the tradition in England from the early romances to Arnold, with special attention to Malory and Tennyson. II; (3).

Dr. Schoepperle
[39. Introduction to the Literature of the Middle Ages.-European culture from the fourth century; the relation of English and continental literature, to the fourteenth centurg: $I_{\text {; ( }}$ (3). Not given, 1915-16. Dr. Creer]
50. Celtic Literature in English Translation.-Irish, Scotch, Gælic, and Welsh literatures, with special attention to the Cuchulainn and Ossianic cycles of romances and the Mabinogion. Celtic influence in English literature. I; (2).

Dr. Schoepperle
45. The Development of the Modern Drama.-Dramatic tendencies in the nireteenth century; both in England and on the Continent; representative readings; lectures. $I$; (2).

Dr. Hillebrand

## Courses for Graduates

101. Research in Special Periods.-Competent graduate students are encouraged to seek the advice and assistance of the department of English and to submit to the department plans for study in the language or literature of the periods mentioned below.
A. Anglo-Saxon language and literature Professor Dodge, Dr. Zertirn
B. Thirteenth and Fourteenth Centuries. Assistant Professor Jones
C. Sixteenth Century

Professor Dodge
D. Seventeenth Century

Assistant Professor Baldwin
E. Eighteenth Century Professor Sherman, Assistant Professor Paul
F. Nineteenth Century Professor Sheryan, Associate Professor Fulton
106. English Literary Criticism From Dryden to Coleridge.-Tuice a week. I, II; (I : nitit).

Associate Professor Fulton
[108. The English Epic.-The 16th, 17th, and 18 th Centuries, from the point of view of classical theory. $I, I I$; (I unit). Not given, 1915-16.

Associate Professor Fulton]
110. Old English (Anglo-Saxon) Poetry.-Twice a week. I, II; (I un:t).

Professor Dodge
[113. Historical Prose Syntax.-The forces, native and foreign, in the development of English prose sentence structure. I, II; (I unit). Not given, 1915-16.

Dr. Zeitlin]
114. The Develcpment of the Essay.-Types of the English essay; Continental influences and classical origins. $I, I$; (2). Dr. Zeitlin
[125. English Ballads and Metrical Romances. $-I$, II; (I :(nit). Not given, 1915-16.

Assistant Professor Jones]
123. Spenser and the Beginnings of the English Renaissance.-The persistence of certain medieval traditions reinforced by the revival of classical leamins; Catholicism and Calwinism as sources of literary inspiation. Twice a week. I, II; (I unit).

Assistant Professor Jones
[135. Problems in American Literature.-I, II; (I unit). Not given, 1915-16.

Assistant Professor Paul]
136. The Transition From the Seventeenth to the Eighteenth Century: The Rise of Classicism.-Twice a week. I, II; (I unit). 1915-16.

Assistant Professor Paul
[137. Nineteenth Century Prose Writers.-The relation of literature to social forces; the works of Mill, Carlyle, Newman, Ruskin, Arnold, and Pater. Twice a week. I, II; (I unit). Not given, 1915-16. Professor Sherman]
138. The Romantic Movement in England.-I, II; (I unit).

Professor Sherman

## B. RHETORIC

## Elementary Courses

*1-2. Rhetoric and Themes.-Required for students in the Colleges of Liberal Arts and Sciences, Commerce, Engineering, and Agriculture. I, II; (3). Assistant Professor Scoit in charge; Associate Professor Fulton, Assistant Professor Jones, Dr. Creek, Dr. Boyer, Dr. Schoepperle, Mr. Harrington, Dr. Rinaker, Mr. Jones, Mír. Curl, Dr. Hillebrand, Mr. Alden, Mr. Whitford, Dr. Harris, Mr. Tieje, Dr. Downes, Dr. Sceultz,
Dr. Gregory, Dr. Hustvedt, Mr. Loomis, Miss Harbarger, Miss Kelso, Mr. Sutcliffe, Mr. Stanley, Mí. Dixox. Mr. Weirick, Mr. Thurber, Miss Cruzan, Miss Copley
Prerequisite: The minimum entrance requirements in English.
Note: For the beneift of those whose course is irregular, a limited number of sections in each semester take up the work of the other semester. The course is not counted toward a major in English.

Students who show in the first two weeks that they are not prepared to do composition work of collegiate grade will be assigned to a special course parallel to Rhetoric 1, but involving additional work.

## Intermediate Courses

3. English Composition.-Short themes, with an occasional long theme. I or $I$; (3). Mr. Curl, Mr. Jones, Mr. Alden

Prerequisite: Rhetoric 1-2.
6-7. Narrative Composition.-Short story writing. (Intended for those who have some aptitude for literary work). I, II; (3). Mr. Curl

Prerequisite: Two years of college work and the consent of the instructor.
10. Business Writing.-Correspondence; sales letters; business reports and summaries. Lectures; discussions. (Not counted toward a major in English). I or II; (2).

Mr. McJohnston, Mr. Warnock, Mr. Stanley, Mr. Thurber
Prerequisite: Rhetoric 1-2.
12. The Collecting and Writing of News.-Gathering news; writing the news-story; types of newspaper narratives; news values. $I$; (3).

Mr. Harrington
Prerequisite: Rhetoric 1-2.

[^77]13. The Newspaper.-(A continuation of Rhetoric 12.) Interviewing and newspaper correspondence; organization and mechanical details of the newspaper. Practise in writing for newspapers. Six laboratory periods and three lectures a week. II; (3).

Mr. Harrington
Prerequisite: Rhetoric 1-2, 12.
21. Sales Correspondence.-Successful sales letter writing; planning the campaign; the follow-up letter; analysis of markets. I; (2).

Mr. McJornston
Prerequisite: Rhetoric 10. Open to students in business administration only.
22. Summarizing and Briefing.-Summarizing, briefing, and making reports; abstracts of correspondence on file; summarizing of commercial and economic data for the solution of business problems. (For students in the College of Commerce and Business Administration). I; (2).

Mr. McJohnston
Prerequisite: Rhetoric 10.
25-26. Senior Conferences (Courses in Commerce and Business Admin-istration).-Each senior is required to present all papers written during the year for review and criticism. Rewriting may be required if they are open to serious criticism. (Required of all seniors in the College of Commerce and Business Administration). $I, I$; (1).

Mr. McJohnston
19. Agricultural News Writing.-Class exercises; lectures; gathering and preparing material for agricultural papers. $I I$; (3).

Assistant Professor Scott
Prerequisite: Junior or senior standing in the College of Agriculture; Rhetoric 1-2.

## Advanced Courses for Undergraduates and Graduates

15-16. Editorials and Special Articles.-Sources and treatment of material for editorials and articles; the interpretation of news; journalistic backgrounds; the relation of current events to the social sciences. Assigned readings; preparation of editorials, articles, and reviews. $I, I I$; (3).

Assistant Professor Scort
17. Advanced Composition.-Structure; criticism of current periodical literature; the developing of material for reports, magazine articles, etc. (Open to a limited number of students, and only on recommendation). . II; (3).

Mr. Alden
Prerequisite: Two years of college work.
26-27. Editorial Practise.-Reading "copy"; writing headlines; making up; editorial supervision; proof reading; type selection. Five hours' desk work and one lecture a week. I, II; (3). Mr. Harrington
Prerequisite: Rhetoric 12, 13, or the consent of the instructor.
[28. Newspaper Problems and Policies.-The relation of the newspaper to the public. I; (2). Not given, 1915-16. Mr. Harrington

Prerequisite: Rhetoric 26-27.]
29. Making a Country Newspaper.-(Discussions intended primarily for seniors who expect to enter the country field.) Small town conditions;
problems affecting rural newsgathering; country correspondence; circulation; advertising; business efficiency; print-shop equipment. Special investigations. II; (2).

Mr. Harrington
Prerequisite: Junior or senior standing.

## C. PUBLIC SPEAKING

1. Oral Expression.-Theory and practise of elocution and expression, both for public and private address. (No credit is given for this course alone; it must be followed by Public Speaking 2.) $I$; (2).

Mr. Woolbert, Mr. Sarett, Mr. Phelps
Prerequisite: Rhetoric 1-2.
2. Extemporaneous Speaking.-Discussion of topics of current interest, assigned and chosen; adaption of speaking manner to subject matter, length, and attendant circumstances of the address; cultivation of facility in thinking on the platform. II; (2). Mr. Woolbert, Mr. Sarett, Mr. Phelps

Prerequisite: Public Speaking 1.
3. Argumentation.-Argumentative discourse; meeting the contentions of an opponent; briefing, speech-writing, criticism of the literature of debate. Text and exercises. I; (3).

Mr. Sarett
Prerequisite: Public Speaking 1 and 2.
4. Debate.-The spoken debate; team and individual competition; debates on current issues. II; (3).

Mr. Sarett
Prerequisite: Public Speaking 3.
5. Persuasion.-The winning of individuals and audiences by means of written and spoken appeal; platform manner and methods. $I$; (2).

Mr. Woolbert
Prerequisite: Public Speaking 1 and 2.
6. The Forms of Public Address.-Types and modes of speeches; speech style, criticism, and standards; practise in using various forms. $I I$; (2). Mr. Woolbert
Prerequisite: Public Speaking 1 and 2.
7. A Study of Orators and Oratory.-The lives, times, and works of distinguished speakers. Required readings and reports, chiefly oral in the form of speeches; discussions, topical speeches, and declamations. I; (2).

Mr. Woolbert
Prerequisite: Public Speaking 1 and 2.
10. Interpretation and Dramatization of Literature.-Oral interpretation of standard literature; the interpretation and staging of plays. $I I$; (2). Mr. Woolbert, Mr. Phelps
Prerequisite: Public Speaking 1.

## Summer Session Courses

## A-Literature and Language

S 2a. Survey of English Literature.-With S 2b this course covers the work of English 2. (2).

Dr. Boyer
Prerequisite: One year of college work or the equivalent.

S 2b. Survey of English Literature.-With English S 2a, this course covers the work of English 2. (2).

Assistant Professor Jones
Prerequisite: One year of college work or the equivalent.
S 23. Shakespeare.-Two Gentlemen of Verona, Midsummer Night's Dream, Richard III, Romeo and Juliet, Much Ado, Twelfth Night, Othello, Lear, Coriolanus, The Tempest. Text: Tudor Shakespeare. (212).

Professor Sherman

Prerequisite: One year of college English or an equivalent.
S 31. English Literature from 1688 to 1789.-(2 $1 / 2$ ). Dr. Boyer
Prerequisite: Three semesters of college work, including English 1-2 or 10-11.
*S 8. Old English (Anglo-Saxon.)-Grammar and reading (3).
Professor Dodge
Prerequisite: Two years of college English.
S 25. Chaucer.-Selections from the Canterbury Tales. (3).
Assistant Professor Jones
Prerequisite: Two years of college work or the equivalent.
*S 35. The Pre-Shakespearian Drama.-Medieval and sixteenth century drama; Udall, Sackville and Norton, Lyly, Greene, Peele, Kyd, and Marlowe. (212). Professor Dodge

Prerequisite: Two years of college work.
*S 101. Research in Special Periods.-Individual conferences arranged with graduate students engaged upon definite pieces of investigation.

Professor Dodge, Professor Sherman, and Assistant Professor Jones
*S 138. The Romantic Movement in England.-Lectures; reading; theses; conferences. (I unit).

Professor Sherman
Prerequisite: Graduate standing or the consent of the instructor.

## B-Rhetoric

S 1. Rhetoric and Themes-For description, see Rhetoric 1. (3).
Mr. Curl
S 2. Rhetoric and Themes.-For description, see Rhetoric 2. (3).
Mr. Curt
Prerequisite: Entrance credit in English.

## Business English

S 10. Business Letter Writing, Including Sales Letters.-(2).
Mr. McJohnston
Prevequisite: Six hours of freshman rhetoric.

## C-Public Speaking

S 1. Oral Expression.-Theory and practice of vocal methods and platform manner, both for public address and oral interpretation of literature. For description, see Public Speaking 1. (2).

Mr. Woolbert
Prerequisite: Rhetoric 1 and 2 or equivalent.

S 9. Interpretive Reading.-Various types of literature from the point of view of oral expression; practise in interpreting chosen selections. (2).

Mr. Woolbert
Prerequisite: Public Speaking 1 or its equivalent.
S 10. Special Problems in the Teaching of Oral English.-Primarily for high-school teachers. (1).

Mr. Woolbert
Prerequisite: The consent of the instructor.

# ENTOMOLOGY 

Stephen Alfred Forbes, Ph.D., LL.D., Professor
Alexander Dyer MacGillivray, Ph.D., Associate Professor
Justus Watson Folsom, D.Sc., Assistant Professor
Robert Douglas Glasgow, Ph.D., Instructor
Edna Mosher, Ph.D., Instructor
Clyde Carney Hamilton, B.S., Graduate Assistant
Alvar Peterson, A.M., Assistant in the Summer Session
Major: 20 hours from courses offered in the department, except Entomology 1, 4, and 16.

Minors: 20 hours in botany, physiology, zoology; horticulture and agronomy (see page 25 ).

Entomology as taught at the University is distinctly differentiated from the work in zoology. Beginning courses open to freshmen and without prerequisites are $1 \mathrm{a}-1 \mathrm{~b}, 15$, and 4 . Course $1 \mathrm{a}-1 \mathrm{~b}$ may be followed by 2 or 3 , and course 15 by 7. Course 3 is not open to freshmen, and courses 5 and 13 are not open to freshmen or sophomores. Students preparing for service as economic entomologists should take as many of the courses offered as possible, including especially $2,3,4,7,8 a-8 b, 14$, and 108 . Those preparing for the teaching of zoology should take either 2 and 4 , or 3 and 4 , or all three of these courses.

1a-1b. Elementary Entomology.-Lectures; laboratory; field work. (Open to all students.) $I, I I$; (2).

Assistant Professor Folsom, Dr. Glasgow, Dr. Mosher
2. General Entomology.-Field entomology; morphological and physiological entomology; collection and preservation of specimens; typical insects; adaptive structures and their utilities. (This course, taken with Entomology 3, forms a year's work, covering the whole field, but either may be taken separately.) $I$; (5). Assistant Professor Folsom, Dr. Glasgow

Prerequisite: Entomology, 1a-1b, or 4, or equivalent.
3. General Entomology.-Classification and determination of insects; life histories; ecological relations of insects. II; (5).

Assistant Professor Folsom, Dr. Glasgow
Prerequisite: Entomology, 1a-1b, or 4, or equivalent.
4. Introduction to Economic Entomology.-Lectures; field work; laboratory. (Primarily for students in the College of Agriculture; may not be counted for satisfaction of group requirements in the College of Liberal Arts and Sciences.) $I$ or $I I$; (3). Assistant Professor Folsom, Dr. Glascow

4a-4b. Introduction to Economic Entomology.-Lectures; field work; laboratory. Section $A$ for students of agriculture. I; first half; (2). Section $B$, for students of horticulture. II; second half; (3).

## Assistant Professor Folsom, Dr. Glasgow

5. Introduction to Research.-Preparation for thesis work. Library, language, manuscript, and advanced laboratory work on assigned topics. (Three hours in this course are required as a preparation for entomology thesis work.) $I$ or $I I$; *(3 to 5).

Associate Professor MacGillivray, Assistant Professor Folsom
Prerequisite: Entomology 2, 3; or 15, 7.
6a-6b. Thesis Investigation.-Subjects selected during the junior year. Three hours a day given to investigation, under the supervision of an instructor, during the senior year. $I, I I$; (5).

Associate Professor MacGillivray, Assistant Professor Folsom
7. Systematic Entomology.-The external anatomy of insects; terminology of the parts; identification of specimens representing the major groups. $I$ or 11 ; (5).

Associate Professor MacGillivray, Dr. Mosher
Prerequisite: Entomology 2, or 15 .
\&a-8b. Advanced Economic Entomology.-Assigned problems. Field laboratory, insectary, library, and manuscript work; practise in the operations of economic entomology. (Intended to prepare students for service as entomologists in experiment stations and other state and government positions. Agronomy 7 and Horticulture, 1, 2, and 3 should also be taken as a part of this preparation.) $I$, $I I$; (3). Assistant Professor Folsom, Dr. Glasgow

Prerequisite: Entomology 4, 2, 3.
9. Advanced Systematic Entomology.-The identification of the characters on which genera and species are based. $I$ or $I I$; (5).

Associate Professor MacGillivray, Dr. Mosher
Prerequisite: Entomology 2 or 15 , and 7.
10. Taxonomy of Immature Insects.-The external form of immature insects; identification of species. $I$; (5). Associate Professor MacGillivray

Prerequisite: Entomology 2 or 15, and 7.
11. Classification of the Coccidæ.-Methods of preparing scale insects for study; identification of genera and species; discussion of their morphology, metamorphosis, and phylogeny. II; (5). Associate Professor MacGillivray

Prerequisite: Entomology 2 or 15, and 7.
12a-12b. Current Literature.-Reports and discussion on assigned topics; presentation and discussion of contents of recent entomological publications, and of results of personal research. $I, I I$; (1).

Assistant Professor Folsom
Prercquisite: One year of work in entomology.
13. Medical Entomology.-Insects and the transmission of disease; methods of control and prevention. (Primarily for advanced students preparing for medicine.) $I I$; (3).

Dr. Glasgow
Prerequisite: Zoology 3, or its equivalent in microscopical technics.

[^78]14. Advanced Economic Entomology.-Personal work under direction on assigned problems in economic entomology, to prepare advanced students for immediate service as state and government entomologists. Advantage will be taken of the operations and practical problems of the State Entomologist's office so far as available. $I, I I$, and six weeks in the summer; $\dagger(2$ to 4). Professor Forbes, Assistant Professor Folsom
Prerequisite: Courses in elementary and advanced economic entomology and in systematic entomology and the consent of the instructor.
15. Elementary Systematic Entomology.-Characteristics of the orders, suborders, and more important families; the habits of representative species; field collections and laboratory studies on the anatomy and classification of insects. $I$; (3).

Associate Professor MacGillivray
16. Apiculture.-The essentials of bee-keeping. Practical operations; laboratory observations; collateral reading. II; (2).

Assistant Professor Folsom

## Courses for Graduates

The prerequisite for graduate work in entomology is one years' work in biological courses, including an equivalent of either Zoology 1 or Entomology la-1b, or 4. Entrance upon major work in entomology requires the equivalent of Entomology 2 and 3.

Graduate students who have had at least one year of college work in biological courses may take for graduate credit any of the preceding courses except $1 \mathrm{a}-1 \mathrm{~b}, 4$, and $6 \mathrm{a}-6 \mathrm{~b}$. The following courses are open to graduate students only.
102. Research in the Morphology and Embryology of Insects.-Twice a week; I, II; (I or 2 units).

Assistant Professor Folsom
107. Systematic Entomology.-Five times a week; I, II; (I or 2 units.) Associate Professor MacGillivray
108. Research in Economic Entomology.-Once or twice a week; I, II; (I or 2 units).

Assistant Professor Folsom
109. Research in Systematic Entomology.-Twice a week; I, II; (I or 2 units).

Associate Professor MacGillivray

## Summer Session Courses

S 1. General Field and Laboratory Course.-Lectures, laboratory studies; field observations. For high school teachers. (2).

Assistant Professor Folsom
*S 2. Advanced Course.-Instruction to meet the purposes of the individual student. $\dagger(2$ or 3$)$.

Assistant Professor Folsom
S 3. Economic Entomology.-Stages of development of common injurious insects; laboratory; field trips. (3). Assistant Professor Folsom
*S 4. Advanced Economic Entomology.-For description see Entomology 14. (3).

Professor Forbes, Assistant Professor Folsom
Prerequisite: 15 hours' credit in general and economic entomology.

[^79]
# FARM MANAGEMENT 

(See Animal Husbandry.)

FINE ARTS
(See Art and Design and Music. Attention is called also to the courses in Esthetics offered by the departments of Philosophy, Education, Architecture, and Household Science.)

## FLORICULTURE

## (See Horticulture.)

FRENCH
(See Romance Language and Literature.)
GENETICS
(See Animal Husbandry.)

## GEOLOGY

(Including Mineralogy, Paleontology, and Physical Gegraphy)
Charles Wesley Rolfe, M.S., Professor
William Shirley Bayley, Ph.D., Professor
Thomas Edmund Savage, Ph.D., Associate Professor
John Lyon Rich, Ph.D., Instructor
Francis Maurice Van Tuyl, Ph.D., Instructor
Clarence Samuel Ross, A.M., Assistant
Henry Methusalem DuBois, A.M., Assistant
Mason Kent Read, A.B., Assistant
Luther Eugene Kennedy, A.M., Assistant
Major: 20 hours in any one of the following fields, including Geology 1a, and exciuding Geology 3, 14, and 22. In addition to Geology 1a, the major in (a) general geology, must also include Geology 15 and 24 ; in (b) stratigraphy and paleontology, Geology 16; in (c) mineralogy and economic geology, Geology 2 and 6 ; in (d) geography, Geology 24 , and at least one of the courses, Geology 8,10 , and 11.

Minors: 20 hours selected from courses in chemistry, zoology, botany, physics, and economics.

## Courses for Undergraduates

1. Dynamic and Structural Geology.-The agents and processes involved in the development of the earth's present features. Lectures; laboratory; field trips. $I$; (5).

Professor Rolfe in charge
Prerequisite: Chemistry 1 or an equivalent.
1a. Historical Geology.-The evolution of the earth and its life. Lectures; laboratory. (Continuing course 1 and introducing courses 9 and 16.) II; (5). Associate Professor Savage, Dr. Van Tuyl, and assistants

Prerequisite: Geology 1 or 3.
2. Economic Geology.-The origin and manner of occurrence of minerals and rocks of economic importance, especially those of North America. Lectures; laboratory. II; (3).

Dr. Van Tuyl.
Prerequisite: Geology 5; 13a and 13b, or 1 and 1a.
3. General Geology.-Mineralogy; dynamic, historic, and economic geology; minerals; rocks; contour maps; fossils. Recitations; laboratory; field trips. (For students who wish to devote but one semester to geology.) $I$ or $I I$; (5).

Professor Rolfe in charge
4. Thesis Course.-Field or laboratory problems; reports; maps, sections, and figures based on observations. II; (5).

Professor Rolfe, Professor Bayley, Associate Professor Savage, Dr. Rice
5. Mineralogy.-Common ores and minerals of scientific importance; crystallography; characteristics of about 125 of the most important minerals; blow pipe analysis. Lectures; laboratory. $I$; (5).

Professor Bayley in charge
Prerequisite: Chemistry 1, 2, 3, or 2a.
5a. Mineralogy.-The characteristics, origin, and transformations of the silicates. Lectures; laboratory. II; (3).

Dr. Van Tuyl
Prerequisite: Geology 5.
8. Physiography of Europe.-The physiographic features of the continent of Europe; climate, resources; influence of geographic factors on industries; distribution of population. II; (3). Dr. Rice

Prerequisite: Geology 23 and 14.
10. Physiography of South and Central America.-Physiography; climate; resources. II; (3).

Dr. Rice
Prerequisite: Geology 23 and 14.
11. Physiography of North America.-Typical physiographic provinces of North America, with especial emphasis on the United States. Lectures; readings; maps. $I$; (3).

Dr. Ricr
Prerequisite: Geology 23 and 14.
12. Geology of Soils.-The origin of the various classes of soils; mineral compositions; physical characteristics; transformations. (Valuable to students of agriculture and others interested in plant growth.) $I I$; (5).

Professor Rolfe
Prerequisite: Chemistry 1 or an equivalent.
13a. Engineering Geology.-Mineralogy; lithology. Lectures; laboratory. (Open only to students in engineering and ceramics.) $I$; (3).

Dr. Van Tuyl
13b. Engineering Geology.-Dynamic and structural geology. Lectures; laboratory. (Open only to students in engineering and ceramics.) II; (3).

Professor Bayley
14. Meteorology.-The heating and cooling, pressure, circulation, and moisture of the atmosphere; storms and weather forecasting; rainfall, climate. (To be taken by those who intend to do work in geography and agriculture; should be taken with Economics 26 by students of commerce.) I; (3).

Dr. Rich
19. Field Geology.-(Introductory Course). The physiography and geology of a selected area, including the making of a map of the area and the submission of a satisfactory written discussion of its geology. Four weeks in the early summer; (3).

Dr. Van Tuyl
Prerequisite: Geology 1 and $1 \mathrm{a}: 13 \mathrm{a}$ and 13 b or 3 and 23.

19a. Field Geology.-Excursion to Central Kentucky and Mammoth Cave; valley trains of Wabash River; glacial border; Bedford limestone quarries; falls of the Ohio at Louisville; the Louisville cuesta; Mitchell limestone plateau; Mammoth Cave. (The trip involves an absence from the University of one week at the time of the Easter recess. Cost about $\$ 30.00$.) Credit on completion of satisfactory report. II; (1).

Associate Professor Savage, or Dr. Rici
Prerequisite: Geology 1, 3, or 13b.
21. Geology of Coal.-The origin of coal; age, distribution, and stratigraphy of the coal deposits of North America; the Illinois or Eastern Interior basin. I; (3).

Associate Professor Savagr
Prerequisite: Geology 13b or an equivalent.
31. Geology of Oil and Gas.-The origin of oil and gas; stratigraphic relations; structural conditions, and occurrences in the oil fields of the United States. II; (3).

Associate Professor Savage
[22. Organic Evolution.-The evolution of plant and animal forms as indicated by the fossil record. II; (3). Not given, 1915-16.

Associate Professor Savagr
Prerequisite: Geology 1a, or one semester of zoology or botany.]
23. Physiography of the Lands.-Land forms; origin, development, and classification; relation between surface forms and rock composition and structure; influence of climate on land forms. (This course follows Geology 3 and presupposes a knowledge of the principal geologic processes.) Five allday field excursions. II; (5).

Dr. Rice
Prerequisite: Geology 3 or 13 a and 13 b or 1.
Courses for Advanced Undergraduates and Graduates
6. Geometrical and Optical Crystallography.-Petrography; geometrical and optical properties of minerals with reference to symmetry; polarized light and its practical use in identifying rock-forming materials. $I$; (3).

Professor Bayley
Prerequisite: Geology 5, 5a.
7. Petrography.-Lectures: types of rocks and their origin and classification. Laboratory. $I I$; (3).

Professor Bayley
Prerequisite: Geology 6.
9. Paleontology.-Invertebrate fossils, their classification and relationships; identification of fossils. $I$; (5).

Associate Professor Savage, Dr. Van Tuyl
Prerequisite: Geology 1a; or senior standing in zoology or botany.
15. Structural Geology.-The arrangement of the rocks which form the earth's crust and their distribution on its surface; mountains; faults; folds; other diastrophic phenomena. $I$; (3).

Dr. Van Tuys
Prerequisite: Geology la.
16. Stratigraphy.-Classification of rock formations; methods and criterions employed in correlation of the successive geologic formations. II; (5). Associate Professor Savage, Dr. Van Tuyb.
Prerequisite: Geology 9.
17. Principles of Stratigraphy.-Sedimentary rocks and associated deposits; kinds; composition; origin; mode of occurrence; geologic interpretation. $I$; (5).

Associate Professor Savage
Prerequisite: Geology 16.
[24. Physiographic Interpretations.-Recent earth history; erosion planes and their meaning; drainage modifications; physiographic indications of climatic fluctuations. $I$; (3). Not given, 1915-16.

Dr. Rich
Prerequisite: Geology 23 and 1a.]
25. Physiography of the Mississippi Valley.-Field trips to southern Illinois, eastern Missouri, the Baraboo Ridges of Wisconsin, or the Lexington dome of Kentucky. II; (3).

Dr. Rich
Prerequisite: Geology 24 or an equivalent, and senior or graduate standing.
[26a-26b. Seminar.-Weekly meetings, reports, and discussions of the current literature of geology, mineralogy, and physiography. Open to all students registered in the department; credit will be given only to those having 10 hours of completed work in geology. $I, I I$; (1). Not given, 1915-16.]

Surveying for Students in Geology.-I; (3). (See Civil Enginering 33.)

Topographical Surveying for Students in Geology.-II; (3). (See Civil Engineering 34.)

## Courses for Graduates

The first prerequisite for graduate work in geology is the equivalent of the complete undergraduate offerings in that branch of the subject in which specialization is desired. Those specializing in paleontology should have, in addition, at least an elementary knowledge of systematic zoology; those specializing in physical geography should have a knowledge of general physics and chemistry; and those who expect to pursue work in petrography and economic geology should be well grounded in general physics, inorganic chemistry, and the elements of physical chemistry. All graduate students should be able to read the journals printed in German and French.
101. Advanced Crystallography.-Methods used in measuring, projecting, and calculating crystal forms, and determining the physical properties of crystalized bodies. Three to five times a week; I, II; (I unit).

Professor Bayley
[102. Petrography.-The igneous and fragmental rocks; including identification of types, classification, and relationships. Lectures; laboratory. Twice a week; I, II; (I unit). Not given, 1915-16.]
103. The Crystalline Schists and Other Metamorphic Rocks.-Processes of metamorphism. Lectures; laboratory. Twice a week; I, II; (I unit). Professor Bayley
105. Invertebrate Paleontology.-A group of invertebrate fossils; or the fossils of a special geological system; their geographic distribution and geologic range with reference to stratigraphy. Largely individual work. One to three times a week; I, II; (I unit).

Associate Professor Savage
106. Areal and Stratigraphic Geology.-The geology and paleontology of a selected area; report on the geology of the region, based on the data collected in the field. One to three times a week; I, II; (I to 2 units).

Assistant Professor Savage
[107. Areal and Structural Geology.-Individual work on some area exhibiting important structural or economic features. Once a week; I, II; (2 units). Not given, 1915-16.]
108. Advanced Economic Geology.-The processes resulting in the production of ore-bodies. Studies of type mining districts. Three times a week; I, II; (I to 2 units).

Professor Bayley
124. Advanced Physiography.-Individual work on field problems; study and discussion of the literature of physiography and geomorphology. One to three times a week; I, II; (I unit).

Dr. Rice

# GERMANIC LANGUAGES AND LITERATURE 

## (Including Scandinatian)

Julius Goebel, Ph.D., Professor Otto Eduard Lessing, Ph.D., Professor
George Tobias Flom, Ph.D., Associate Professor (Scandinavian)
Neil Conwell Brooks, Ph.D., Assistant Professor
Leonard Bloomfield, Ph.D., Assistant Professor (Comparative Philology) Joseph Eugene Gillet, Ph.D., Associate (German and Comparative Literature) Daisy Luana Blaisdell, A.M., Instructor
Charles Allyn Williams, Ph.D., Instructor
Armin Hajman Koller, Ph.D., Instructor
Alexander Green, Ph.D., Instructor
Hugh Wiley Puckett, Ph.D., Instructor
Heinrich Waldemar Nordmeyer, Ph.D., Instructor
Earl Kilburn Kline, A.M., Instructor
George Washington Spindler. A.M., Teaching Fellow
Felix Emil Held, Ph.D., Associate Professor of German, Miami University (Summer Session)
Charles Marshall Poor, Ph.D., Instructor in the Summer Session
Philip Stephan Barto. Ph.D., Instrictor in the Summer Session
Adolf Eduard Zucker, A.M.. Assistant in the Summer Session

## German

Major: 20 hours in German. excluding German 1, 2, and 3, and including at least 6 hours of primarily fourth-year courses.

Minors: 20 hours in not more than two subjects chosen from the following list: languages, education, history, philosophy, and psychology, provided that 8 hours must be selected from a language other than German.

## Germanic Languages

Major: 20 hours in German and the Scandinavian languages, provided that at least 8 hours must be in German and 8 hours in one Scandinavian language. Only German courses above the second year, and Scandinavian courses exclusive of Scandinavian 6 and 12 will be acceptable.

Minors: 20 hours in not more than two subjects chosen from the following list: languages, education, history, philosophy, and psychology.

## A. GERMAN

## First-Year Courses

1. Elementary Course.-Grammar and easy reading for beginners. (Two sections are offered in the second semester for students who enter the University in the second semester.) $I$; (4).
Assistant Professor Brooks, Assistant Professor Bloomfield, Dr. Gillet, Miss Blaisdell, Dr. Koller, Dr. Puckett, Dr. Nordmeyer, Mr. Kline, Mr. Spindler
2. Narrative Prose.-Grammar and reading. I; (4).

Dr. Green, Dr. Puckett, Dr. Nordmeyer, Mr. Spindler
Prerequisite: One year of high school German, or German S 1, or German 1 taken in the second semester.
3. Narrative Prose.-Grammar and reading. (Continuation of German 1.) $I I$; (4).

Assistant Professor Brooks, Assistant Professor Bloomfield, Dr. Gillet, Dr. Koller, Dr. Green, Dr. Puckett, Dr. Nordmeyer
Prerequisite: German 1.

## Second-Year Courses

4. Prose Reading.-Selections from standard prose writers; sight reading; composition. I or $I I$; (4).
Miss Blatsdell, Dr. Williams, Dr. Koller, Dr. Green, Dr. Puckett, Dr. Nordmeyer, Mr. Kline
Prerequisite: German 2, or 3, or two years of high school German.
5. Narrative and Historical Prose.-At the option of the instructor one classic in verse may also be read. Composition. I or II; (4).

Miss Blaisdell, Dr. Williams, Dr. Koller, Dr. Gillet
Prerequisite: German 4, or three years of high school German.
6. Scientific Prose.-The rapid reading of works of a general scientific character. (Parallel with 5. Students may not take both 5 and 6 for more than a total of four hours' credit without special permission of department.) II; (4). Dr. Puckett, Dr. Nordmeyer, Mr. Kline

Prerequisite: German 4, or three years of high school German.
12. Newspaper Reading.-Daily reading of newspapers; oral and written composition; conversation. (Parallel with 5 and 6 . Not open to students who have had 5 or 6 or any more advanced course.) II; (4). Dr. Green

Prerequisite: German 4, or three years of high school German, and the consent of the instructor.

## Third-Year Courses

7. Modern Fiction.-(Intended primarily for students who take course 5 in the first semester. Not open to those who have had any course more advanced than 5.) $I I$; (3).

Dr. Williams, Dr. Nordmeyer
Prerequisite: German 5, or equivalent.
10. Introductory Goethe Course.-Reading of works illustrating different periods in Goethe's development. Götz von Berlichingen; Egmont; Iphigenie auf Tauris; selections from Dichtung und Wahrheit. II; (3).

Assistant Professor Brooks, Dr. Williams
Prerequisite: German 14, or 16 , or 24 , or 28 a.
14. Introductory Schiller Course.-Works illustrating different periods in Schiller's development: Lyrics and ballads; Kabale und Liebe; Braut von Messina. I; (3).

Professor Lessing, Miss Blaisdell
Prerequisite: German 5, or equivalent.
16. Elementary Composition and Conversation.-I or II; (2).

Assistant Professor Bloomfield, Dr. Williams, Mr. Kline
Prerequisite: German 5, or equivalent.
17. Intermediate Composition and Conversation.-I or II; (3).

Assistant Professor Bloomfield, Dr. Williams, Dr. Green
Prerequisite: German 16.
24. Modern Drama.-Rapid reading of dramas by Grillparzer, Hebbel, Hauptmann, and others. I; (3).

Dr. Nordmeyer
Prerequisite: German 5, or equivalent.
28a-28b. German Lyrics.-The form, development, and different types of the lyric. First semester: The chief lyric poets of the classical period. Second semester: The chief lyric poets of the nineteenth century. (The first semester may be taken separately, but not the second without the first). I, II; (2).

Dr. Puckett
Prerequisite: German 5, or equivalent, and sophomore standing.

## Primarily Fourth Year Courses

Note.-For a major in German students are required to take at least six hours of these primarily fourth-year courses; seniors who are preparing to teach German should take German 29.
8. Schiller.- The life of Schiller; Wallenstein and other selections. II; (3).

Professor Lessing
Prerequisite: Three years of college German, or equivalent.
11. German Literature after the Reformation.-Lectures; recitations; reports on assigned collateral reading. II; (3). Professor Lessing

Prerequisite: German 26.
19a-19b. Goethe's Faust.-The Faust legend and early Faust books and plays; the genesis of Goethe's Faust ; reading of both parts. I, II; (2).

Professor Goebel
25. Teachers' Course.-Discussion of methods; examination of textbooks. (Open to seniors and special students who have 20 hours' credit in German.) II; (2). Miss Blaisdell
Prerequisite: German 29a or equivalent; completion of or registration in Education 1 or equivalent.
25. German Literature to the End of the Reformation.-Lectures; recitations; reports on assigned reading. $I$; (3).

Professor Lessing
Prerequisite: German 10, or 24, or 28a-28b.
[27. Lessing.- The life of Lessing; Nathan der Weise; Emilia Galotti, and other selections. $I$; (3). Not given, 1915-16. Professor Lessing]

29a-29b. Advanced Composition.-Themes on Germany and German life, based on suitable reading, discussed in German. I, II; (3). Dr. Koller

Prerequisite: German 17.

30a-30b. Thesis Course.-(Intended primarily for candidates for honors in German, but open to other seniors.) $I, I I ;{ }^{*}(1$ or 2$)$.

Professor Goebel and other members of the department
Prerequisite: Senior standing in College, and three years of college German or equivalent.
31. Middle High German.- $I$; (2).

Professor Goebel
Prerequisite: Senior or graduate standing; three years of college German.
32. History of German Civilization.-Readings; lectures; discussions. $I$; (3).

Assistant Professor Broors
[39a-39b. Goethe and Schiller.-Interpretation of Goethe's pocms. Goethe's Tasso; Schiller's Ueber naive und sentimentalische Dichtung. Not given, 1915-16. I, II; (2).

Professor Goebel]

## Courses for Graduates

Students desiring to take German as a major should have completed a four years' course of undergraduate study in German, corresponding to the four years' course at this University, and should be familiar with the principal works of the writers of the classical and modern periods of German literature, show a general knowledge of the history of German literature, and be able to follow lectures in the German language.

A reading knowledge of Latin and French is required. It is desirable that candidates for the degree of Ph.D. have some knowledge of Greek. All students are expected to have had a course in German history.
101. Seminar in Germanic Philology.-Training in original research; results of special value may be published in the Journal of English and Germanic Philology. Once a week; I, II; (I unit). Professor Goebel
103. Introduction to the Historical Study of the Germanic Languages.History of German philology; comparative grammar of the Old Germanic dialects. Lectures; discussions of special topics. Twice a week; II; (I unit).

Professor Goebel
[104. Gothic.-Grammar and literature. Twice a week; I; (I unit). Not given, 1915-16.

Professor Goebel]
[105. Old High German.-Grammar and interpretation of the oldest literary documents. Three times a zeeek; II; (I unit). Not given, 1915-16.]
[109. Goethe's and Schiller's Philosophy.-Twice a week; I, II; (I $\imath$ nit). Not given, 1915-16. Professor Goebel]
110. Early German Drama.-German drama to the time of the Reformation; medieval religious drama; Shrovetide plays; beginnings of the humanistic drama. Twice a week; I; (I unit). Assistant Professor Brooks
113. German Literature of the Fifteenth and Sixteenth Centuries.Survey of the literature on the background of the general history of the time; Luther and the Reformation; Mastersingers and folksong; the Reformation drama; Hans Sachs; Brant; Fischart; the chap books; the English comedians. Twice a week; II; (I unit).

Assistant Professor Brooks

[^80][115. History of German Literature from Goethe's Death to the Present Time.-Twice a week; I, II; (I unit). Not given, 1915-16.

Professor Lessing]
[116. Medieval German Literature with Reference to Political, Religious, and Social History.-Research. Twice a week; I; (I unit). Not given, 1915-16.

Professor Lessing]
117. History of German Literature during the Eighteenth Century.Twice a week; I, II; (I ииit). Professor Goeber
[118. The German Drama since Schiller.-Research. Twice a week; I, II; (I unit). Not given, 1915-16.

Professor Lessing]
119. The German Novel.-Research. Twice a week; I, II; (I unit). Professor Lessing
121. Walther von der Vogelweide.-Lectures and interpretations. Twice a week; II; (I unit).

Professor Goebel
125. History of the German Language.-Three times a week; II; (I หทit).

Dr. Green

## Summer Session Courses

Note: A German House was maintained where more advanced students could obtain board and room, and practise speaking in German.

S 1. Beginners' Course.-(4).
Dr. Held, Mr. Zucker
S 2. Intermediate Course.-(Open to those who have had German 1 the regular university year or its equivalent.) (3). Dr. Barto

Prerequisite: German 1 or its equivalent.
S 3. Prose Reading.-Narrative prose; sight translation; composition. (3).

Dr. Poor
Prerequisite: German 3 or its equivalent.
S 4. Readings from the Classics_-Suderman's Teja (2). Dr. Barto
Prerequisite: German 4 or its equivalent.
S 5. Prose Composition and Conversation.-Translation of ordinary prose into German; idiomatic constractions; free composition and conversation. (2).

Dr. Koller
Prerequsisite: Two years of university German or the equivalent.
S 6. Modern Drama.-Rapid reading of dramas by Kleist, Hebbel, and others. (2).

Dr. Koller
Prerequisite: Two years of university German or the equivalent.
S 9. Teachers' Course.-The study of German in the high school; methods and chief difficulties in teaching German. Observation work in the beginners' course. (1).

Dr. Held
Prerequisite: Open to those who have taught German and to those who have had three years of university German or its equivalent.

S 10. Goethe's Faust-(2).
Dr. Pooz
Prerequisite: Three years of university German or its equivalent.
[*S 11. History of German Literature Since the Reformation.-(2). Not given, 1915. To be given, 1916.

Prerequisite: Three years of university German or the equivalent. Open also to graduate students.]
[*S 14. Elementary Readings in Middle High German.-Not given, 1915.] To be given, 1916 .

Prerequisite: Three years of university German or the equivalent. Open also to graduate students.]
*S 15. The Classical Period of Middle High German Literature.-Lectures ; discussions; reports; reading (not necessarily in the original). (1).

Dr. Koller

Prerequisite: Three years of university German or the equivalent. Open also to graduate students, subject to the approval of the Executive Faculty.

## B. SCANDINAVIAN

## Undergraduate Courses Not Open to Freshmen

[1a-1b. Elementary Norwegian.-Grammar, pronunciation, composition, easy reading. $I$; (3) : II; (2). Not given, 1915-16.

Associate Professor Flom]
2a-2b. Elementary Swedish.-Grammar; pronunciation; composition; easy reading. $I$, $I I$; (2). Associate Professor Flom
6. Ibsen's Social Dramas.-Lectures; interpretation of four of the social dramas; Ibsen's technics. Archer's translation is used. II; (2).

Associate Professor Flom
Prerequisite: Junior standing.
12. Norse Mythology.-Primitive religion; the religious belief of the Norseman in pre-christian times; interpretation of the principal myths. I; (2). Associate Professor Flom
Prerequisite: Junior standing.
[14. History of Old Norse Literature.- II; (2). Not given, 1915-16.]
30. Scandinavian Drama.-History of Scandinavian dramatic theory; problems in modern drama. I; (1). Associate Professor Flom
40. Germanic Mythology.-Lectures; interpretation of the sources. II; (2). Associate Professor Flom

## Courses for Graduates

Preparation for graduate work in the Scandinavian languages or literature must include a reading knowledge of one of the Scandinavian languages and systematic work in the undergraduate courses in Scandinavian or their equivalent. Any graduate student in language may, however, be admitted to the purely philological courses.
101. Old Norse.-Introduction to the language as a member of the Germanic group. Reading of the Prose Edda with selections from the Icelandic sagas. I, II; (I unit).

Associate Professor Fiom
140. Scandinavian Paleography.-II; (I unit).

Associate Professor Flom

## GREEK

## (See Classics.)

## HISTORY

Evarts Boutell Greene, Ph.D., Professor
Clarence Walworth Alvord, Ph.D., Professor
Laurence Marcellus Larson, Ph.D., Professor
Albert Howe Lybyer, Ph.D., Associate Professor
William Spence Robertson, Ph.D., Assistant Professor
Paul Van Brunt Jones, Ph.D., Associate
Theodore Calvin Pease, Ph.D., Associate
Arthur Charles Cole, Ph.D., Associate
Elizabeth Parnham Brush, A.M., Assistant
Jay Earll Miller, A.M., LL.B., Assistant Cooperating:
William Abbott Oldfather, Ph.D., Professor of the Classics
Howard Vernon Canter, Ph.D., Assistant Professor of the Classics
Clapence Edwin Carter, Ph.D., Professor of History in Miami University (Summer Session)
Orren Chalmer Hormell, A.M., Professor of History in Bowdoin College, (Summer Session)
Major: 20 hours, excluding History 1a and 2a, and including (a) either History 1 b or 2 b ; (b) six hours selected from courses for advanced undergraduates and graduates; and (c) any other courses offered in the department.

Minors: 20 hours, including (a) either Economics 1 or Political Science 1 and 3 ; and (b) one or two of the following subjects: economics, political science, law, sociology, the history of any literature, history of education, philosophy, and physiography. Courses in any foreign language may be accepted in satisfaction of this requirement, if the student can show his ability to read ordinary historical prose in that language.

## Courses for Undergraduates

1a-1b. Continental European History.-Europe from the fourth century to the present time. (The work of neither semester may be taken separately without special permission.) $I, I I$; (4).

Associate Professor Lybyer, Dr. Jones, and assistants
2a-2b. English History.-First semester: Political history of England to 1603 ; the larger social, economic, and religious movements. Second semester: The modern history of England; colonial and imperial development. I, II; (3). Professor Larson, Dr. Pease, and assistants
3a-3b. History of the United States.-First semester: The colonial era; the revolution; genesis of the federal constitution. Second semester: The United States under the constitution. (Either semester may be taken separately). I, II; (3). Professor Greene, Assistant Professor Robertson, Dr. Cole

Prerequisite: One year of college work.
5. History of Greece.-I; (3). (See Greek 20.) Professor Oldfather

Prerequisite: One college course in history or the classics, and sophomore standing.
6. History of Rome.- $/ 1$; (3). (See Latin 19.)

Assistant Professor Canter
Prerequisite: One college course in history or the classics. Not open to freshmen.
[17. The History of Illinois.-The political, economic, and social development of a commonwealth in the Middle West, considered in its relation to the course of American history. II; (2). Not given, 1915-16.

Prerequisite: History $3 \mathrm{a}-3 \mathrm{~b}$ or junior standing in any college of the University.]
18. The Teaching of History.-Preparation of students for the teaching of history in secondary schools. I; (2).

Dr. Cole
Prerequisite: History la-1b, 3a-3b, or their equivalent; senior standing.
28a-28b. Thesis.-Special training in investigation for candidates for honors and for other seniors. $I, I I$; (2).

Professor Greene and other members of the department

## Courses for Undergraduates and Graduates

(Open to seniors and to juniors of high standing. The ability to we French and German is desirable.)

4a-4b. The Constitutional History of England.-First semester: Institutional origins. Second semester: Modern constitutional practise. (Important for students specializing in history, political science, or law). I, $I$; (3).

Professor Larson
Prerequisite: One year of college history.
7. The Revolutionary and Napoleonic Era in Europe.-I; (3).

Associate Professor Lybyer
Prerequisite: One year of college work in history or political science.
8. Medieval Civilization.-The religious, economic, and intellectual development of medieval society. $I$; (3).

Professor Larson
Prerequisite: History la-1b.
9a-9b. The Renaissance and the Reformation.-The transition from medieval to modern ideals. $I$, $I I$; (3). Dr. Jones

Prerequisite: History 1a-lb.
[10. The Development of American Society in the Eighteenth Cen-tury.-II; (4). Not given, 1915-16.

Prerequisite: History 3a-3b.]
[12. History of Germany.-I, II; (2). Not given, 1915-16.]
14a-14b. American Constitutional History.-First semester: Political institutions at the close of the colonial era; early state constitution and the confederation; the framing and ratification of the federal constitution. Second semester: The development of the written and unwritten constitution since 1789. (Either semester may be taken separately.) $I, I I$; (3).

Professor Greene, Assistant Professor Robertson
Prerequisite: History 3a-3b, or Political Science 1 and 3.
15. The Civil War and Reconstruction in the United States.-II; (3).

Dr. Cole
Prerequisite: History 3a-3b.

16a-16b. The Exploration and Colonization of the West.-First semester: The Mississippi Valley from the earliest European explorations to the close of the war of 1812. Second semester: The Mississippi Valley since 1815, and the progress of western expansion to the Pacific. (Either semester may be taken separately.) $I, I I$; (2).

Professor Alvord
Prerequisite: History 3a-3b.
[19. France in the Feudal and Later Middle Ages with Special Reference to Institutions.-A reading knowledge of French is required. This course may be combined with History 8. I; (3). Not given, 1915-16.

Dr. Jones
Prerequisite: History 1a-1b.]
[20a. Europe in the Nineteenth Century from 1815 to 1871.-I; (3). Not given, 1915-16.

Associate Professor Lybyer
Prerequisite: One year of college work in history or political science.
20b. Europe Since 1871.-II; (3). Associate Professor Lybyer
Prerequisite: One year of college work in history or political science.
21. The United States since the Reconstruction.-Historical introduction to contemporary American politics. $I$; (3).

Assistant Professor Robertson
Prerequisite: History 3a-3b.
26. The Latin-American Colonies.-The political, economic, social, and intellectual life of Spain during the period of discovery; the exploration, settlement, and civilization of Spanish America and the Philippines; the exploration and colonization of Brazil. I; (3). Assistant Professor Robertson

Prerequisite: History 1a-1b or 3a-3b.
27. Latin-America from the Wars of Independence to the Present Time.-The leading Latin-American states; political parties; existing governments; relations with Europe and the United States; the old regime in Texas, Mexico, and California. II; (3). Assistant Professor Robertson

Prerequisite: History 3a-3b.
29. The Far East.-The contact of Western nations with the Far East from the sixteenth century to the present time. II; (2). Professor Greene

Prerequisite: One year of college history, economics, or political science, and senior standing.

## Courses for Graduates

Graduate work in history presupposes two years of college work in this subject, or sixteen semester hours, which should include courses in European and American history corresponding roughly to History $\mathrm{la}-1 \mathrm{~b}$ and $3 \mathrm{a}-3 \mathrm{~b}$ in this University. Linguistic preparation, especially in French and German, is important. For medieval history some knowledge of Latin is essential, and Spanish is useful for certain fields of American history.

Advanced courses in history at the University of Illinois are of three kinds: (1) For information and guidance in general reading. (2) lnstruction in methodology, historiography, and bibliography. A part of this work (in course 103) is required of all graduate students in history during their first year.
(3) Seminar courses of the study of special fields with a view to training in the methods of historical criticism and research.

Illinois Survey.-Students have an opportunity to pursue research in western history in connection with the Illinois Survey, an organization for the purpose of carrying on systematic studies in the history of Illinois.

Attention is also called to the fact that the University of Illinois has for some time co-operated with the Illinois State Historical Society and the Trustees of the State Historical Library, in the gathering and editing of archive material. As a result instructors and graduate students in the department have contributed from time to time to the publications of these state organizations, and have been given useful training in the study of manuscript as well as printed material.

The Fistorical Club, consisting of graduate students in the department, which meets twice a month, gives an opportunity for informal discussion of historical topics.
101. Seminar in American History.-Bibliography; solution of typical problems; reports on the progress of investigations. Two hours, once a week; I, II; II to 2 units).

In connection with this course, direction in research is offered as follows:
A. American history before 1789 . Professor Greene
B. American history since 1789 .

Assistant Professor Robertson, Dr. Colr
Professor Alvord
C. The history of the West.
D. American church history.

Professor Greene
E. Latin-American history.

Assistant Professor Robertson
102. Studies in English History.-Selected problems from the history of England in the later middle ages and the early modern period. Twice a week; I, II; (I unit).

Professor Larson
103. Historiography and Historical Method.-Selected problems; studies of representative historians; readings in French and German historical literature. Required of all candidates for an advanced degree in history who do not present evidence of similar training elsewhere. Twice a weck; $I, I I$; ( $1 / 2$ unit).

Associate Professor Lybyer and others
104. Research in European History.-I, II; (I to 2 units).

Direction is offered by members of the department as follows:
A. Medieval history. Professor Larson
B. Modern history of Continental Euurope. Associate Professor Lybyer
C. English history.

Professor Larson
Dr. Jones
I, II; (I to 2 units).
105. Studies in the History of the West.-Subject for 1915-16: The West in American Diplonatic History, 1775-1814. Once a week, I, II; (I unit). Professor Alvord
111. Spanish-American Relations.-The relations of the Latin-American States with Europe and the United States. An intensive study of such topics as the Monroe Doctrine, and the development of international trade. Once a week; I, II; ( $1 / 2$ to I unit).

Assistant Professor Robertson
112. Studies in American Religious History.-Questions of church and state. Once or twice a week, $I, I I$; (I unit).

Professor Greene

## Summer Session Courses

S 1a. European History, 378-1300.-For description see History 1. (21/2).

Associate Professor Lybyer
S 3b. American History, 1783-1861.-For description see History 3b. (21/2).

Professor Carter

## Courses for Graduates and Undergraduates

*S 16. The History of the West, 1750-1850.-For description see History 16 a . ( $21 / 2$ ).

Professor Carter
Prerequisitc: At least one college course in American history, and junior standing.
*S 20b. European Political History, 1870-1914.-International relations and the events leading up to the great war. (2). Associate Professor Lybyer

Prercquisite: At least one college course in European history, and junior standing.
*S 15b. The United States During the Period of Reconstruction.-An intensive study is made of: (a) the constitutional problems involved; (b) the political status of the negro and the factors resulting in his enfranchisement. (2I/2).

Professor Hormell
Prcrequisite: One college course in American history, and junior standing.

## Course for Graduates

*S 101. Investigation of Selected Topics.-Personal conferences with graduate students.

Associate Professor Lybyer

## HORTICULTURE

Joseph Cullen Blatr, M.S., Profcssor, Horticulture $\dagger$ John William Lloyd, M.S., Professor, Olericulture Charles Spencer Crandall, M.S., Professor, Pomology
Charles Mulford Robinson, A.M., Professor, Civic Design
Herman Bernard Dorner, M.S., Assistant Profcssor, Florichture
Bethel Stewart Pickett, M.S., Assistant Professor, Pomology
Wilhelm Miller, Ph.D., Assistant Professor, Landscape Horticulture
Ralph Rodney Root, M.L.A.. Assistant Professor, Landscape Gardening
Ernest Winfield Bailey, M.S., Assistant Professor, Pomology
Oscar S Watkins, B.S., Associate, Horticultural Chemistry
Charles Elmer Durst, M.S., Associate, Olericulture
Simeon James Bole, A.M., Associate, Pomology
John Joseph Gardner. M.S., Associate, Pomology
Ira Dent Allison, B.S., Associate, Horticulture
Frank A Cushing Smith, M.L.A., Associate, Landscape Design
Frederick Nobel Evans, M.L.A., Associate, Landscape Gardening
Alfred Joseph Gunderson, B.S., Instructor, Pomology
Frank Lotan Venning. Instructor, Landscape Design
William Sanford Brock, A.B., B.S., Instructor, Pomology
William King Palmer, B.S., Instructor, Floriculture
Arthur Samuel Colby, M.S., Assistant, Pomology'
$\dagger$ Absent on leave.

Howard Dexter Brown, B.S., Assistant, Olericulture<br>August George Hecht, B.S., Assistant, Floriculture<br>Duane Taylor Englis, A.M., Assistant, Floricultural Chemistry<br>Leon Deming Tilton, B.S., Assistant, Landscape Extension

1a. Elements of Horticulture.-Fruit growing, vegetable gardening, and ornamental planting, with special reference to the farm home. Recitations; practical exercises. (Required of all freshmen in the general course in Agriculture.) $I$; (2).

Assistant Professor Pickett, Mr. Bole, Mr. Gardner, Mr. Brock, Mr. Colby
1b. Elements of Horticulture.-Continuation of la. (Required of all freshmen in the general curriculum in Agriculture.) II; (2).

Assistant Professor Pickett, Mr. Bole, Mr. Gardner, Mr. Brock, Mr. Colby
2. Small Fruits and Grapes.-The strawberry, raspberry, blackberry, dewberry, currant, gooseberry, grape. History; extent of cultivation; soil; location; fertilizers; propagation; planting; tillage; pruning; insect enemies; diseases; varieties; harvesting; marketing. Lectures; reference readings. II; (2).

Mr. Bole
Prerequisite: Horticulture 1 a and 1 b or their equivalents, Horticulture 5.
3. Vegetable Gardening.-The production and marketing of vegetables. Lectures; reference readings; practical exercises. II; (5).

Mr. Durst, Mr. Brown
Prerequisite: Horticulture 1 a and lb or their equivalents.
4. Plant Houses.-Construction, cost, and maintenance; heating; ventilating. $I$; (4).

Assistant Professor Dorner
5. Plant Propagation.-Grafts; buds; layers; cuttings; seeds. Lectures; laboratory ; quizzes. II; (5). Assistant Professor Dorner, Mr. Hecht
6. Nursery Methods.-Lectures; reference readings. II; (2).

Assistant Professor Bailey, Mr. Allison
Prerequisite: Horticulture 5; Entomology 4.
7. Spraying.-Materials, appliances, and methods employed in combating insects and fungous diseases. Lectures; reference readings; laboratory; field work. II; (3). Mr. Watkins

Prerequisite: Horticulture 1 a and 1 b or their equivalents; Chemistry 1; Entomology 4.
8. Orcharding.-Pomaceous, drupaceous, and nut fruits; management of large commercial orchards; harvesting; grading ; packing; storing; marketing. $I$; (5).

Professor Crandall, Assistant Professor Bailey
Prerequisite: Horticulture 1 la and lb or their equivalent, 5; Botany 1 ; Entomology 4.
[9. Forestry.-Forest trees; uses; distribution; artificial production; relations of forest and climate; forestry legislation and economy. II; (2). Not given, 1915-16.

Prerequisite: Botany 1, or an equivalent.]
10a. Rural Improvement.-Landscape gardening in the open country and its relation to rural conditions, with special reference to the farm group. Lectures; reference reading; reports; occasional field trips. $I$; (2).

Assistant Professor Root

10b. Town Improvement.-The development of the town as an organism and the improvement of small communities, with special reference to the home grounds. Lectures; reference reading; reports; occasional field trips. II; (2).

Professor Robinson, Mr. Evans
11. Study of Cultivated Plants.-Economic and ornamental plants of the temperate zonc; identification of species; examination of living plants and herbarium specimens. Lectures; assigned readings. I; (2).

Professor Blair, Professor Crandall
Prerequisite: Botany 4a.
12. Evolution of Horticultural Plants.-History, botanical classification, and geographical distribution of cultivated plants; modification under culture; theoretical causes and observed factors that influence variation, particularly food supply, climate, and cross-fertilization. I; (3). Professor Crandall

Prerequisite: Two years of university work, including Horticulture 8 and Botany 4 a .

15a. Principles of Plant Growing.-Preparation of soils for greenhouse crops; fertilizers; potting and shifting plants; watering. Lectures; practical greenhouse work. II; (5). Assistant Professor Dorner, Mr. Hecet

Prerequisite: Horticulture 5; Botany 1.
15b. Commercial Crops.-Greenhouse plants and cut flowers for wholesale and retail markets; care and marketing. Lectures; greenhouse work. $I$; (5).

Mr. Palmer
Prerequisite: Horticulture 15a.
17. Commercial Fruit Culture.-Practical work in houses and fruit plantations; reference readings; seminar. (For students specializing in horticulture.) I; (5).

Professor Crandall, Assistant Professor Bailey
Prerequisite: Horticulture 8.
18. Experimental Horticulture.-Methods and difficulties in horticultural investigations; the planning of experiments; recording and interpreting results. (For advanced students preparing for experiment-station work.) II; (5). Professor Blair, Assistant Professor Pickett, Mr. Watkins

Prerequisite: Twenty hours' work in horticulture.
19. Amateur Floriculture.-Window gardening; flowers on the home grounds; containers; potting soils; fertilizers; flower beds; plants for window and garden. $I$; (3). Mr. Нecht
21a-21b. Landscape Design (First Course).-Composition; lectures on form and arrangement; small home grounds and gardens of simple form; types of drafting and presentation in office practise. Nine hours drafting a week. I, II; (4).

Mr. Smith, Mr. Evans, Mr. Venning
Prerequisite: Architecture 32.
22. Special Investigation and Thesis. $-I$ or $I I$; ${ }^{*}(5-10)$.

23a-23b. Landscape Design (Second Course).-Topographic plans for urban home grounds and country estates, small parks and playgrounds. Lectures; eleven hours drafting a week. I, II; (4). Mr. Evans, Mr. Venning

Prerequisite: Horticulture 21b.

[^81]24a. Trees and Shrubs.-Plant material important to landscape gardening; landscape value; adaptability to the soil and situation; use in design. Two lectures a week; one field trip. II; (3). Assistant Professor Root

Prerequisite: Botany 1, 4d.
24b. Trees and Shrubs.-(Continuation of 24a.) Lectures; reference reading; field trips. $I$; (3).

Assistant Professor Roor
Prerequisite: Horticulture 24a.
25a. Landscape Design (Advanced Course).-Large country estates; country parks; golf courses; drafting; field trips; assigned reading; reports; occasional lectures; 15 hours drafting a week. $I$; (5)*, or more by special arrangement with the head of the division.

Assistant Professor Root, Mr. Evans, Mr. Venning
Prerequisite: Horticulture 23b.
25b. Landscape Design.-(Continuation of 25a.) Cemeteries; real-estate subdivisions. Drafting; field trips; assigned readings; reports; occasional lectures; 15 hours drafting a week. II; (5)*, or more by special arrangement with the head of the division. Professor Robinson, Mr. Evans, Mr. Venning

Prerequisite: Horticulture 25a, 26b.
26a. Planting Design.-Plans, based on the design problems in course 23a; lectures; conferences; library research; drafting. Eight hours drafting a week. II; (3).

Assistant Professor Root
Prercquisite: Horticulture 23a, 24b.
26b. Planting Design.-Plans, based on the design problems in course 25 ; lectures; conferences; library research; drafting. Eight hours drafting a week. $I$; (3).

Assistant Professor Root
Prerequisite: Horticulture 26a.
27a. Landscape Construction.-Relation of topographic maps to landscape design; calculation of cut and fill; quantities of material; grading plans and working drawings. One lecture and six hours drafting a week. $I$; (3).

Mr. Smith
Prerequisite: Civil Engineering 32; Horticulture 21b.
27b. Landscape Construction.-Construction drawings; drainage; water supply and sewage disposal; specifications and reports; engineering drawings based on the problems in course 23a. Two lectures and four hours drafting a week. $I I$; (3).

Mr. Smith
Prerequisite: Horticulture 27a.
28. Exotics.-Temporary decorative plants used in landscape gardening. Lectures; planting plans; field trips. II; (1). Assistant Professor Root

Prerequisite: Horticulture 25a, 26b.
29a. Garden Design.-The garden in its relation to the house; architectural harmony; utilization, topographic conditions, and planting for architectural or horticultural emphasis. Eight hours drafting a week; one lecture. $I$; (3).

Assistant Professor Root, Mr. Venning
Prercquisite: Architecture 32 or Horticulture 23a.

[^82]29b. Garden Design.-The designing of period gardens and their relalation to garden design. Eight hours drafting a week; one lecture. II; (3).

Assistant Professor Root, Mr. Venning
Prerequisite: Architecture 34 or Horticulture 25a.
30. Decorative and Bedding Plants.-Tropical and sub-tropical plants used in decorative work in the conservatory; tender plants used in out-door bedding. Lectures; practical greenhouse work. II; (5). Mr. Неснт

Prerequisite: Horticulture 15a.
31. Garden Flowers.-The propagation and growing of annuals, herbaceous perennials, bulbs, and shrubs for cut flowers and ornamental plantings. $I$; (3).

Assistant Professor Dorner
Prerequisite: Horticulture 5; Botany 1.
32. Floral Decoration.-Cut flowers and plants in decorative work; arrangement of flowers in baskets, designs, and bouquets; table decoration; house decoration. (For floriculture students.) II; (4).

Assistant Professor Dorner
[33. Systematic Pomology.-Description, nomenclature, and classification of native and sub-tropical fruits; critical descriptions and identification with special reference to relationships and classifications of varieties; judging and displaying fruits. $I$; (2). Not given, 1915-16.

Prerequisite: Horticulture 8.]
34. Vegetables Under Glass.-History and development of vegetable forcing; location and types of greenhouses for vegetable crops; soils and fertilizers; ventilation, watering, and treatment of insects and diseases, including fumigation and soil sterilization; crops used for forcing; marketing. Lectures; reference readings; laboratory practise in planting and growing crops. $I$; (3). Mr. Durst, Mr. Brown
Prerequisite: Horticulture 3.
35. Private Conservatory Work.-Types of plants for large conservatories; arrangement; care. II; (3).

Assistant Professor Dorner
Prerequisite: Horticulture 15a, 4.
36. History of Landscape Gardening.-Lectures; reference readings; library sketches; reports. II; (2). Assistant Professor Root

37a. Civic Design.-Town remodeling; remedial problems in town planning. Lectures; field trips; reference reading; reports; drafting. I; (3). Professor Robinson, Mr. Evans
Prerequisite: Horticulture 41.
37b. Civic Design.-Town extension; preventive and preservative aspects of town planning. Lectures; reference reading; drafting; textbook. II; (3).

Professor Robinson
Prerequisite: Horticulture 37a.
38. Office Practise in Landscape Gardening.-Lectures; office work; reports. Practise in carrying out landscape plans in the field. $I$ or $I I$; (2). Assistant Professor Root
Prerequisite: Horticulture 27a, 23b.
39a-39b. Special Lectures.-Lectures by members of the faculty and invited lecturers, on the working out of problems in landscape gardening. Required of students taking the professional curriculum in landscape gardening. Certain inspection trips will be required of the class. The expense of these trips will be about two dollars. One lecture a week with written reports. I, II; (1).

Assistant Professor Roor
Prerequisite: Permission of the instructor in charge.
40a. Trees and Shrubs (Advanced Course).-Laboratory, field, and herbarium work; assigned reading; seminar conferences. $I$; (3).

Assistant Professor Roor
Prerequisite: Horticulture 24b.
40b. Trees and Shrubs (Advanced Course).-Special problems in the classification and arrangement of plants as to their leaf color. $I I$; (3).

Assistant Professor Root, Mr. Venning
Prerequisite: Horticulture 21b.
41. Civic Design (Elementary Course).-Lectures; reference reading; reports. II; (1). Professor Robinson

Prerequisite: Horticulture 23a.
42. Landscape Design (Elementary Course).-Application of landscape design to private grounds. One lecture; reference reading; reports; six hours drafting a week. II; (3). Mr. Smith

## Courses for Graduates

At least two years of collegiate work in horticulture and allied subjects and specific preparation for the chosen topics are required for entrance on major work in this department.
102. Pomology.-Adaptation, propagation, cultivation, or pruning of small fruits. Conferences. $I I$; ( $1 / 2$ to $I u n i t$ ). Professor Crandall
103. Olericulture.-Structure, cultural requirements, and improvement of vegetabies. Conferences. $I, I I$; (I to 2 units; a student working part time and extending his study for the master's degree over two years may register for $1 / 2$ to I unit for each of the four semesters.)

Professor Blair, Professor Lloyd
108. Pomology.-The relationship, adaptation, improvement, propagation, cultivation, pruning, protection, preservation, or marketing of orchard fruits. Conferences. I, $I$; (I to 2 units; a student working part time and extending his study for the master's degree over two years may register for $1 / 2$ to I unit for each of the four semesters.) Professor Blair, Professor Crandall
115. Horticulture.-The horticultural status of flowering plants; or special problems in the culture of greenhouse plants.

Assistant Professor Dorner

## HOUSEHOLD SCIENCE

Isabel Bevier, Ph.M., Professor and Director
Ruth Wheeler, Ph.D., Assistant Professor
Lurene Seymour, Ph.B., B.S., Associate
Cora Emeline Gray, M.S., Associate
Maud Edna Parsons, A.B., Associate
Florence Harrison, B.S., Associate
Georgia Elizabeth Fleming, B.S., Instructor
Grace Esther Stevens, A.B., Instructor
Anna Waller Williams, A.M., Instructor
Greta Gray, A.M., Instructor
Mamie Bunch, A.B., State Leader in Home Economics Demonstration
Margaret Beaumont Stanton, A.M., Instructor
Leona Hope, Instructor
Olive B Percival, B.S., Assistant, Extension
Fannie Maria Brooks, A.B., Assistant, Extension
Grace Linder, A.B., Assistant, Extension
Frederick Jackson Blackburn, B.S., Assistant, Extension
Major: 20 hours from any courses offered by the department, excluding Household Science 2 and 7, and including Household Science 5, 6, 12, and 3.

Minors: 20 hours from either (a) chemistry, bacteriology, and physiology; or (b) economics (a minimum of eight hours), along with one or two of the following subjects: art and design, education, history, psychology, and sociology.

## Food

1. Selection and Preparation of Food.-The nature and uses of foods, their chemical composition, and the changes effected by heat, cold, or fermentation; principles of selection, illustrated by marketing expeditions; processes of manufacture ; combinations of different kinds. II; (3).

Miss Stevens, Miss Stanton, Miss Greta Gray
Prerequisite: Entrance credit in physics; Chemistry 1.
6. Economic Uses of Food.-(Continuation of 1.) The economics of the food question; uses and applications of preservatives. $I$; (3).

Miss Stevens, Miss Stanton, Miss Greta Gray
Prerequisite: Household Science 1.
14. Problems in the Preparation and Service of Food.-(Continuation of courses 1 and 6.) Preparation and service of meals for a family; cost and dietetic values; the preparation of food in quantities; individual problems in the manipulation of food materials. I or II; (3).

Miss Cora Gray, Miss Williams
Open to: (a) those who are preparing for lunch-room management; (b) those who are preparing for extension work; (c) in special cases, those who have completed the major in household science.

Prerequisite: Household Science 1, 6; Chemistry 1, 2, 3 or 2a; junior standing, and the consent of the instructor.
5. Dietetics.-Diet; the relation of food to health; influence of age, sex, and occupation on diet; the construction of dietaries; dietetic treatment of certain diseases. Laboratory. I or II; (3).

Assistant Professor Wheeler
Prerequisite: Household Science 1, 6; Physiology 4; Chemistry 1, 2, 3 or 2 a.
4. Food and Nutrition.-The physiological, chemical, and bacteriological problems of food and nutrition. Individual investigation. $I$; (5).

Assistant Professor Wheeler
Prerequisite: Bacteriology 5; Chemistry 1, 2, 3 or $2 \mathrm{a}, 13 \mathrm{a}, 9,9 \mathrm{c}$, five hours in botany or zoology; Household Science 1, 5, 6.
18. Lunch-Room Management.-Organization and equipment of lunch rooms. Laboratory practise. (The class takes a trip to Chicago to inspect various types of lunch rooms. The cost of the trip is about $\$ 15.00$.) I or II; (5).

Miss Parsons
Prerequisite: Household Science 1, 5, 6, 14; Economics 1 or 2, and senior standing.
[20. Infant Nutrition.-Lectures; readings; discussions. I; (2). Not given, 1915-16.

Assistant Professor Wheeler
Prerequisite: Household Science 5, and senior standing.]

## The House

2. Home Architecture and Sanitation.-Situation, surroundings, and construction of the house; hygiene, heating, lighting, ventilating, water supply, and drainage. House planning and sanitary plumbing, fixtures, and internal drainage ; making skeleton plans. $I$; (2).
Professor Bevier, Miss Fleming, Miss Greta Gray, Assistant Professor Ase, and others
Note: Only one credit for seniors.
3. Elementary Home Decoration.-Evolution of the house and home; homes of primitive peoples; theory of color and its application in home decoration; furnishings from a sanitary and artistic standpoint. II; (2).

Professor Bevier, Miss Fleming, Miss Greta Gray, Miss Hope
Prerequisite: Art and Design 12; Household Science 2; junior standing.
10. Household Management.-Expenditure of the income; organization of the household; care of the house and family; home nursing; domestic service problem. Laboratory work in practise apartment. II; (2).

Miss Cora Gray, Miss Williams
Prerequisite: Household Science 1, 2, 6; Economics 1 or 2; junior standing.

## Textiles and Clothing

7. Textiles.-Development of the textile industry from primitive times to the present; the important fibers and materials made from them; movements for bettering textile conditions; practise in weaving. $I$ or $I I$; (2).

Miss Seymour
Note: Only one credit for seniors.
12. Clothing.-Dress from the historic, hygienic, and economic standpoint. Making of garments from individual designs. II; (3).

Miss Hope, Miss Fleming
Prerequisite: Household Science 7, 19; 30 hours of university work. Proof by examination or otherwise of the ability to sew.
17. Problems in the Study of Textiles.-Microscopic and chemical analysis of fabrics; dyeing; special problems. $I I$; (3).

Miss Seymour
Prerequisite: Household Science 7, 12; Chemistry 1, 2a.
19. Dress Design.-Effect of space division and line on proportion of figure; dresses for definite occasions. I; (2).

Miss Hope
Prerequisite: Household Science 7, Art and Design 1, 12; thirty hours of university work.

## Courses for Teachers

11. *Teachers' Course.-The best methods of presenting the work, and its correlation with other subjects. Practise in planning and presenting of courses. (Two inspection trips are made to other schools, one in April and one in May. The total cost does not exceed $\$ 5.00$.) II; (3).

Professor Bevier, Miss Seymour, Miss Harrison
Prerequisite: Household Science 1, 2, 3, 5, 6, 7, 12, and 13; laboratory work in sewing, Saturday morning, first semester; senior standing.
13. History of Home Economics.-Origin and development of home economics; the work in different types of institutions; the planning of courses for these types. I; (2). Professor Bevier, Miss Harrison, Miss Seymour

Prerequisite: Senior standing.
9. Individual Problems.-Different phases of home economics. II; (3).

Professor Bevier
Prerequisite: Senior standing.

## Economics of the Family

15. Economics of the Family Group.-The economic relations of the family as a whole and as individuals. Retail market; sources of income, and social and industrial conditions affecting them; child labor; economic position of women. $I$; (3).

Miss Stanton
Prerequisite: Household Science 3, 6, 10, 12.

## Courses for Graduates

Students who wish to do graduate work in household science should specialize in either the scientific or the economic phase of the subject. In either case they must offer twenty credit hours of household science as given in the University of Illinois, or its equivalent, with a minimum of two years of chemistry, including organic chemistry, a year of biological science, and a year of either economics or sociology.

Note: Courses 4, 5, and 20 may be taken for graduate credit.
101. Home Economics.-Origin and development; industrial, educational, and sociological aspects. Twice a week; I, II; (I unit). Professor Bemer
102. Special Investigations.-The application of the principles of bacteriology, chemistry, and physiology to the ordinary processes used in preparation of food; problems in nutrition. Twice a weck; I, II; (2 units).

Professor Bevier, Assistant Professor Wheeler

[^83]103. Seminar.-Recent advances in nutrition. Once a week; II; ( $1 / 2$ unit). Assistant Professor Wheeler

## Summer Session Courses

Foods.-The work offered in foods is of two grades: (a) That designed for those who have studied or taught household science and wish to prepare themselves to teach it in high schools; (b) Advanced work in nutrition.

S 1. Foods.-Sources and cost of foods; the cooking of various types; planning and service of meals. ( $11 / 2$ ). Miss Stanton

S 2. Foods.-Relative nutritive value of foods; dietetic values: the relation of foods to the human body. ( $11 / 2$ ). Miss Stanton

Prerequisite: A year's work of college rank with foods; a year of general chemistry; a course in general physiology.

S 4. Clothing.-Textiles used in clothing; cost and care of clothing; use of patterns; drafting; making of undergarments, a shirtwaist, and a cotton dress. Lecture; discussion; laboratory. (2). Miss Hope and Miss Linder

S 5. Millinery.-Designing and construction of wire, buckram, and cape net frames; covering with velvet and straw. Demonstrations; laboratory. ( $1 / 2$ ).

Miss Linder
S 6a. Costume Design.-Appropriate dress; proportion of parts; outline of figure and color harmony. Lecture; laboratory. ( $1 / 2$ ). Miss Hope

S 6b. House Decoration and Furnishing.-History of furniture; perspective drawing of rooms; color schemes; weaving. Lecture; laboratory. ( $1 / 2$ ).

Miss Hope

## ITALIAN

## (See Romance Languages and Literature.) <br> JOURNALISM

(See Rhetoric 12, 15, 17, 19, under The English Language and Litrarature.)

# LANDSCAPE GARDENING <br> (See Horticulture.) 

## LATIN

## (See Classics.)

## LAW

Oliver Albert Harker, A.M., LL.D., Professor, Dean
Frederick Green, A.M., LL.B., Professor
Edward Harris Decker, A.B., LL.B., Professor
Joun Norton Pomeroy, A.M., LL.B., Professor
Chester Garfield Vernier, A.B., J.D., Professor
William Green Hale, B.S., LL.B., Professor, Secretary
Charles Ernest Carpenter, A.M., LL.B., Assistant Professor

## First Year Courses

Nore.-In addition to the regular courses, first year students are required to attend one quiz-hour each week.

1a-1b. Contracts.-Williston's Cases on Contracts, Vols. I and IT. Selected Illinois Cases. I; (4):II; (3). Professor Decker

2a-25. Torts.-Ames and Smith's Cases on Torts. I, II; (3).
Professor Hale
37. Introduction to the Study of Law.-I; (1). Professor Decker
3. Real Property.-Gray's Cases on Property, Vols. I and II (2d Edition). II; (3).

Assistant Professor Carpenter
[4. Common Law Pleading.-II; (3). Not given, 1915-16.]
5. Criminal Law.-Beale's Cases on Criminal Law, (2nd edition). I; (4).

Professor Vernier
6. Personal Property.-Gray's Cases on Property, Vol. I, (2nd edition). $I$; (2).

Professor Green
7. Domestic Relations.- Woodruff's Cases on Domestic Relations, (2nd edition). II; (2).

Professor Vernier
11a. Agency.-Wambaugh's Cases on Agency. II; (3).
Assistant Professor Carpenter

## Second or Third Year Courses

8. Evidence.-Thayer's Cases on Evidence, (2nd edition). II; (4).

Professor Hale
9. Sales.-Williston's Cases on Sales, (2nd edition). I; (3).

Professor Hale
10. Real Property.-Gray's Cases on Property, Vols. II and III, (2nd edition). $I$; (4).

Assistant Professor Carpenter
11b. Agency.- Wambaugh's Cascs on Agency. I; (3).
Assistant Professor Carpenter
12a-12b. Equity.-Ames' Cases on Equity. I; (3): II; (2).
Professor Pomeroy
13. Damages.-Beale's Cases on Damages, (2nd edition). I; (2).

Professor Decker
14. Carriers.-Green's Cases on Carriers. II; (3). Professor Green
15. Bills and Notes.-Huffcut's Cases on Bills and Notes, (Colson's edition). I; (4). Professor Vernier
16. Trusts.-Ames' Cases on Trusts, (2nd edition). II; (3).

Professor Vernier
18. Wills.-Gray's Cases on Property, Vol. IV, (2nd edition). II; (2).

Professor Pomeroy
19. Partnership.-Mechem's Cases on Partnership, (2nd edition). I; (2). Professor Hale
20. Equity Pleading.-Rush's Cases on Equity Pleading; selected Illinois and Federal Cases. II; (2). Professor Hasker
24. Municipal Corporations.-Beale's Cases on Municipal Corporations. II; (2). Professor Pomeroy
27. Future Interests in Property.-Gray's Cases on Property, Vol. V and part of Vol. VI, (2nd edition). II; (3). Assistant Professor Carpenter

Note: Given in 1915-16 and in alternate years.
28. Insurance.-Wambaugh's Cases on Insurance. I; (2).

Professor Green
Note: Given in 1915-16 and in alternate years.
30. Public International Law.-Lawrence's Principles of International Law and Scott's Cases on International Law. I; (3). Professor Garner
[32. Quasi-Contracts.-Woodruff's Cases on Quasi-Contracts. II; (2). Given in alternate years. Not given in 1915-16.]
[34. Public Utilities.-Wyman's Cases on Public Service Companies, (2nd edition). $I I$; (2). Given in alternate years. Not given in 1915-16.]

35a. Brief Making.-Lectures and assigned work. I; (1).
Professor Decker
35b. Moot Court.-II; (1).
Professor Harker
Prerequisite: Law 4 and 35a.

## Third Year Courses

4a. Illinois Procedure.- ; (3). Professor Harker
17. Private Corporations.-Canfield and Wormser's Cases on Private Corporations. II; (4).

Professor Green
21. Suretyship.-Ames' Cases on Suretyship. II; (3).

Professor Decker
Prerequisite: Law 15.
22. Constitutional Law.-Hall's Cases on Constitutional Law. I; (3). Professor Green
23. Mortgages and the Recording Acts.- $I$; (2). Professor Pomeroy
25. Bankruptcy.-Williston's Cases on Bankruptcy, (2nd edition). I; (2).

Professor Pomeroy
31. Conflict of Laws.-Beale's Shorter Selection of Cases on Conflict of Laws. II; (2). Professor Vernier
33. Constitutional Law.-Hall's Cases on Constitutional Law. II; (2).

Professor Green
36a-36b. Moot Court.- I, II; (2).
Professor Harker
Prerequisite: Law 4, 20, and 35a.

## LIBRARY SCIENCE

Phineas Lawrence Windsor, Ph.B., Director
Frances Simpson, M.L., B.L.S., Assistant Director, Assistant Professor
Florence Rising Curtis, A.B., B.L.S., Associate
Ernest James Reece, Ph.B., Associate
Ethel Bond, A.B., B.L.S., Instructor and Catalog Reviser
Emma Felsenthal, Ph.B., B.L.S., Instructor and Reference Assistant
Edna Lyman Scott, Special Lecturer
Fanny Wilder Hill, A.B., B.L.S., Reviser and Assistant
Lecturers from the Staff of the Library
Francis Keese Wynkoop Drury, A.M., B.L.S., Lecturer, Order Work
Philip Sanford Goulding, A.B., Lecturer, Cataloging
Charles Edward Graves, A.B., Lecturer, Exchanges
Alice Sarah Johnson, A.B., B.L.S., Lecturer, General Reference
Emma Reed Jutton, B.L.S., Lecturer, Loans
Adar Patton, B.L.S., Lecturer, Cataloging

Margaret Hutchins, A.B., B.L.S., Lecturer, General Reference
Ola M Wyeth, A.B., B.L.S., Lecturer
Mary Torrance, A.B., B.L.S., Lecturer
Charles Edwin Janvrin, Ph.B., B.L.S., Lecturer
Winifred Fehrenkamp, B.L.S., Lecturer

## Eva Cloud, Lecturer in the Summer Session

2a-2b. Reference Work.-Methods of bibliographic research; use of reference books; practical work in the reference department of the University library. $I, I I$; (3).

Assistant Professor Simpson
3a-3b. Selection of Books.-Selection for libraries of different types; standard lists, critical periodicals, and other aids; practise in writing book annotations. $I, I I$; (2).

Miss Felsenteal
4a-4b. Practise Work.-Work in the various departments of the University library. (To be taken with Library $2,16,17,18,19,20$, and 21.) $I, I I$; (2).

Mr. Reece
6a-6b. Subject Bibliography.-Books in special subjects; literature and bibliography. Lectures by professors in the respective departments of the University. $I, I I$; (2).

Director Windsor, and others
[7. History of Libraries.-The foundation, development, and resources of libraries of Europe and the United States. I; (2). Given in alternate years. Not given, 1915-16.

Assistant Professor Simpson]
8. Advanced Reference.-Transactions of learned societies; special periodicals and government publications; indexes and other works of value to a large reference department. I; (2). Assistant Professor Simpson

Prerequisite: Library 2a-2b.
9. History of Books and Printing.-The early forms of books; the invention and spread of printing; book illustration; book-binding. Given in alternate years. $I I$; (2).

Director Windsor
10a-10b. Practise Work.-(Continuation of course 4, supplemented by one month of work on the staff of an assigned public library.) $I, I I$; (4).

Miss Curtis
12. General Reference.-Classification and arrangement of books in the University library; card catalogs; reference books. (Intended for freshmen and sophomores in the University, not for students in Library School.) I or II; (2). Miss Hutchins, Miss Felsenthal, Miss Johnson

13a-13b. Public Documents.-13a: Production and distribution of United States documents; their treatment and use as reference books. 13b: American state and municipal documents; publications of foreign governments. I, II; (2).

Mr. Reece
15a-15b. Seminar in Library Economy.-Special problems; library economy publications. I, II; (2). Mr. Reece and others
16. Order, Accession, and Shelf Work.-Order department records and routine; book-buying; publishers and discounts; copyright; serials and continuations; gifts; exchanges; duplicates; the accession book and its substitutes; the shelf list and its uses; care of pamphlets, clippings, and maps. $I$; (2).
17. Classification and Subject Headings.-Dewey Decimal and Cutter expansive systems; subject headings for dictionary catalog; book numbers. I; (3).

Miss Bond
18. Cataloging.-Dictionary catalog; classed catalog. I; (3). Miss Bond
19. Trade Bibliography.-Books and periodicals used as tools of the book trade of America, England, Germany, and France. II; (1). Mr. Reece
20. Loan Department-Records; representative systems; rules, regulations, and practises. $I I$; (1).

Miss Tution
21. Printing, Binding, and Indexing.-Printing: Printing for libraries; preparing copy and reading proof. Binding: Materials and methods of bookbinding for libraries; practise in preparing books for the bindery and in making necessary records. Indexing: Magazine and book indexing; marking copy, choice and arrangement of entries. II: (2). Director Windsor, Miss Curtis
22. Library Legislation.-Organization and administration of public libraries, special libraries, state library agencies, library training, library periodicals. $I I$; (3).

Miss Curtis
23a-23b. Library Administration and Current Library Literature.Current library periodicals, bulletins, reports, catalogs, and reading lists; organization, reorganization, and administration of small libraries; planning and equipment of reading rooms and small library buildings; library accounts and business forms. $I, I I$; (1).

Miss Curtis
24a-24b. Selection of Books.-English translation of representative works of French, German, Spanish, Italian, and Russian novelists, dramatists, and short story writers of the 19th century; examination of about forty newly published books each month. I, II; (2). Assistant Librarian Drury
25. Comparative Classification and Cataloging.-The principal systems; rules for cataloging. $I I$; (1).

Miss Bond
Prerequisite: Library 17, 18.
26a-26b. Library Administration.-Advanced trade bibliography; library organization; library architecture; legislative and municipal reference work; library work with children; special topics. I, II; (3).

Assistant Professor Simpson and others
27. Bibliographical Institutions.-Organization and work of societies and institutions of America and Europe; cooperative bibliographical undertakings; international bibliography. $I$; (1).

Miss Patton
28. Practise Work.-Advanced practise work in departments of the University library. $I I ;$ *(1 to 4$)$. Miss Curtis

## Summer Session Courses

Note-The courses indicated covered six weeks and received no university credit. Only people employed in libraries were admitted.

[^84]S 1．Classification；Cataloging；Book Numbers．－Fine times a week．
S 2．Reference Work－Reference books suited to the small sublic libary．Tưre a wiek．

S 3．Selection of Books．－Book selection and subject bibliography．


S 4．Work with Children－Selection and discussion oi children＇s bools；acministation of chilcten＇s libraties；classifcation and cataloging． Tuine a weck．

S 5．Order and Accession；Loan Deparment；Binding and Repair． Trice a mes占．

S 6．Library Administration and Extension－Twiee a wich．

## MANUAL TPAINING

Summe：Session Only




The courses is mantal art tere been arrarged to satisir tie needs of three ciases o stufers mho atend tes summet sessions；（1）superintendents， p：incipals and teacters in s－all schocls who purste the work with the idea
 sugerisus mioc tais the cotres to inctase the：bomienge and experience；


S 1．Incustial Ecucation－Tpieal schoois and systems of manual
 ＂红：e＝i ニaterize（2\％／2）．Mr．Pusa

S 2．Wooimorking－Fo：：eccites in the serenth asc eighth grades



S 3．Woodmoring．－（Fo：teschers who hate completed S 2）．Cabinet


M－．Pasz，Me．Duricas




S 5．Descriptive Geomery－Poitn liss and plane；properties of sur－











## MATHEMATICS

Exchr Jeane Towsicnd, PhD. IId, Profester
Gdonce Azank Minizs, PhD, Projesror
Hevisy Lewis Reetz, PinD, Professot
James Byznes Siaw, D.SE -ferociate Professer
Ceazins Hiraceme Sisam, PhD., Ásvisiant Projesoor
Aaroto Exct, PhD, Assistam: Projetsor
Romst Dantel Chemicesin, PhD, Acristomt Projescor
Artelz Robert Cratacosin Ph.D, Associane
Rosirt Lact Bosers, PiD_ fasocite
ERNest Barnis Litie, PhD, fussocide
Gustaf Eaic Whelts, PhD, Accocinte
Auraxy Joen Revpnes, ELD, Ásocivic
Wifture Weis Denton, Pi $D$, Imbitation

Lent Thomas Winson, PhD, Intirnter
Gey Warson Smite, M.S. Assitiant


Hosasy D Fiary, w.E. MS, frsitiont
Raywond Fzancern Bomex, Pin foritint
Willian Emwan Rotey .fscistim:


Henry Ceanles Zits, AM. Áscisiam: in the Smmone Sistion
Major: Twenty hcurs made np from any =adergradzate courses ofered
 7 and 9.

Minors: Twenty hours selected from pissics, izemisty, zad astocans.

## Courses for Undergraduates

2. College Alsebra-i of II; (3).

Assistart Proiessor Sishy, Assistar: Proiess: Chavientin De. Encore


Mr. Bander, Mr. Aote
Prercurivit: Entrance algibra, $1 / 2$ wits; plase geometr, 1 Itit
4. Plane Trigonometr.-I as 11 ; (2).

Professor Mourn Assistan: Proiessor Ence, Assister: Foniessor Chinnentu


Mr. Fahry, Mr. Soñex. Mr. Sore

5. Teachers' Course-Secondary algebra and seo=etry: their edarational ralue: position in conse; =ethods of tantins: surciation; comparica of Amerioan methods with thos of ioreise wanties: cries and importance of topies; ter-bocks: literature. Levtere; disemsians; mpots 1: (2).

Prerrquixif: Iunior standies.
6. Analytic Geometry.-Plane and solid analytic geometry. II; (5). Associate Professor Shaw, Assistant Professor Sisam, Dr. Crathorne, Dr. Borger, Dr. Lytle, Dr. Wahlin, Dr. Kempner, Dr. Reed, Dr. Denton,
Dr. Chittenden, Dr. Wilson, Mr. Smith, Mr. Wilson, Mr. Marshall, Mr. Frary, Mr. Borden, Mr. Roth
7-9. Differential and Integral Calculus.-Functions of one and of several variables. (Section A1 is an honor section and may be selected by those specializing in mathematics or having an average grade of 90 in freshman mathematics.) $I$; (5): II; (3).

Professor Townsend, Professor Reitz, Associate Professor Shaw, Assistant Professor Sisam, Assistant Professor Emch, Assistant Professor Carmichael, Dr. Crathorne, Dr. Borger, Dr. Lytle, Dr. Waflin, Dr. Kempner, Dr. Ceittenden.

Note: Two sections of Mathematics 7 are given the second semester.
Prerequisite: Mathematics 6.
8. Differential and Integral Calculus.-(For students in chemistry and chemical engineering). $I$; (5).

Professor Miller, Mr. Smith
Prerequisite: Mathematics 6.
9a. Differential and Integral Calculus.-(Second course). The definite (single and multiple) integral; formation of problems in applied mathematics; line, surface, and volume integrals; the theorem of Stokes and Green; partial differentiation; exact integrals with applications of the conditions for exactness; elements of differential equations, approximate quadrature and integration of differential equations. $I$; (2)

Associate Professor Shaw, Dr. Crathorne, Dr. Borger, Dr. Denton

## Courses for Advanced Undergraduates and Graduates

10. Theory of Equations and Determinants.-An algebraic equation in one unknown; solutions of systems of simultaneous equations; theory of a system of linear equations; determinants. $I I$; (3).

Professor Miller
Prerequisite: Mathematics, 6, 7, 9 (or 8).
16-17. Differential Equations and Advanced Calculus.-Ordinary and partial differential equations; special topics of calculus of value in the application of mathematics not included in Mathematics 7, 9. $I, I I$; (3).

Professor Townsend
Prerequisite: Mathematics 7 and 9, (or 8).
18. Constructive Geometry.-Development and training of space perception; properties of lines, planes, and the simpler surfaces of the second order studied by methods of parallel and central projection; graphical interpretation of the processes of analytic geometry; analytic discussion of the methods of descriptive geometry. I; (3).

Assistant Professor Emch
Prirequisite: Mathematics 6.
19. Solid Analytic Geometry.-Equations of the plane and right line in space; the more general properties of surfaces of the second degree; the classification and special properties of quadrics; a brief introduction to the theory of surfaces. II; (3). Assistant Professor Sisam

Prerequisite: Mathematics 7, 9 (or 8 ), and 10.
21. Method of Least Squares.-Law of probability and error; adjustment of observations; precision of observations; independent and conditional observations. $I$; (2). Professor Stebbins

Prerequisite: Mathematics 7, 9 (or 8 ).
23. Averages and Mathematics of Investment.-Meaning, use, and abuse of different kinds of averages; probability; annuities, insurance, and branches of science; loans and investments; the evaluation of investment securities. II; (3).

Professor Reitz
Prerequisite: Mathematics 2; junior standing.
24-25. Functions of a Complex Variable.-I, II; (3).
Professor Townsend
Prerequisite: Mathematics 7, 9, 16-17.
[31. Actuarial Theory.-Application of probability to life contingencies; mortality tables; fire insurance; premiums for various types of insurance. $I$; (3). Not given, 1915-16.

Professor Rietz
Prerequisite: Mathematics 7, 9 (or 8), and 23.]
[32. History of Mathematics.-The elementary subjects; rise and growth of the higher mathematics chiefly in the nineteenth century; biography of persons influential in this development. Lectures; reports on assigned reading. II; (2). Not given, 1915-16.

Dr. Lytle
Prerequisite: Junior standing in mathematics.]
[33-34. Modern Algebra.-Theory of matrices; system of linear equations; bilinear and quadratic forms; properties of polynominals; algebraic invariants; elementary divisors. $I, I$; (3). Not given, 1915-16. Dr. Borger

Prerequisite: Mathematics 7, 9, 10.]
27-28. Projective Geometry.-Fundamental concepts; anharmonic ratio; projective pencils and ranges; transformations and groups; theory of conics and quadric surfaces; pencils and ranges of conics; quadratic transformations and projective theory of cubics; applications in mechanics. $I, I I$; (3).

Assistant Professor Emch
Prerequisite: Senior standing in mathematics.
40. Fundamental Concepts of Mathematics.-The concepts of higher mathematics in their bearing on elementary mathematics. $I I$; (2).

Dr. Lytle
Prerequisite: Junior standing in mathematics.

## Courses for Graduates

100. Seminar and Thesis.-Three times a week; I, II; (I or 2 units). Professor Townsend, Professor Miller, Professor Rietz, Associate Professor Shaw, Assistant Professor Sisam, Assistant Professor Emch, Assistant Professor Carmichael
[101. Functions of Real Variables.-Real variables; assemblages. Three times a week; I, II; (I unit). Not given, 1915-16. Professor Townsend

Prerequisite: Mathematics 16-17.]
104. Expansions in Fundamental Functions.-Theory of integral equations; methods of expansion of arbitrary functions in terms of the characteristic
functions of a given nucleus; applications of Green's functions, Potential functions, Fourier series, series of Legendrians, of Bessel functions; differential equations of physics under given boundary conditions; the inversion of definite integrals. Three times a week; I, II; (I unit). Associate Professor Shaw
105. Calculus of Variations.-Those elements of the science most needed in the study of the higher subjects of mathematical astronomy and physics. I, II; (I unit).

Dr. Crathorne
Prerequisite: Mathematics 16.
110. Elliptic Functions.-Application to geometry and mechanics; the elliptic modular functions. Three times a week; I, II; (I unit).

Assistant Professor Carmichael
Prerequisite: Mathematics 24.
[111. Automorphic Functions.-First semester: The group-theoretic side of the theory. Second semester: Function-theoretic developments and applications. Three times a week; I, II; (I unit). Not given, 1915-16.

Assistant Professor Emch
Prerequisite: Mathematics 24-25 and preferably 27-28 and 110.]
[113. Theory of Linear Differential Equations.-Three times a week; I, II; (I unit). Not given, 1915-16.

Dr. Crathorne
Prerequisite: Mathematics 24-25.]
[120. Elementary Theory of Groups.-Groups in arithmetic, geometry, and trigonometry; those which can be represented with a small number of letters; the abstract group theory; the Galois theory of equations. Three times a week; I, II; (I unit). Not given, 1915-16.

Professor Miller
Prerequisite: Mathematics 33-34.]
121. Theory of Groups.-A second course in the theory of groups of finite order. Three times a week; I, II; (I unit).

Professor Miller
Prerequisite: Mathematics 120.
124. Theory of Numbers.-Conferences; Kronecker's modular systems; quadratic residues and forms; algebraic numbers. Three times a week; I, II; (I unit).

Dr. Wahlin
129. Theory of Statistics.-Statistical investigation; application of the theory of probability to statistical data; fitting curves to observation; interpolation; theory of errors; variability and correlation; problems in economics, sociology, and biology. Three times a week; I, II; (I wnit). Professor Rietz

Prerequisite: Mathematics 8.
[130. Invariants and Higher Plane Curves.-Algebraic curves; application of the theory of invariants to higher plane curves; curves of the third and fourth order. Three times a week; I, II; (I unit). Not given, 1915-16.

Assistant Professor Sisam
Prerequisite: Mathematics 16, 27.]
[131. Algebraic Surfaces.-Homogeneous coordinates, invariants, and geometry of three dimensions; surfaces; special properties of surfaces of the third and fourth order. Three times a week; I, II; (I unit). Not given, 1915-16. Assistant Professor Sisam
Prerequisite: Mathematics 19.]
135. Metric Differential Geometry.-The calculus and the general theory of curves and surfaces based on the use of Cartesian coordinates; theory of surfaces and the theory of invariants of a pair of quadratic differential forms. Three times a week; I, II; (I unit).

Assistant Professor Sisam
Prerequisite: Mathematics 16.
[141. Vector Methods.-The algebras of quaternions, space analysis, and dyadics; differentiation and integration; rational mechanics, elasticity, hydrodynamics, electrodynamics. Three times a week; I, II; (I unit). Not given, 1915-16.

Associate Professor Shaw
Prerequisite: Mathematics 16.]
[142. General Algebra.-Linear associative algebra or hyper-complex numbers; systems useful for the geometry and physics of $N$ dimensions; relativity theories, and general differential and integral invariants; linear operators and functional equations; general analysis, integro-differential equations, infinite systems; operators; general invariant theories. Three times a week; I, II; (I unit). Not given, 1915-16.

Associate Professor Shaw
Prerequisite: Mathematics 16-17.]

## Summer Session Courses

S 2. College Algebra.-(Equivalent to course 2) Rietz and Crathorne's College Algebra. (3).

Dr. Warlin
Prerequisite: $21 / 2$ units entrance mathematics.
S 4. Plane Trigonometry.-(Equivalent to course 4.) Kenyon and Ingold's Trigonometry. (2).

Mr. Zeis
Prerequisite: $21 / 2$ units entrance mathematics.
S 6. Analytical Geometry.-(Equivalent to course 6.) Ziwet and Hopkins' Analytic Geometry. (5). Dr. Kempner
Prerequisite: Mathematics 2 and 4.
S 7. Differential Calculus.-(Equivalent to course 7). Townsend and Goodenough's Essentials of Calculus. (5). Mr. Wilson

Prerequisite: Mathematics 6.
S 9. Integral Calculus.-(Equivalent to Mathematics 9). Townsend and Goodenough's Essentials of Calculus. (3).

Assistant Professor Shaw, Mr. Zeis
Prerequisite: Mathematics 7.

- *S 10. Theory of Equations and Determinants.-For description, see Mathematics 10. Text: Dickson's Elementary Theory of Equations, (3).

Dr. Wahlin
Prerequisite: Mathematics 6.
( *S 16. Differential Equations.-For descriptions, see Mathematics 16. (3).

Assistant Professor Shaw
Prerequisite: Mathematics 8 or 9.

## MECHANICAL ENGINEERING

Charles Russ Richards, M.M.E., Professor
George Alfred Goodenough, M.E., Professor, Thermodynamics
Bruce Willet Benedict, B.S., Director, Shop Laboratories
Lewis Allen Harding, M.E., Professor Experimental Mechanical Engineering
Oscar Adolph Leutwiler, M.E., Professor, Machine Design
Arthur Cutts Willard, B.S., Assistant Professor, Heating and Ventilation
John Adlum Dent, M.E., Associate
George Benjamin Rice, Lecturer on the Installation and Operation of Mechanical Equipment for Buildings, and Assistant Mechanical Engineer in the Office of the Supervising Architect
Alonzo Plumsted Kratz, M.S., Research Associate, Engineering Experiment Station
Harry Frederick Godeke, B.S., Instructor
Edwin Frank, B.S., Instructor
Harry William Waterfall, B.S., Instructor, Machine Design
Horatio Sprague McDewell, M.M.E., Instructor
Edgar Thomas Lanham, Instructor, Forge Practise
Robert Edivin Kennedy, Instructor, Foundry Practise
Gustave Adolph Gross, Instructor, Pattern Making
Gustav Howard Radebaugh, Instructor, Machine Practise
James Harvey Hogue, Instructor, Foundry Practise
Jeremiah Amos De Turk, B.S., Instructor, Machine Practise
Leroy Alonzo Wilson, M.M.E., First Assistant, Engineering Experinuent Station
James Merion Duncan, Assistant, Pattern Making
Peter Joseph Rebman, Assistant, Forge Practise
Jorn Alexander Frisk, Assistant and Mechanician

1. Steam and Air Machinery.-Construction, operation, and care of boilers, engines, and air compressors; thermodynamics; steam engine performance ; compressed air. (For students in civil and mining engineering.) $I$; (3).

Mr. Dent
Prerequisite: Junior standing.
2. Steam Engineering.-Engines, boilers, pumps, condensers, and other steam machinery. II; (3). Mr. Godeke, Mr. McDewell, Mr. Frank

Prerequisite: Physics 1a-1b, 3a-3b.
11. Thermodynamics and Heat Engines.-(For students in electrical engineering.) $I$; (3).

Professor Goodenough
Prercquisite: Mechanical Engineering 1 or 2.
12. Thermodynamics.-Transformation of heat into work; the second law and its connection with irreversible processes; heat media; perfect gases; saturated and superheated vapors; flow of fluids. $I I$; (5).

Professor Goodenough
Prerequisite: Mathematics 9a; Theoretical and Applied Mechanics 27.
15. Gas Power Engineering.-Internal combustion engines; liquid and gaseous fuels and their combustion; gas producers. $I$; (3).

Professor Richards
Prerequisite: Mechanical Engineering 12.
23. Mechanical Equipment of Buildings.-Designing systems: Heating and ventilation; refrigeration; fire protection; vacuum cleaning; elevators; lighting; small power plants. Lectures; laboratory. $I$; (5).

Assistant Professor Willard
Prerequisite: Senior standing.
25. Heating and Ventilation for Architects.-Direct and indirect steam and hot water heating; furnace heating; ventilation and air analysis; air condition; temperature and humidity control. $I$; (2).

Assistant Professor Willard
Prerequisite: Senior standing.
26. Heating and Ventilation.-Steam boilers and water heaters of steel and cast iron for heating service; heat losses from buildings; direct and indirect steam and hot water heating, using gravity systems; furnace heating; fan blast or mechanical indirect systems; exhaust steam heating; district heating by steam and water; ventilation and air analysis; air conditioning; temperature and humidity control. II; (3). Assistant Professor Willard

Prerequisite: Mechanical Engineering 65.
30. Mechanics of Machinery.-Mechanisms and mechanical movements; cams, gears, valve gears, and quick-return motions; graphic constructions for displacement, velocity, and acceleration; kinetics of the steam engine and similar mechanisms; balancing; critical speeds; force and mass reduction. II; (5).

Mr. Dent
Prerequisite: Theoretical and Applied Mechanics 27.
32. Power Transmission.-Shafting, belts, ropes, cables, water, air, gas, and steam; measurement and storage of power. II ; (3).

Professor Richards, Mr. McDewell
Prerequisite: Mechanical Engineering 12 and 43.
37. Principles of Management.-Industrial development; modern industrial tendencies; organization; selection and compensation of labor; application of science to industrial problems; shop systems of management; production. $I$; (3).

Director Benedict
Prerequisite: Mechanical Engineering, 81, 82.
43. Engineering Design.-Machine design; investigation of machines similar to the one to be designed; machinery subjected to heavy and variable stresses; punches, shears, presses, riveters, and cranes. $I$; (5).

Professor Leutwiler, Mr. Waterfall
Prerequisite: Theoretical and Applied Mechanics 29; Mechanical Engineering 30 .
44. Engineering Design.-Special tools, fixtures, jigs, dies, and gauges used in high production manufacturing. $I I$; (2).

Professor Leutwiler, Director Benedict, Mr. Waterfall
Prerequisite: Mechanical Engineering 37 and 43.
52. Power Plant Design.-Steam power plant. II; (3).

Professor Leutwiler, Mr. Waterfall
Prerequisite: Mechanical Engineering 43 and 65.
54. Industrial Plant Design.-Design and equipment; buildings, heating, ventilation, lighting, power generation, and transmission; drying processes. II; (3).

Professor Harding
Prerequisite: Mechanical Engineering 43 and 65.
61. Power Measurement.-Testing and calibrating instruments and apparatus; the indicator; horse-power and steam consumption; indicator diagrams; valve setting. (For students in electrical engineering.) $I$; (2).

Mr. Godere, Mr. Frank, Mr. McDewell
Prerequisite: Mechanical Engineering 1 or 2.
62. Power Measurement and Steam Engines.-Laboratory, substantially the same as Mechanical Engineering 61 ; lectures. II; (3).

Mr. Godeke, Mr. Frank, Mr. McDewell
Prerequisite: Junior standing.
64. Power Measurement.-Engine and boiler tests-scales, thermometers, indicators, brakes and dynamometers, gauges, calorimeters; calibration and use; horse-power of steam engines, pumps, and gas engines. Reports. II; (3).

Mr. Goedeke, Mr. Frank, Mr. McDewell
Prerequisite: Mechanical Engineering 2; registration in Mechanical Engineering 12 or Chemistry 31.
65. Power Laboratory.-Engines; turbines; gas engines; pumps; boilers; injectors; air compressors; hoisting appliances; heating apparatus; refrigerating machines. $I$; (3).

Professor Harding, Mr. Goedere, Mr. Frank, Mr. McDewell
Prerequisite: Mechanical Engineering 12 and 64.
66. Power Laboratory.-Special research. II; (2).

Professor Harding, Mr. Goedeke, Mr. Frank, Mr. McDewell
Prerequisite: Mechanical Engineering 65; senior standing.
71. Forge Work for Agricultural Students.-Forging and welding; tempering tools; pointing and hardening cultivator shovels, plow shares. Six hours a week, either half of I or II; (1). Mr. Lanham, Mr. Rebman
73. Wood Work for Agricultural Students.-Carpentry for the farmer; use of tools; layout and construction of building joints; repairs to buildings and equipment. Six hours a week, either half of I or II; (1).

## Mr. Gross, Mr. Duncan

75. Forge Work.-Hand and power forging and welding of metals; heat treatment of carbon and high speed steels in modern gas, electric, and cyanide furnaces; case carbonizing. (9 weeks.) I or II; (1).

Mr. Lanham, Mr. Rebman
77. Foundry Work.-Bench, floor, and machine moulding; core making; operation of cupola and brass furnace; casting of iron, brass, and alloys. (9 weeks.) I or $I I$; (2). Mr. Kennedy, Mr. Hogue
79. Pattern Work.-Hand and machine methods. ( 18 weeks.) I or $I I$; (3).

Mr. Gross, Mr. Duncan
81-82. Machine Work.-Modern manufacturing methods; machine operation; shop management; organization; production methods; dispatching
work; ordering, storing, and routing materials; time studies; shop accounting; inspection and all activities of the machine department of a manufacturing plant. $I$; (3) ; $I$; (2).

Mr. Radebaugh, Mr. De Turk
99. Thesis.-Investigation of special subject and preparation of thesis embodying a review of the literature of the subject, the results of investigation, and a discussion of those results. $I I$; (3).

## Courses for Graduates

Entrance upon graduate work in mechanical engineering presupposes the full undergraduate curriculum in that subject.
106. Heat Motors.-The internal combustion motor; steam turbine; refrigeration. Twice a week; (I unit). Professor Goodenough
107. Thermodynamics.-Thermodynamics; application to physical and engineering problems. Twice a week; I; (I unit). Professor Goodenough
109. Machine Design.-Rational design; application of mechanics of materials. Individual problems. Twice a week; I or II; (I unit).

Professor Leutwiler
112. Laboratory Investigation.-Combustion of fuel; boiler economy; steam engines and turbines; gas engines and producers; explosive mixtures; mechanical refrigeration. Original work. Three times a week; I, II; ( $I^{I} / 2$ units).

Professor Richards, Professor Harding
114. Dynamics of Machinery.-Advanced problems. Balancing, whirling and vibration of shafts; governors; fly wheels; force and mass reduction; stresses in rotating masses. Twice a week; I, II; (I unit).

Professor Goodenough

## MECHANICS, THEORETICAL AND APPLIED

Arthur Newell Talbot, C.E., D.Sc., Professor, Municipal and Sanitary Engineering, in Charge of Theoretical and Applied Mechanics
Herbert Fisher Moore, M.M.E., Research Professor, Engineering Materials, Engineering Experiment Station
Melvin Lorenius Enger, C.E., Assistant Professor, Mechanics and Hydraulics Willis Appleford Slater, M.S., C.E., Research Assistant Professor, Applied Mechanics, Engineering Experiment Station
Virgil R Fieming, B.S., Associate
Fred B Seely, M.S., Associate
George Paul Boomsliter, M.S., Associate
Newton Edward Ensign, A.B., B.S., Associate
Clarence Eugene Noerenberg, A.B., A.E., Instructor
Harry Gardner, M.S., Instructor
Alex Vallance, M.E., Instructor
William James Putnam, B.S., Instructor
Harrison Frederick Gonnerman, M.S., First Assistant, Engineering Experiment Station

1. Analytical Mechanics.-Specially designed for graduates and advanced undergraduates in arts and sciences. Lamb's Statics and Lamb's Dynamics. I; (3).

Mr. Ensign
Prerequisite: Mathematics 8 or 9.
2. Analytical Mechanics.-(A continuation of course 1.) Lamb's Dynamics. II; (3).

Mr. Ensign
Prercquisite: Theoretical and Applied Mechanics 1.
10. Hydraulics.-Pressure and flow of water; utilization as motive power; power and efficiency; determination of experimental coefficients. Hoskin's Text-Book on Hydraulics. Laboratory weekly; II; (3).
Assistant Professor Enger, Mr. Fleming, Mr. Seely, Mr. Boomsliter, Mr. Vallance
Prerequisite: Mathematics 9; Theoretical and Applied Mechanics 21.
14. Elements of Mechanics.-Kinematics; kinetics; statics. (For architects and others who have not taken the calculus.) Morley's Mechanics for Engineers. II; (4).

Mr. Boomsliter, Mr. Gardner
Prerequisite: Mathematics 2, 4.
15-16. Strength of Materials.-Graphic methods of determining the elastic curve of beams; centroids and moments of inertia of areas; reinforced concretc beams and columns; properties and tests of engineering materials. (For students in architecture and others without the prerequisites required for course 29.) Murdock's Strength of Materials. Laboratory every other week. I, II; (3).
Mr. Boomsliter, Mr. Noerenberg, Mr. Ensign, Mr. Gardner, Mr. Vallance
Prerequisite: Theoretical and Applied Mechanics 14.
20. Analytical Mechanics.-The mechanics of engineering rather than that of astronomy and physics. Equilibrium; centroids and center of gravity; friction; engineering problems. Maurer's Technical Mechanics. II; (3).

Mr. Boomsliter, Mr. Ensign, Mr. Noerenberg, Mr. Gardner, Mr. Putnam
Prerequisite: Mathematics 7; registration in Mathematics 9.
21. Analytical Mechanics.-Continuation of course 20. Kinematics; kinetics. Maurer's Technical Mechanics. I; (2).

Mr. Boomsliter, Mr. Ensign, Mr. Gardner, Mr. Putnam
Prerequisite: Mathematics 9; Theoretical and Applied Mechanics 20.
25. Resistance of Materials.-Condensation of course 29. (For students in architectural, ceramic, chemical, electrical, mining, and railway engineering.) Merriman's Mechanics of Materials. I; (4).
Assistant Professor Enger, Mr. Fleming, Mr. Boomsliter, Mr. Ensign, Mr. Seely, Mr. Vallance, Mr. Putnam
Prerequisite: Mathematics 9; Theoretical and Applied Mechanics 20.
26. Analytical Mechanics and Hydraulics.-Kinematics; kinetics; hydraulics; problems; experiments in the hydraulic laboratory. (For students in architectural, electrical, and mining engineering.) Laboratory weekly during the last half of semester. Maurer's Technical Mechanics and Hoskin's Text-book on Hydraulics. II; (4).
Assistant Professor Enger, Mr. Fleming, Mr. Seely, Mr. Boomsliter, Mr. Vallance, Mr. Putnam
Prerequisite: Theoretical and Applied Mechanics 25.
27. Analytical Mechanics.-Kinetics; kinematics. (A longer course than Theoretical and Applied Mechanics 21; for mechanical engineering stu- Mechanics for Engineers. I; (3).

Assistant Professor Enger, Mr. Seely, Mr. Ensign
Prerequisite: Mathematics 9; Theoretical and Applied Mechanics 20.
29. Resistance of Materials.-Materials; properties and requirements; the effect of methods of manufacture on quality; specifications and standard tests; experiments and investigations in the materials laboratory. (For students in civil, mechanical, municipal and sanitary, and railway civil engineering.) Recitations; lectures; assigned reading; laboratory weekly. Merriman's Mechanics of Materials. I; (5).
Professor Talbot, Mr. Seely, Mr. Boomsliter, Mr. Ensign, Mr. Noerenberg, Mr. Gardner, Mr. Fleming, Mr. Vallance, Mr. Putnam
Prerequisite: Mathematics 9; Theoretical and Applied Mechanics 20; registration in Theoretical and Applied Mechanics 21.
36. Analytical Mechanics.-The portion of course 26 which involves analytical mechanics. (Open only to railway electrical engineering students.) Maurer's Technical Mechanics. II; (2).

Mr. Vallance
Prerequisite: Theoretical and Applied Mechanics 25.

## Courses for Graduates

Entrance upon graduate work in theoretical and applied mechanics presupposes a full undergraduate curriculum in that subject.
101. Aanlytical Mechanics.-Methods; problems and applications. Twice a week; I; (I unit). Professor Moore
102. Resistance of Materials.-Materials used in engineering construction; analysis and investigation; effect of form of member in a structure or machine; application of forces. Twice a week; II; (I unit).

Professor Moore
103. Hydraulics and Hydraulic Engineering.-Engineering problems; hydraulic power and its development; design and investigation. Twice a week; II; (I unit).

Professor Talbot
104. Experimental Work in the Laboratory of Applied Mechanics.(a) Laboratory investigation in the materials-testing laboratory; (b) experimental work in hydraulics laboratory; laws of hydraulics; development of power; problems. Twice a zeeek; I, II; (1/2 to 2 units).

Professor Talbot, Professor Moore
105. Experimental and Analytical Work in Reinforced Concrete.Research; interpretation of available experimental results and their application to the design of structures; principles of construction. Twice a week; $I, I I$; ( $15 / 2$ unit or more).

Professor Taleot

## Summer Session Courses

S 10. Hydraulics.-(For description see Theoretical and Applied Mechanics 10 above.) (3). Mr. Vallance Prerequisite: Theoretical and Applied Mechanics 21.
S 14. Elements of Mechanics.-(For description see Theoretical and Applied Mechanics 14 above.) (4).

Mr. Ensign
Prerequisite: Mathematics 2, 4.

S 20. Analytical Mechanics.-The first half of analytical mechanics as given in Maurer's Technical Mechanics. (3).

Mr. Ensign
Prerequisite: Mathematics 7; registration in Mathematics 9.
S 21. Analytical Mechanics.-The second half of analytical mechanics as given in Maurer's Technical Mechanics. (2). Mr. Seely

Prerequisite: Mathematics 9; Theoretical and Applied Mechanics 20.
S 25. Resistance of Materials.-The mechanics and properties of materials used in construction; experiments in the testing laboratory; problems. Merriman's Mechanics of Materials. (4). Mr. Seely, Mr. Vallance

Prerequisite: Mathematics 9; Theoretical and Applied Mechanics 20.

## MEDICINE

(See under College of Medicine.)

## METEOROLOGY

(See under Geology.)

## MILITARY SCIENCE

*Frank Daniel Webster, Major U. S. Infantry, Professor and Commandant $\dagger$ Robert Walter Mearns, Major U. S. Infantry, Professor and Commandant Frederick William Post, 1st Sergeant, U. S. A., retired, Administrative Assistant
Edwin Shelby, Jr., Assistant
Francis Marion Van Natter, Assistant
Lloyd E. Lamkins, Assistant
Ralph Raymond Thomas, Assistant
Ross Seguine Mason, Assistant
George Curtiss, Assistant
Reinhard Steinmayer, Assistant
Daniel Edwin Miller, Assistant
Charles William McCumber, Assistant
Oliver Edwin Troster, Assistant

1. Drill Regulations.-Infantry Drill Regulations. For all freshman men. $I I$; (1). Professor Mearns
2a-2b-2c-2d. Military Drill.-Infantry: Infantry drill regulations; smallarm firing regulations; bayonet exercise; ceremonies. Artillery: School of the Cannoneer and battery dismounted. Signal Company: Flag; telegraph; wireless; heliograph. Engineer Company: Field engineering; map reading; entrenchments; bridge building. Hospital Company: U. S. Army Hospital Corps Drill Regulations. Freshman and sophomore years. Two drill periods a week. $I, I I$; (1). Professor Webster, Professor Mearns

3a-3b. Advanced Theoretical Instruction.-For sophomore officers: Infantry drill regulations; small-arm firing regulations. For junior and seniors: Field Service Regulations. This course is obligatory for commissioned officers and sergeants, recommended to corporals, and open to others. $I$, $I I$; (No credit).

Professor Webster, Professor Mearns

- Detail expired January 22, 1916.
$\ddagger$ Detail began January 22, 1916.


## MINERALOGY

## (See Geology 5, 5a, 6, 7.)

## MINING ENGINEERING

Harry Harkness Stoek, B.S., E.M., Professor
Elmer Allen Holbrook, B.S., Assistant Professor
*Stephen Osgood Andros, A.B., B.S., E.M., Assistant Professor, Mining Research
Alfred Copeland Callen, B.S., E.M., Instructor

1. Earth and Rock Excavation.-Explosives; blasting; boring; tunneling; shaft-sinking; coal-cutting; timbering and prospecting. $I$; (3). Mr. Callen

Prerequisite: Chemistry 1a or 1 b .
3. Mining Principles.-Terminology; explosives; blasting; drilling; tunneling; shaft-sinking; mining and timbering flat deposits. (For students in engineering courses other than mining.) $I$; (2). Mr. Callen

Prerequisite: Chemistry la or 1 b .
4. Mining Methods.-Mining and timbering bedded, vein, and placer deposits. II; (2).

Professor Stoek
Prerequisite: Mining 1.
5. Mine Ventilation.-Mine gases; safety lamps; ventilation; lighting and signaling; explosions and fires; rescue work and first aid. Laboratory. $I$; (3).

Professor Stoek, Mr. Callen
Prerequisite: Chemistry la or $1 \mathrm{~b}, 4$, Physics $1 \mathrm{a}-1 \mathrm{~b}, 3 \mathrm{a}-3 \mathrm{~b}$, and Mining 4.
6. Mechanical Engineering of Mines.-Hoisting: Ropes, cages, hoisting engines, and other appliances. Haulage: systems used under-ground and on the surface; loading and unloading; stables; transportation of workmen. Drainage of mines; dams; pumps. II; (2).

Mr. Callen
Prerequisite: Mechanical Engineering 1, or equivalent.
8. Mine Law, Administration, and Accounts.-Laws governing location, ownership, and policing; trade agreements, relations between employers and employees; sociology; accounts and cost sheets. II; (3).

Professor Stoek, Assistant Professor Holbrook

Prerequisite: Mining 3 or 4 or Geology 2.
9. Preparation of Coal and Ores.-History, processes, machines; applications to dry coal preparation and coal washing; breaking, sizing, and concentrating ores. Laboratory. I; (3). Assistant Professor Holbrook

Prerequisite: Chemistry 5 and Physics 3a-3b.
13. Utilization of Fuels.-The manufacture, handling, and utilization of wood, charcoal, peat, lignite, bituminous coal, anthracite, coke, petroleum, natural and artificial gas, and refractories in mining and metallurgy. $I I$; (2).

Assistant Professor Holbrook
Prerequisite: Junior standing.
15. Principles of Mine Ventilation.-Mine ventilation, signaling, and lighting. $I$; (1). Mr. Callen

Prerequisite: Chemistry 4; Physics 3a-3b.

[^85]17. Problems.-Problems, library research, and reports on mining and metallurgy. $I$; (1).

Professor Stoek
19. Ore and Coal Preparation.-Machines used in breaking, pulverizing, sizing, classifying, and concentrating ores and mineral products; wet and dry concentration; limits of ore dressing; coal preparation. Laboratory practise in ore concentration. I; (3). Assistant Professor Holbrook

Prerequisite: Chemistry 5; Geology 13a and 13b or equivalent.
21. Mine Examination and Valuation.-The methods of examining, valuing, and reporting on a mine; estimation and prospecting of mineral deposits. I; (2).

Professor Stoek
Prerequisite: Min. 3 or 4; Geology 13a and 13b, or equivalent.
41. Principles of Coal Plant Design.-Design of mine structures of wood, steel, and masonry; drafting practise in design of coal tipples and general surface plant. I; (3). Assistant Professor Holbrook

Prerequisite: Civil Engineering 58.
42. Coal Plant Design.-General layout; design; estimates for construction and specifications for coal mining plant. II; (2).

Assistant Professor Holbrook
Prerequisite: Mining 41.
43. Principles of Ore Plant Design.-Design of mine structures of wood, steel, and masonry; drafting practise in design of rock houses, ore bins, and crushing plants. I; (3).

Assistant Professor Holbroors
Prerequisite: Civil Engineering 58.
44. Ore Plant Design.-General layout; design; estimates for construction and specifications for ore mining plants. $I I$; (2).

Assistant Professor Holbrook
Prerequisite: Mining 43.
45. Principles of Mill and Smelter Design.-Flow sheets and structures of wood, steel, and masonry; drafting practise on individual designs. $I$; (3).

Assistant Professor Holbroor
Prerequisite: Civil Engineering 58.
46. Mill and Smelter Design.-Revised flow sheet; design; estimates for construction and specifications for concentrating plants or smelter. II; (2).

Assistant Professor Holbroor
Prerequisite: Mining 45.
62. Mine Surveying.-Instruments employed underground and in connecting surface and underground surveys; platting and use of mine maps; mineral land surveying; solar attachments; determination of the meridian. (A surveying trip is made to neighboring mines, the estimated cost of which is $\$ 10.00$.) II; (3).

Mr. Callen
Prerequisite: Civil Engineering 27.
64. Coal Mining Laboratory.-Coals; availability for crushing, dry preparation, washing, and briquetting; commercial tests, using small commercial machines wherever possible; design of flow sheets; analysis of products; estimation of costs. II; (3). Assistant Professor Holbrook

Prerequisite: Mining 9 or 19.
66. Ore Concentration Laboratory.-Commercial wet and dry concentration tests on raw ores of lead, zinc, iron; amalgamation and cyanidation of a gold ore; sampling, preparation, and analysis or assay of the products recovered. II; (3).

Assistant Professor Holbrook
Prerequisite: Mining 9 or 19.
68. Mine Topography.-Stadia; application of topographic and railroad surveying to mining conditions. $I I$; (1).

Mr. Callen
Prerequisite: Civil Engineering 27.
90. Journal Meeting.-Review of literature; reports; technical writing. II; (1).

Professor Stoek
99. Thesis.-Individual investigation; preparation of thesis giving review of the literature, the results of experimental work, and a general discussion of the subject. II; (3).

Mining Journal Club.—Review of current literature. No credit; I, II.
Prerequisite: Junior standing.

## Courses for Graduates

Entrance upon graduate work in mining engineering presupposes the completion of the undergraduate curriculum in the subject.
100. Seminar.- Once a week; I, II; (I unit). Professor Stoer
101. Advanced Mining Methods.-Coal and ore fields of the United States; methods and economics of mining; utilization, marketing, storage, and transportation of coal and ores. Twice a week; I, II; (I unit).

Assistant Professor Stoek
102. Advanced Preparation of Coal and Ores.-Settling ratios; laws of crushing; sorting vs. sizing; specific mill and washing problems. Twice a week; I, II; (I unit). Assistant Professor Holbrook
103. The History of Miners' Organizations.-Truice a week; I, II; (I unit).

Professor Stoek
104. Mining Reports.-The law of the apex; classification of coal and ore lands; conservation of mineral resources; mine examination and report. Twice a week; I, II; (I unit).

Professor Stoek
105. Welfare Work and Education Among Mine Employees.-The organization and operation of mining institutes, night classes, welfare, mine rescue and first-aid work. Twice a week; I, II; (I unit). Professor Stoek

## MODERN LANGUAGES

(See English Language and Literature, Germanic Languages and Literature, and Romance Languages and Literature.)

## MUNICIPAL AND SANITARY ENGINEERING

Arthur Newell Talbot, C.E., D.Sc., Professor
Paul Hansen, Engineer, State Water Survey
Melvin Lorenius Enger, B.S., C.E., Assistant Professor, Mechanics and Hydraulics
Harold Eaton Babbitt, B.S., Instructor
2. Water Supply Engineering.-Source of supply; hydraulics of wells; stream flow; impounding and storage reservoirs; conduits and pipe lines; pumps
and pumping machinery ; stand-pipes and elevated tanks; the distribution system; tests and standards of purity of potable water. Designing weekly. Turneaure and Russell's Public Water Supplies. I; (4).

Assistant Professor Enger, Mr. Babbitt
Prerequisite: Theoretical and Applied Mechanics 29, 10; Chemistry 1; Mechanical Engineering 1 or 2.
3. Sewerage.-Design and construction of sewerage systems; sanitary necessity; separate and combined water carriage systems, surveys, and general plans; hydraulics of sewers; house sewerage and its removal; rainfall and storm water flow; size and capacity of sewers; forms and strength of appurtenances; modern methods of sewage disposal; estimates and specifications. Designing weekly. Metcalf and Eddy's American Sewerage Practice. II; (3).

Mr. Babbitt
Prerequisite: Theoretical and Applied Mechanics 29, 10; Chemistry 1 ; Municipal and Sanitary Engineering 2.

6a-6b. Water Purification, Sewage Disposal, and General Sanitation.Impurities in water supplies and their removal; sewage disposal by filtration, chemical precipitation, irrigation; purification plants; garbage; sanitary restrictions and regulations and general sanitation. Lectures; seminar work; drafting. Turneaure and Russell's Public Water Supplies and Fuller's Sewage Purification. I; (3): II; (2). Professor Talbot, Mr. Hansen, Mr. Babbitt

Prerequisite: Municipal and Sanitary Engineering 2, 3; Chemistry 1, 2, 3, 10b.
9. Hydraulic Design and Construction.-Reservoirs; dams; conduits; waterways; problems. $I I$; (2). Assistant Professor Enger
Prerequisite: Municipal and Sanitary Engineering 2.
98. Thesis.-Investigation or design of an engineering problem. II; (2). Professor Talbot, Mr. Babbitt

## Courses for Graduates

Entrance upon graduate work in municipal and sanitary engineering presupposes a full undergraduate curriculum in that subject.
102. Water Supply Engineering.-Water supply; general water-works construction; pumps and pumping; design of reservoirs and elevated tanks; water-works operation; valuation of plants. One to three times a week; I or II; ( $1 / 2$ unit or more).

Professor Talbot
103. Sewerage.-Design and construction; systems; hydraulics of sewers; run-off. Once or twice a week; II; ( $1 / 2$ unit or more). Professor Talbot
106. Water Purification, Sewage Disposal, and General Sanitation.The design, construction, and operation of water purification plants and of sewage disposal works; existing plants; comparison of results and cost of construction and operation; water filters and septic tanks; garbage disposal; general sanitation. Once a week; II; ( $1 / 2$ unit or more). Professor Talbot

## MUSIC

John Lawrence Erb, F.A.G.O., Director, University Organist
George Foss Schwartz, A.M., B.Mus. Assistant Professor, Theory and History of Music
Constance Barlow-Smite, Assistant Professor, Sight Singing, Ear Training, Public School Music
Henri Jacobus van den Berg, Instructor, Piano
Albert Austin Harding, Instructor, Wind Instruments, Director of the Band
Edna Almeda Treat, B.Mus. Instructor, Piano
Edson Wilfred Morphy, Instructor, Violin
Heber Dignam Nasmyth, Instructor, Voice
Frank Tatham Johnson, Instructor, Voice
Bertha Davis, Instructor, Voice
Mabelle Genevieve Wright, A.B., B.Mus., Instructor, Piano
Grace Swan, Assistant in the Summer Session
History and Theory
1-2. History of Music.-I, II; (2). Assistant Professor Schwartz
Prerequisite: One year of college work
3-4. Theory of Music (Harmony).-I, II; (2).
Assistant Professor Schwartz
5-6. Theory of Music (Harmony).-Continuation of 3-4. I, II; (3).
Assistant Professor Schwartz
Prerequisite: Music 3-4.
7-8. Counterpoint, Canon, and Fugue.-I, II; (3).
Assistant Professor Scewartz
Prerequisite: Music 5-6.
9-10. General Analysis.-I, $I I$; (2). Director ERB
Prerequisite: Music 7-8.
11-12. Acoustics.-I, $I$; (1). Director ERB
13-14. Constructive Listening (Musical Appreciation).-I, $I I ; *(1)$.
Director Erb

## Public School Music

21a-21b. Ear Training, First Year.-Two hours a week; required of all music students. $I, I I$; (no credit).

Assistant Professor Smith
22a-22b. Ear Training, Second Year.-Two hours a week; required of students in the curriculum in Music in the sophomore year, and of students in the curriculum in Public School Music. I, II; (1). Assistant Professor Smith

23a-23b. Sight Singing, First Year.-Two hours a week; required of students in the curriculum in Music in the sophomore year, and of students in the curriculum in Public School Music. I, II; (no credit).

Assistant Professor Smith
24a-24b. Sight Singing, Second Year.-Two hours a week; required of students in the curriculum in Music in the junior year, and of students in the curriculum in Public School Music. I, II; (1). Assistant Professor Smith

[^86]25a-25b. Methods of Teaching.-Elements of theory, eye and ear training, the limitations of the child-voice, selection of material, pedagogical presentations, appreciation work for the high school. (Primarily for students preparing to teach music in the public schools.) $I, I I$; (4).

Assistant Professor Smith
27a-27b. Ensemble.- $I, I I$; (1). Time to be arranged.

## Piano

## Mr. van den Berg, Miss Treat, Miss Wriget

41a-41b. Preparatory Course in Piano, First Year.-I, II. (No collegiate credit).

41c-41d. Preparatory Course in Piano, Second Year.-I, II. (No collegiate credit).

41e-41f. Preparatory Course in Piano, Third Year.-I, II. (No collegiate credit).

42a-42b. Piano, First Year.-I, $I I$; (4).
43a-43b. Piano, Second Year.-I, II; (4).
44a-44b. Piano, Third Year.-I, $I$; (4).
45a-45b. Piano, Fourth Year.-I, $I$; (4).
46a-46b. Minor in Piano.-Taken by freshmen majoring in voice or violin. $I, I I$; (2).

46c-46d. Minor in Piano.-Taken by sophomores majoring in voice or violin. $I, I I$; (2).

46e-46f. Minor in Piano.--Taken by juniors majoring in voice or violin. I, II; (2).

46g-46h. Minor in Piano.-Taken by seniors majoring in voice or violin. I, II; (2).

47a-47b. Piano.-For students from other departments of the university. $I, I$; (no credit).

## Voice

Mr. Nasmyth, Mr. Johnson, Miss Davis
51a-51b. Preparatory Course in Voice, First Year.-I, II; (no collegiate credit).

51c-51d. Preparatory Course in Voice, Second Year.-I, II; (no collegiate credit).

51e-51f. Preparatory Course in Voice, Third Year.-I, II; (no collegiate credit).

52a-52b. Voice, First Year.-I, II; (4).
53a-53b. Voice, Second Year.-I, II; (4).
54a-54b. Voice, Third Year.-I, II; (4).
55a-55b. Voice, Fourth Year.-I, $I I$; (4).
56a-56b. Minor in Voice.-Taken by freshmen majoring in piano or violin. $I, I I$; (2).
$56 \mathrm{c}-56 \mathrm{~d}$. Minor in Voice.-Taken by sophomores majoring in piano or violin. I, $I I$; (2).

56e-56f. Minor in Voice.-Taken by juniors majoring in piano or violin. I, II; (2).

56g-56h. Minor in Voice.-Taken by seniors majoring in piano or violin. I, II; (2).

57a-57b. Voice.-For students from other departments of the University. $I, I I$; (no credit).

## Violin

## Mr. Morphy

61a-61b. Preparatory Course in Violin, First Year.-I, II; (no collegiate credit).

61c-61d. Preparatory Course in Violin, Second Year.-I, II; (no collegiate credit).

61e-61f. Preparatory Course in Violin, Third Year.-I, II; (no collegiate credit).

62a-62b. Violin, First Year.-I, II; (4).
63a-63b. Violin, Second Year.-I, II; (4).
64a-64b. Violin, Third Year.-I, $I I$; (4).
65a-65b. Violin, Fourth Year.-I, $I I$; (4).
66a-66b. Minor in Violin.-Taken by freshmen majoring in piano or voice. I, II; (2).

65c-66d. Minor in Violin.-Taken by sophomores majoring in piano or voice. $I, I I$; (2).

66e-66f. Minor in Violin.-Taken by juniors majoring in piano or voice. $I, I I$; (2).

66g-66h. Minor in Violin.-Taken by seniors majoring in piano or voice. I, II; (2).

67a-67b. Violin.-For students from other departments of the University. $I, I I$; (no credit).

## Violoncello <br> Mr. Schwartz

71a-71b. Preparatory Course in Violoncello, First Year.-I, II; (no collegiate credit).

71c-71d. Preparatory Course in Violoncello, Second Year.-I, II; (no collegiate credit).

71e-71f. Preparatory Course in Violoncello, Third Year.-I, II; (no collegiate credit).

72a-72b. Violoncello, First Year.-I, II; (4).
73a-73b. Violoncello, Second Year.-I, II; (4).
74a-74b. Violoncello, Third Year.-I, II; (4).

## Organ

## Director ERb

Students desiring to take organ will be obliged to pass without conditions the entrance examination in piano.

81-82. Organ, First Year.-I, II; (6).
83a-83b, 83c-83d. Organ, Two Years.-First two years' work in organ taken as a minor by seniors majoring in piano, vaice, or violin. $I, I I$; (2).

84-85. Organ, Second Year.-I, II; (4).
86-87. Organ, Third Year.-I, II; (4).
88-89. Organ, Fourth Year.-I, II; (4).
Band and Ensemble Work
92a-92b. Band Instruments.- $I, I I$; (no credit).
94a-94b. Recital Course in Practical Music.-(For seniors in Music 45a-45b, 55a-55b, 65a-65b, 88-89).

96a-96b. Band Instrumentation.- $I$, $I I$; (no credit).
97a-97b. Band Arranging.- $I, I I$; (no credit).

## Summer Session Courses

S 1. History of Music.-Ancient and medieval music; early church music; polyphonic music; organum descant and Fauxbourdon; the evolution of the oratorio, music-drama, and the beginnings of instrumental music. Collateral reference work. (2).

Assistant Professor Smitri
S 2. High School Music.-Standard vocal and instrumental compositions; chorus singing; theory and methods of teaching. (2).

Assistant Professor Smirt
S 3. Harmony.-Summary and drill in scales and keys, intervals, triad construction and connection; derivation and figured bass from given melody, harmonization in two clefs. (2).

Miss Swan
S 4. Advanced Course.-Drill in one, two, three, and four part reading; exercise for breath control, enunciation, and phrasing. (1). Miss Swan

S 5. Elementary Course.-Music notation; scale structure; ear and eye training; solfeggio. (no credit). Assistant Professor Smith

## PALEONTOLOGY

> (See Geology 1a, 16, 18, 19, 20, 21.)

## PHILOLOGY

(See Classics, Comparative Philology, English Language and Literature, Germanic Languages and Literature, and Romance Languages and Literature.)

PHILOSOPHY
(See also Psychology and Education.)
Arthur Hill Daniels, Ph.D., Professor
Boyd Henry Bode, Ph.D., Professor
Queen Lois Shepherd, Ph.D., Instructor
Carl Herman Haessler, A.B., Assistant
Major: Twenty hours from any courses offered by the department, including Philosophy 1, 2, 3, and 4, and one other advanced course. Six hours in psychology may be counted toward a major in philosophy.

Minors: Twenty hours in (a) psychology (at least six additional hours, if psychology is counted toward a major), and one other subject in the following list; or (b) any two subjects in the same group in the following list: (A) economics, history, political science, education, sociology; (B) English, French, German, Greek, Latin; (C) botany, chemistry, mathematics, physics, zoology.

No course in any subject of the above groups may be counted for the minor requirement if it is excluded from the major requirement of its respective department.

## Courses for Undergraduates

1. Logic.-The principles of reasoning; detection of fallacies; evidence. I or II; (3).

Professor Bode, Dr. Shepherd, Mr. Haessler
Prerequisite: One year of university work.
2. Introduction to Philosophy.-Philosophic problems in their relation to the doctrine of evolution and in their bearing on conduct and religion. $I I$; (3). Professor Bode, Dr. Shepherd, Mr. Haessler
Prerequisite: Two years of university work.

## Courses for Advanced Undergraduates and Graduates

9. Political and Social Ethics.-Moral principles applied to political and social relations. $I$; (2).

Professor Daniels, Mr. Haessler
Prerequisite: Two years of university work.
3. History of Ancient and Medieval Philosophy.-I; (3).

Professor Daniels
Prerequisite: Three hours in philosophy.
4. History of Modern Philosophy.-From the Renaissance to the present time. $I I$; (3).

Dr. Shepherd
Prerequisite: Three hours in philosophy.
7. Ethics.-Morality; ethical theory; social and economic problems. II; (3).

Professor Daniels
Prerequisite: Three hours in philosophy.
11. Philosophy of Religion.-God; revelation; inspiration; dogma; prayer; faith; immortality; the problem of evil; the relation of morality and religion. II; (2).

Professor Daniels
Prerequisite: Senior or graduate standing; six hours in psychology, philosophy, or both.
15. British Philosophers of the Eighteenth Century.-Locke, Berkeley, and Hume. I; (3). Professor Bode
Prerequisite: Philosophy 2 or 3 or 4 .
16. Philosophy of Pragmatism.-II; (3). Professor Bode

Prerequisite: Philosophy 15.
18. Philosophers of the Nineteenth Century.-Materialism; naturalism; idealism; pragmatism. I; (3).

Dr. Shepherd
Prerequisite: Philosophy 2 or 3 or 4.
19. Religious Thought in the Eighteenth and Nineteenth Centuries.I; (3).

Dr. Shepherd
Prerequisite: Philosophy 2 or 3 or 4.

## Courses for Graduates

Students entering upon graduate work in philosophy must have had a general course in the history of philosophy, a course in logic, and a general course in psychology.
103. Seminar in Ethics.-British ethics from Hobbes to Sidgwick. Twice a week; I, II; (I unit). Professor Daniels
107a-107b-107c. History of Philosophy.-(a) Plato and Aristotle. Twice a week; (I unit). (b) Descartes, Spinoza, and Leibnitz. Twice a week; (I unit). (c) Kant and Schopenhauer. Twice a week; (I unit). I, II. The subjects for 1915-16 are 107b and 107c. Professor Daniels
108a-108b-106c. Seminar in Contemporary Philosophy.-(a) Idealism. Twice a week; (I unit). (b) Realism and pragmatism. Twice a week; (I unit). (c) The philosophy of Bergson. Twice a week; (r unit). I, II. The subject for $1915-16$ is 108a.

Professor Bods

## PHOTOGRAPHY

## Arthur Grenville Eldredge, Instructor

1. The Principles and Practise of Photography.-Lenses; cameras; plates and films; exposure; development; printing; copying; positives; landscape, architectural, and scientific photography; speed work; color photography. Lectures; demonstrations; each student is required to produce a stated amount of work covering the processes treated. (For advanced students who use photography in connection with their special subjects). II; (one hour a week, no credit).

Prerequisite: Junior standing and the consent of the instructor.
PHYSICAL TRAINING FOR MEN
George A Huff, Director
Harry Lovering Gill, Associate, Track
Ralph Jones, Associate, Basket Ball
Robert Carl Zuppke, Ph.B., Associate, Foot Ball
Roy Newton Fargo, B.S., Director of the Men's Gymnasium
Edward John Manley, Instructor, Szeimming
Waltfr Rooke Evans, Instructor, Wrestling and Boxing
Olaf Harold Glimstedt, Assistant
Alvin Romeiser, Assistant, in Charge of Fencing
1-2. Gymnasium Practise.-Two hours' gymnasium drill each week. (Required of freshmen. First semester given in conjunction with la below.) $I$; ( $1 / 2$ ): $I I$; (1).

Mr. Fargo
1a. Personal Hygiene.-Six lectures by the Dean of Men. Required in conjunction with Physical Training 1. I; (First six weeks). Dean Clark
3. Elementary and Intermediate Gymnastics on Heavy Apparatus.Preparation of men for teaching physical training. Three exercises a week. $I$; (1).

Prerequisite: Physical Training 1-2 and the consent of the instructor.
4. Advanced Physical Training.-(Continuation of course 3.) Three exercises a week, II; (1).

Prerequisite: Physical Training 3 and the consent of the instructor.

## Summer Session Courses <br> Athletic Coaching

Note: Courses in physical training for men continue through only six weeks. Not more than five credit-hours in physical training may be counted for graduation in any of the colleges of the University.

S 10. Baseball.-Batting; base running; fielding each position; team work and coaching; rules; physical condition; indoor practise. Lectures; practical work. ( $11 / 2$ ). Director Hupr

S 11, Track and Field Athletics.-Starting, sprinting, distance running, hurdling, high and broad jumping, pole vaulting, shot putting, hammer throw, and discus; preparing contestants for different athletic events; individual peculiarities; rules; physical condition, including endurance, speed, fatigue, and means of training; promotion, management, and officiating of games and meets. Lectures; practical work. ( $1^{1} / 2$ ).

Mr. Gill
S 12. Basketball.-Coaching; passing; goal throwing; dribbling; team play; condition; styles of play used by leading coaches. Lectures; practical work. (11/2).

## Mr. Jones

S 13. Football.-Theoretical: Rules from the standpoint of coach, players, and officials: offense and defense; generalship and strategy. Practical: Training, conditioning, and players' equipment; punting, drop kicking, place kicking, kick off, forward passing; tackling dummy and charging sled; special drills for linemen, ends, and backs; following the ball, interference, team work; fundamental plays, freak plays, signal systems. Lectures; practical work. ( $11 / 2$ ).

Mr. Zuppke
S 14. Training.-Theories of training, massage, treatment of sprains, bruises, etc.; bandaging and first aid. Lectures and practical work. This course should be taken by all who take S $10, \mathrm{~S} 11, \mathrm{~S} 12$, or S 13 . ( $1 / 2$ ).

Mr. Glimsted

## PHYSICAL TRAINING FOR WOMEN

Loutse Freer, A.B., B.S., Director
Verna Brooks, A.B., Instructor
Edith Griffith Osmond, A.B., B.S., Instructor
Anna Lue Hughitt, Instructor
Caroline Ruth Morris, A.B., Assistant
Rosa-Lee Gaut, B.Mus., Assistant
Gertrude Evelyn Moulton, A.B., Director in the Summer Session
7a-7b. Practise.-Class work; light gymnastics; gymnastic dancing; games; personal hygiene; corrective work. Required of freshmen. I, II; (1). Miss Freer, Miss Broors, Miss Hughitt, Miss Morris, Miss Osmond
8a-8b. Practise.-(Continuation of 7a-7b. Second year, elective.) I, II; (1). Miss Broors, Miss Hughitt, Miss Osmond, Miss Morris
9. Hygiene.-Required of freshmen. $I$; (1).

Acting Dean Kyle
10a-10b. Teachers' Course.-(Third year). Theory and practise teaching in the gymnasium and in public playgrounds. $I, I I$.

Miss Osmond
Prerequisite: One year of gymnasium work, psychology, or education; registration in Physical Training 7 or 8.

11a-11b. Teachers' Course.-(Fourth year). Massage, theory and practise; emergencies (including bandaging) ; anthropometry, practise work in measurements for physical examinations. $I, I I$. Miss Hughitr

Prerequisite: Physical Training 10.

## Summer Session Courses

S 1. Methods of Improving Posture and Health; Theory and Prac-tise.-Corrective work; hygienic work, folk dancing, singing games, and other exercises; play and games; lectures. Miss Moulton
S 2. Swimming.-Games, diving, "stunts."
Miss Moulton

## PHYSICS

Albert Pruden Carman, D.Sc., Professor
Charles Tobias Knipp, Ph.D., Associate Professor, Experimental Electricity
Floyd Rowe Watson, Ph.D., Associate Professor, Experimental Physics
Jakob Kunz, Ph.D., Associate Professor, Mathematical Physics
William Frederick Schulz, Ph.D., Assistant Professor
Elmer Howard Williams, Ph.D., Associate
William Henry Hyslop, A.M., Assistant
Oscar Alan Randolph, M.S., Assistant
Earle Horace Warner, A.M., Assistant
Sebastian Karrer, A.M., Assistant
Jonas Bernard Nathanson, A.M., Assistant
Charles Francis Hill, A.B., Assistant
Paul Levern Bayley, A.M., Assistant
Cenrles Stever Fazel, A.M., Assistant
Lloyd Theodore Jones, Ph.D., Instructor in the Summer Session

## Introductory Courses for Undergraduates

1a-1b. General Physics.-Lectures with class-room demonstration; recitations; written exercises. (For sophomores in engineering, mathematics, physics, and chemistry.) $I$; (3): $I I$; (2). Professor Carman and others

Prerequisite: Registration in Physics 3a-3b; freshman mathematics.
3a-3b. Physical Measurements.-Laboratory experiments; quizzes in connection with Physics 1a-1b. I, II; (2).

Assistant Professor Schulz and others
Prerequisite: Registration in Physics 1a-1b or credit for the same.
7a-7b. General Physics.-Lectures, with class-room demonstration; recitations. (For students in arts and science.) $I, I I$; ( $21 / 2$ ). Associate Professor Watson, Dr. Williams, Mr. Karrer
Prerequisite: Completion of or registration in Mathematics 4; registration in Physics 8a-8b.

8a-8b. Introductory Laboratory Physics.-Physical measurement. I, II; (21/2).

Dr. Williams, Mr. Karrer
Prerequisite: Registration in Physics 7a-7b.
9a-9b. General Physics.-Lectures, with class-room demonstration; recitations. (For students in architecture.) I, II; (2).

Associate Professor Watson, Dr. Williams, Mr. Karrer
Prerequisite: Mathematics 4; registration in Physics 10a-10b.
10a-10b. Introductory Laboratory Physics.-Physical measurements. I, II; (2).

Dr. Williams, Mr. Karrer
Prerequisitc: Registration in Physics 9a-9b.
15. Electricity and Magnetism.-(For students in non-technical courses who wish a knowledge of electricity and magnetism beyond the course in general physics.) Recitations or lectures; laboratory. Brooks and Poyser's Electricity and Magnetism. I; (3).

Associate Professor Knipp
Prerequisite: Physics 1a-1b, 3a-3b; or 7a-7b, 8a-8b.
16. Heat.-Heat phenomena; mechanical theory of heat; thermodynamics. Laboratory experiments in thermometry, calorimetry, vapor pressure, expansion of bodies, transmission of heat, and mechanical equivalent. $I$; (3). Associate Professor Watson
Prerequisite: Physics 1a-1b, 3a-3b; or 7a-7b, 8a-8b.
17. Light.-Reflection, refraction, interference, diffraction, and polarization; optical instruments. Lectures; laboratory. (For students in general physics, but also adapted to those who wish to learn the use of the instruments). Clay's Treatise on Practical Light. II; (3). Assistant Professor Schulz
[18. Teachers' Course.-Discussion of text-books, reference books, laboratory manuals, apparatus ordering, and methods of conducting work in physics and of selected topics in advanced general physics. Manipulative work with glass and apparatus. II; (3). (Not given, 1915-16).

Prerequisite: A course in general physics, or experience in teaching.]
23. Sound.-Sound, its origin, propagation, velocity, interference, and diffraction; vibrations of strings and organ pipes; music and speech. Lectures; recitations; laboratory. II; (3). Associate Professor Watson

Prerequisite: Physics 1a-1b, 3a-3b; or 7a-7b, 8a-8b.
24. Properties of Matter.-Weight, mass, gravitation, elasticity, viscosity, surface tension, and diffusion. Lectures; recitations; laboratory. Poynting and Thomson's Properties of Matter; Watson's Text-book of Practical Physics. II; (3).

Dr. Williams
Prerequisite: Physics 1a-1b, 3a-3b; or 7a-7b, 8a-8b.

## Advanced Courses for Undergraduates and Graduates

4a-4b. Electrical and Magnetic Measurements.-First semester: Measurement of very high and very low resistances; aperiodic and ballistic galvanometers; electric currents and quantity; comparison of capacities. There is a special section for students of chemistry, including a course of experiments on the measurement of electrolytic resistance, the use of Dolezalek electrometer, of thermo-couples, and of platinum resistance thermometers for measuring temperatures; the determination of the dielectric constants of solids and liquids; and special uses of the potentiometcr. Second semester: Absolute determination of capacity; determination of the damping factor of a ballistic galvanometer; circuits containing resistance and self-induction; classical methods for measurement of self and mutual induction; magnetic properties of iron; plotting of curves; determination of hysteresis losses; potentiometers. I, II; (2).

Associate Professor Knipp, Mr. Randolph, Mr. Fazel
Prerequisite: Physics 1a-1b, 3a-3b, or 7a-7b, 8a-8b and Mathematics 7, 9.
14a. Introduction to Theoretical Physics.-Dynamics. Motion, mass, and force; problems from pure and applied physics. Recitations; problems; lectures. Jean's Theoretical Mechanics. I; (3).

Professor Carman
Prerequisite: Physics $1 \mathrm{a}-1 \mathrm{~b}, 3 \mathrm{a}-3 \mathrm{~b}$, or $7 \mathrm{a}-7 \mathrm{~b}, 8 \mathrm{a}-8 \mathrm{~b}$; Math. 8 or 7 and 9.

14b. Introduction to Theoretical Physics.-Elementary thermodynamics and wave motion; phenomena of heat and of wave energy with calculus methods. Recitations; problems; lectures. $I I$ (3). Professor Carman

Prerequisite: Physics $1 \mathrm{a}-1 \mathrm{~b}, \mathrm{3a}-3 \mathrm{~b}$ or $7 \mathrm{a}-7 \mathrm{~b}, 8 \mathrm{a}-8 \mathrm{~b}$; Math. 8 or 7 and 9 .
20. Light.-Special phenomena; modern theories; reading in texts of Drude, Wood, and Preston. Lectures; recitations. I; (2).

Assistant Professor Schulz
Prerequisite: Physics $1 \mathrm{a}-1 \mathrm{~b}, 3 \mathrm{a}-3 \mathrm{~b}$; or $7 \mathrm{a}-7 \mathrm{~b}, 8 \mathrm{a}-8 \mathrm{~b}$; Mathematics 7 , 9 , or 8 .
22. Light-Photometry.-Photometry; comparison of light sources with standards; determination of reflective power and transmission coefficient; spectrophotometry. Lectures; recitations; laboratory. $I ;{ }^{*}(2$ to 5$)$.

Assistant Professor Schulz
Prerequisite: Physics 1a-1b, 3a-3b; or 7a-7b, 8a-8b.
[25. Heat.-(Advanced laboratory.) Measurement of temperatures by thermocouples, resistance thermometers, and optical pyrometers. II; (2). (Not given, 1915-16). Associate Professor Watson

Prerequisite: Physics 1a-1b, 3a-3b; or 7a-7b, 8a-8b; Physics 16 advised.]
26. Architectural Acoustics.-Acoustics of auditoriums; common acoustic defects and their cures; transmission of sound through materials; acoustic properties of building materials. Lectures; problems. (For eight weeks only.) $I I$; (1).

Associate Professor Watson
Prerequisite: Physics 1a-1b, 3a-3b; or 9a-9b, 10a-10b.
30. Introduction to Theoretical Electricity.-Electrical and magnetic phenomena with calculus methods. Magnetism, electrostatics, electrolysis, thermoelectricity, electromagnetics, varying currents, alternating currents, units, electromagnetic radiation, conduction through gases, radio-activity and electrons. Lectures, recitations, demonstrations. (For advanced students in physics, chemistry, mathematics, and engineering.) Starling's Electricity and Magnetism. II; (3).

Associate Professor Knipp
31a-31b. Special Problems in Advanced Physical Measurements.$I, I I ;{ }^{*}(2$ or 3$)$. Professor Carman and others
32. Electricity and Magnetism.-Electrical measurements; self and mutual inductance, and capacity; low resistances; standardization and calibration. II; (2).

Dr. Williams

## Courses for Graduates

The prerequisite for graduate work in physics is a college course in general physics with a year's laboratory course in introductory physical measurements. The student who is to do major work in physics should also have had additional courses in physics or teaching experience, unless the training in his minor subjects, mathematics or chemistry, has been strong and complete, and also a knowledge of French and German sufficient to use references in these languages. The courses named below are those open for candidates for the master's or

[^87]doctor's degree. A large part of the last year's work of the candidate for the doctor's degree is investigational, along either the experimental or the theoretical side of physics. In addition to these major graduate courses, the courses in elementary dynamics, heat, light, electrical measurements, and introductory electrical theory are arranged with certain additions for graduate credit. The "intermediate" courses on heat, light, and electricity and magnetism may be offered by students making a minor in physics.
[121. Recent Advances in Physics and the Electron Theory.-Lectures of a non-mathematical character and experiments on some recent discoveries in physics. Three hours a week. II; (1/2 unit). Not given, 1915-16.

Associate Professor Knipp, Associate Professor Kunz
123. Sound.-Wave motion; forced vibrations; the velocity and energy relations of sound waves; resonance; vibrations of strains and organ pipes; dissipation of sound into heat. Lectures; recitations. Rayleigh's Theory of Sound; Auerbach's Akustik; Barton's Sound. Three times a weck. II; (3/4 unit). Associate Professor Watson
124. Conduction of Electricity Through Gases.-Discharge phenomena; production of electrons and ions in a discharge tube; magnetic and electrostatic deflection; the determination of $\mathrm{e} / \mathrm{m}$ and v of the electron for cathode rays, of $\mathrm{e} / \mathrm{m}$ for canal-strahlen or positive rays, and experiments with the hot lime cathode; Roentgen rays and the related phenomena of radio-activity. Quantitative experiments. An original problem, in the second semester. Three times a week; I, $I$; ( $I$ to 2 units). Time to be arranged. Associate Professor Knipp
126. Physics Colloquium.-Weekly meetings of the instructors and advanced students of the department for the presentation and discussion of papers on current problems in physics, and on investigations in progress in the laboratory. Once a week; I, II; ( $1 / 4$ to $1 / 2$ unit).

127a. The Electron Theory.-Radiation; relativity and the electromagnetic emission of light; radiation of the black body; Planck's theory; the constant h ; photoelectric effect, specific heat, and Roentgen rays. Seminar. Twice a week; I; (I unit). Associate Professor Kunz
131. Investigation of Special Problems.-Advanced laboratory or design and calculation. Two to four times a week; I, II; (I to 2 units).

Professor Carman and others
132. Mathematical Physics.-Special phases in theoretical physics.
(a). Dynamics.-First Semester: Newton's equations; general methods of integration; potential-theory; potential of the ellipsoid; application to celestial mechanics; principles of least constraint, and of virtual work, of D'Alembert, and of Hamilton; least action in elasticity, hydrodynamics, electrodynamics, and the second principle of thermodynamics; the gyroscope. Second semester: Special problems of hydrodynamics and of electricity. Routh, Rigid Dynamics; Appel, Traite de mecanique rationelle. Three times a weeek; I, II; (2 units).

Associate Professor Kunz
[(b). Electrodynamics.-Problems from Jean's Mathematical Theory of Electricity and Magnetism; the potential theory; spherical harmonics, conjugate functions, and some theorems of vector analysis; capacities, coefficients of self and mutual induction; absolute electrical measurements and the condenser discharge with its application in wireless telegraphy; Maxwell's theory and its
modifications: relativity and the electromagnetic emission of light. Lectures; collateral reading. Continued in the following year in course 132d. Not given, 1915-16.]
[(c). Thermodynamics and Kinetic Theory of Matter.-Elasticity, surface tension, vapor pressure, osmotic pressure, and electromotive forces of galvanic cells; chemical equilibrium ; the Nernst theorem with its applications; Carnot's cycle, and the thermodynamic potentials and the derived functions; kinctic theory of gases; review of elementary theorems; transfer of mass, momentum, and energy; Maxwell's theory of the distribution of velocities in a gas; Boltzman's H theory and the connection between entropy and probability and statistical mechanics; radiation; Planck's theory of quanta, and recent applications in specific heat and photoelectricity. Current literature. I, $I I$; ( $I$ to 2 units). Not given, 1915-16.]
[(d). Theory of Electrical Oscillations and Cylindrical Harmonics.Four times a week; I, II; (I to 2 units). Not given, 1915-16.]
133. Seminar.-Three or five times a weck; I, II; (I to 3 units).

Professor Carman and others

## Summer Session Courses

S 2aI. General Physics, Part I.-Mechanics; motion; forces and their effects; equilibrium. Kimball's College Physics. (112). Assistant Professor Knipp, Dr. Jones
Prerequisitcs: Plane geometry and high-school algebra; registration in Physics S 2b1. Plane trigonometry desired.

S 2bI. Introductory Laboratory Physics, Part I.-Physical measurements on mechanics, properties of matter. Laboratory to accompany S 2 al . Schulz's Laboratory Manual. (11/2). Dr. Jones, Mr. Bayley

Prerequisite: Registration in Physics S 2al.
S 2aII. General Physics, Part II.-Electricity and magnetism. Kimball's College Physics. (1 $1 / 2$. ) Assistant Professor Knipp, Mr. Nathanson

Prerequisitc: See S 2aI.
S 2bII. Introductory Laboratory Physics, Part II.-Laboratory to accompany S 2 all . ( $1 \mathrm{I} / 2$.)

Mr. Nathanson, Mr. Bayley
Prerequisite: Registration in S 2all.
S 2aIII. General Physics, Part III.-Heat; light; sound. Lectures; demonstrations; recitations. Text: Kimball's College Physics. (112.) Not given, 1915.

Prercquisite: Same as S 2aI.]
[S 2bIII. Introductory Laboratory Physics, Part III.-Heat; light; sound. Laboratory. Schulz's Laboratory Manual. (11/2.) Not given, 1915.

Prerequisite: Registration in Physics S 2aIII.]
S 4. Electrical and Magnetic Measurements.-Laboratory; recitations; reports. (2).

Mr. Randolph
Prerequisite: A course in general physics and calculus.
S 15. Electricity and Magnetism.-Lectures, recitations; laboratory. Brooks and Poyser, Magnetism and Electricity. (112). Mr. Randolpr

Prerequisite: A course in general physics.
[S 16. Heat.-Thermometry, calorimetry, expansion, and vapor pressure. Lectures; demonstrations; recitations; laboratory. Edser's Heat for Advanced Students. (11/2). Not given, 1915.

Prerequisite: A course in general physics.]
S 17. Light.-For description see Physics 17 above. (1 $1 / 2$.)
Prerequisite: A course in general physics.
Mr. Nathanson
S 18. Teachers' Course.-For description see Physics 18 above. (1). Mr. Jones
Prerequisite: A course in general physics, or teaching experience in physics.
S 19. Problems in General Physics.-Problems on mechanics, electricity, magnetism, supplementary to courses S 2aI, S 2aII, and S 2aIII. Shearer's Problems in general physics. (1). Mr. Randolph

Prerequisite: A course in general physics.
*S 127. Electron Theory of Electricity and Matter.-Modern theories of electricity and matter; applications to the phenomena of physics and chemistry. Lectures; reading; reports. (Open to those who have had a course in general physics, and particularly to those expecting to teach the elements of physics and chemistry.) Three lectures a week. ( $\mathrm{I} / 2$ unit).

Assistant Professor Kunz
*S 31. Special Problems in Advanced Physical Measurements.-Special laboratory problems. (1 or 2). Assistant Professor Knipp

Prerequisite: A course in general physics; calculus.
*S 126. Physics Colloquium.-Lectures on liquid air, x-rays, and cathode rays.

In charge of Assistant Professor Knipp
*S 131. Investigation of Special Problems.-
Assistant Professor Knipp, Assistant Professor Kunz
Prerequisite: Registration in the Graduate School.
S 132. Mathematical Physics.-Electrodynamics. Lectures; collateral reading. Two times a week; (I unit).

Assistant Professor Kunz
S 133. Seminar and Tinesis.-
Assistant Professor Knipp, Assistant Professor Kunz
Prerequisite: Registration in the Graduate School.

## PHYSIOLOGY

William Edward Burge, Ph.D., Assistant Professor
Joseph Howard Beard, A.M., M.D., Instructor
Alma Jessie Neill, A.M., Assistant
Major: 20 hours made up from any course offered in the department, exclusive of Physiology 4.

Minor: 20 hours in bacteriology, botany, chemistry and zoology.
4. General Physiology, Chemical and Experimental.-Lectures; demonstrations, recitations; laboratory. $I$ or $I I$; (5).

Assistant Professor Burge, Dr. Beard
Prerequisite: One semester of university work, including five hours in botany or zoology and five hours in chemistry.

1. Histology.-Fundamental mammalian tissues; microscopic anatomy of the organs. Lectures; laboratory. I; (3).

Assistant Professor Burge, Dr. Beard
Prerequisite: Two years of university work, including five hours in botany or zoology.
8. Microscopical Anatomy of the Organs.-Epithelial, connective, muscular, and nervous tissues and their relationships in the different organs of the body. Lectures; laboratory. II; (5).

Assistant Professor Burge, Dr. Beard
Prerequisite: Two years of university work, including Physiology 1.
2. Experimental Physiology.-Nerve and muscle; circulation; respiration; secretion. Lectures; laboratory. II; (5).

Assistant Professor Burge, Dr. Beard
Prerequisite: Two years of university work, including Physiology 4 and 8.
3. Undergraduate Thesis.-(Elective.) Assistant Professor Burge
5. Physiology of Nutrition.-Lectures; demonstrations. $I$; (2).

Assistant Professor Burge
Prerequisite: Physiology 4.
7. Physiological Optics.-Lectures; demonstrations; laboratory. II; (3). Assistant Professor Burge
Pserequisite: Physics 7a-7b, 8a-8b.

## Courses for Graduates

100. Research.-Once a week; I, II; (I or 2 units).

Prerequisite: Physiology 2 or its equivalent.
101. Journal Club.-(Required of graduate students.) I, II.

Prercquisite: Consent of the department Professor Burge, Dr. Beard

## POLITICAL SCIENCE

(See also Economics, History, and Sociology.)
James Wilford Garner, Ph.D., Professor
John Archibald Fairlie, Ph.D., Professor
John Mabry Marhews, Ph.D., Assistant Professor
Russell McCulloch Story, A.M., Instructor
Robert Eugene Cushman, A.M., Instructor
Orren Chalmers Howell, A.M., Professor of History, Bowdoin College (Summer Session)
Major: Twenty hours from any courses offered by the department. A major may include three hours of constitutional history (History 4 and 14).

Minors: Twenty hours, selected from two of the following subjects: history, economics, law, sociology, philosophy, and education.

## Courses for Undergraduates

Note: Courses 1 and 3 give a survey of national, state, and local government in the United States, and should be taken by students specializing in political science.

1. American Government.-Development, organization, powers, limitations, and practical working of the national government. $I$; (3).

Professor Garner, Assistant Professor Mathews, Mr. Story, Mr. Cushman
Prerequisite: Thirty hours of university work.
3. State and Local Government.-Powers, obligations, and rights of the states in the Federal Union; their formation and admission; state constitutions; organization of state and local government; political methods. (A continuation of course 1 ; may be taken independently.) II; (3). Professor Garner, Assistant Professor Mathews, Mr. Story, Mr. Cushman

Prerequisite: Thirty hours of university work.
1a. American Government and Politics.-National, state, and local government. (Open only to students in the Colleges of Engineering and Agriculture.) II; (2).

Mr. Cushman
Prerequisite: Thirty hours of university work. No credit is allowed for this course if the student has already had or subsequently takes course 1 or 3.
16. Government of Illinois.-Constitutional development, organization, and administration of state and local government; legislature ; executive; judiciary; state officers and institutions; county, town, and municipal government. (Students in order to count both courses 3 and 16 for full credit must prepare in course 16 a special report on some phase of the government of Illinois.) $I$; (2).

Mr. Story
Prerequisite: Thirty hours of university work.

## Courses for Advanced Undergraduates and Graduates

(At least junior standing required)
4. Municipal Government.-The growth of cities; their legal and social position; organization in the United States; mayor and council; commission government; city managers; organization abroad. Lectures; assigned readings; reports. $I$; (3). Mr. Story

Prerequisite: One course in political science or Economics 1.
5. Constitutional Law of the United States.-The judicial interpretation of the constitution; judicial power to declare laws unconstitutional; separation of governmental powers; state and national govermment; rights under the constitution (due process of law, contract); territories and dependencies; national powers of taxation and commerce; jurisdiction of the courts. $I$; (4). Mr. Cushman
Prerequisite: Political Science 1.
6. International Law.-Development, nature, source, and present status of the law of nations; intervention; war and peace; neutrals; arbitration. Lectures; assigned readings; reports. $I$; (3).

Professor Garner
Prerequisite: Graduate or senior standing, or junior standing with six hours of history and five hours of political science.
7. American Diplomacy.-The Department of State; the diplomatic service; the treaty making power; methods and traditional principles of the
forcign policy of the United States; diplomatic controversies with foreign powers; the United States as a world power. II; (3).

Assistant Professor Mateews
Prerequisite: Junior standing and Political Science 1 or History 3a-3b.
9. Principles of Jurisprudence.-Nature, sources, and classification of law; the Roman and English legal systems; English common law in the United States; statutes and judicial decisions. II; (2).

Professor Fairlie
Prerequisite: Political Science 1 or its equivalent.
10. Administrative Law in the United States.-Separation of governmental powers and delegation of legislative power; federal and state administrative organizations; powers of administrative officers; methods of enforcing governmental commands; remedies of the individual against unlawful action of public officials. II; (3).

Mr. Cushman
Prerequisite: Political Science 5 and junior standing.
11. Constitutional Aspects of Social and Industrial Problems.-The police; constitutional limitations on legislation concerning public health and safety; control of public service corporations and combinations of capital and labor. I; (3).

Mr. Cushman
12. National Administration.-Administrative powers of the President and Congress; executive departments and administrative services of the national government; judicial administration and the relation of the courts to the executive authorities. $I$; (3).

Professor Fairlie
Prerequisite: Political Science 1.
13. State Administration in the United States.-Administrative position of the governor; organization of state administrative departments; administrative disintegration; influence of diffusion of executive power on enforcement of state law; organization and powers of state boards, commissions, and quasijudicial tribunals; centralization in the administration of taxation, education, and other state functions; methods of control over state administrative officers. $I$; (3).

Assistant Professor Mathews
Prerequisite: Political Science 3 or its equivalent.
14. Political Parties and Methods.-Development, organization, and methods in the United States and Great Britain; recent legislation on primary elections and corrupt practises. I; (2).

Professor Fairlie
Prerequisite: One course in political science.
18. Legislation in the United States.-The legislative power; representation; organization, procedure, and practise; bill drafting; reference bureaus; popular law making; tendencies in legislation. II; (3).

Mr. Story
Prerequisite: Junior standing and six hours of political science.
21. British Government.-Political institutions in the United Kingdom and the British possessions; Crown; Cabinet; House of Commons; House of Lords; party system; courts of law; local government; Crown Colonies and self-governing colonies; recent developments and proposed changes. $I$; (3).

Professor Fatrite
Prerequisite: Open to graduate students, seniors, and to juniors who have had six hours in political science.
22. Continental European Governments.-The political systems of France, Germany, Austria-Hungary, Italy, and Switzerland; constitutional beginnings; political organizations; legislation and administration; constitutional guaranties for the protection of individual rights. II; (3). Professor Garner

Prerequisite: Open to graduate students and seniors, who have had six hours in political science. History 20a-20b and Political Science 21 are recommended.
28. Problems of Contemporary Politics.-Domestic and foreign politics: initiative, referendum, and recall; proportional representation; state socialism; immigration; electoral and ballot reform; judicial reform; parliamentary government; the Monroe Doctrine; international arbitration. Individual reports; discussion. II; (2).

Mr. Story
Prerequisite: Senior standing and one course in political science.
34. Municipal Problems.-Municipal administration in the United States and Europe; municipal organization and relations to the state; municipal ownership and regulation of public utilities; city planning and housing; police and sanitary administration; finances. Lectures; readings; special reports. II; (3).

Professor Faidlie
Prerequisite: Open to graduate students and to undergraduates who have had Political Science 4.

36a-36b. Thesis Course.-(For candidates for honors and other seniors doing research work.) $I, I I$; (2).

## Courses for Graduates

101. History of Political Theories.-Ancient, medieval, and modern political thought; theories of Aristotle, Machiavelli, Hobbes, Locke, Rousseau, Montesquieu; evolution of American political ideas. (Given in 1915-16 and alternate years. Alternating with course 102.) Twice a week; I; (I unit).
[102. The Nature of the State.-Origin, nature, forms, and functions of the state; sovereignty and liberty; citizenship and nationality; constitutions; principles and methods of political organization. Not given, 1915-16. Twice a week; I; (I unit).

Professor Garner]
103. Seminar in Political Science and Public Law.-Special problems; reports; discussions; criticism. (The research work of candidates who are writing theses is under the direction of some instructor to whom they report frequently.) $I, I I$.
106. Special Topics in International Law.-War law; rights and duties of neutrals; contraband ; right of search; capture; continuous voyage; transfers of flag; blockades. Twice a week; II; (I unit). Professor Garner
112. Special Topics in Public Administration.-National, municipal, and local administration. Twice a week; II; (I unit). Professor Farrlie
113. Special Topics in State Administration.-Administrative reorganization; newer functions; centralization and home rule; law enforcement; relations between state, federal, and local agencies; investigation of problems. Twice a week; II; (I unit). Assistant Professor Mathews

## Summer Session Courses

## S 1. American Government.-For description see Political Science 1. (21/2). <br> Mr. Story

Prerequisite: Thirty hours of university work.
S 3. State and Local Government.-For description see Political Science 3. (2 $1 / 2$ ).

Mr. Story
Prerequisite: Thirty hours of university work.
S 6. International Law.-Organization of the diplomatic service; methods of diplomacy; treaties; sovereignty and independence of States; war; neutrals. (Open to graduates and advanced undergraduates.) ( $21 / 2$ ).

Professor Hormell

## PSYCHOLOGY

Madison Bentley, Ph.D., Professor
Christian Alban Ruckmich, Ph.D., Associate
Carl Rabn, Ph.D., Instructor
Gerold Carl Wichmann, A.B., Assistant
Anna Sophie Rogers, A.M., Graduate Assistant
Major: Twenty hours chosen from courses announced by the department, except that six hours may be chosen from one or more of the following subjects: Philosophy 1, 2, 3, 4; Physics 1a-1b, 3a-3b, 7a-7b; Zoology 2, 5, 9, 15; and Animal Husbandry 30.

Minors: Twenty hours chosen from education, genetics, philosophy, physics, physiology, sociology, and zoology.

## Laboratories

The departmental laboratories occupy twenty rooms in University Hall. They make provision for research, undergraduate instruction in drill-courses, demonstrations in the lecture-room, the testing of mental capacity and of mental defect, and the study of the animal mind. Besides standard equipment in all branches, the laboratories contain special apparatus for spectroscopic and chronographic methods and for the investigation of memory and association. Provision is made for research in psychological optics and acoustics. The workshop, which is in charge of a skilled mechanician, is equipped for the construction of delicate apparatus and of instruments of precision. The departmental library contains complete files of foreign and American journals and a working collection for experimental and historical study.

Summer Session courses in psychology will be found under Education.

1. Introduction to Psychology.-The facts and laws of consciousness. Lectures; sectional meetings. $I$; (3).

Professor Bentley, Dr. Ruckmich, Dr. Rahn, and assistants
Prcrequisite: One year of university work.
2. General Psychology.-Mental inheritance, habit, custom, and fashion; psychology and the biological and social sciences; comparative and genetic psychology, the abnormal; applications of psychology to the arts and professions. II; (3).

Professor Bentley, Dr. Ruckmich, Dr. Rahn, and assistants
Prerequisite: Psychology 1.
3. Laboratory Practise (Elementary).-Experiments in the fields of sensation, feeling, attention, and action. $I$ or $I I$; (2).

Dr. Ruckmich and assistants
Prerequisite: Psychology 1.
[4. Laboratory Practise (Intermediate).-Experiments in memory, association, learning, and thought. I; (2). Not given, 1915-16. Dr. Ruckmice

Prerequisite: Psychology 1 and 3.]
5. Comparative Psychology.-Mind in animal forms; psychological implications of organic evolution; human and animal minds; criticism of current literature. (Recommended to students who intend to elect advanced courses either in animal psychology or in the study of behavior). Lectures; laboratory. I; (2).

Professor Bentley, Dr. Rahn
Prerequisite: Psychology 1.
6. Comparative Psychology (Advanced Laboratory).-Individual studies in animal psychology. II; *(2-4). Professor Bentley, Dr. Rahn

Prerequisite: Psychology 1 and 5.
8. Memory and Association.-Learning, retention, and recall; associative consciousness; methods of experimentation. Lectures; assigned reading; laboratory. II; (2).

Dr. Rahn
Prerequisite: Psychology 1 and one other course.
9. Physiological Psychology.-The structure and functions of the nervous system and the phenomena of human consciousness; psychophysical relationship. Lectures; readings; discussions. $I I$; (2). Dr. RaHN

Prerequisite: Psychology 1 and laboratory training in one of the biological sciences.
10. German Reading.-Translation into English of a German psychological text. I; (1).

Professor Bentley
Prerequisite: Psychology 1 and an elementary knowledge of German.
12-13. Minor Problems (Advanced Laboratory).-Formulation of methods. $I, I I$; *(2-5). Professor Bentley, Dr. Ruckmich

Prerequisite: Psychology 1, 2, 3.
14. Social Psychology.-The social consciousness and the collective mind; analysis of conditions; perceptual, ideational, and emotional factors in social consciousness; genetic development of the collective mind as revealed in tradition and institutions. $I$; (2).

Dr. Rahn
Prerequisite: Psychology 1 and one other course.
15. The Psychological Basis of Music.-(An elementary course). Summary of literature on the origin of music, harmony, melody, rythm, consonance, tonal quality; psychology of appreciation and performance. $I$; (2).

Dr. Ruckmice
17. The History of Psychology.-Lectures; reading. II; (2).

Dr. Ruckmich
Prerequisite: Psychology 1, 2, and one other course.

[^88][19-20. Systematic Psychology.-Psychological analysis; elementary processes; sensory and imaginal processes and the simpler complexes. Lectures; essays. (For graduates and advanced undergraduates). I, II; (3). Not given, 1915-16.

Dr. Ruckmich, Dr. Rahn
Prerequisite: The consent of the instructor.]
21-22. Special Studies.-Individual investigations, for advanced students, in the form of essay or of experiment. $1, I I$; (3).

Dr. Bentley, Dr. Ruckmich, Dr. Rahn
Prerequisite: Psychology 1, and one other course.

## Courses for Graduates

103. Research.-Experimental and historical investigations. $I, I I$; ( $1 / 2$ to 2 units). Professor Bentley, Dr. Ruckmich, Dr. Rahn
104. Seminar.-Discussion of current topics in their historical setting. Once a week; $I, I I$; ( $1 / 2$ unit).

Professor Bentley
PUBLIC SPEAKING

## (See under English Language and Literature.)

## RAILWAY ADMINISTRATION

(See Transportation.)

## RAILWAY ENGINEERING

Edward Charles Schmidt, M.E., Professor
William Freeman Myrick Goss, M.S., D.Eng., Professor
John McBeath Snodgrass, B.S., Assistant Professor, Railway Mechanical Engineering
Alonzo Morris Buck, M.E., Assistant Professor, Railway Electrical Engineering Arthur Francis Comstock, C.E., Associate, Railway Civil Engineering Otto Sternoff Beyer, Jr., M.E., First Assistant, Engineering Experiment Station Harold Houghton Dunn, M.S., Assistant, Engineering Experiment Station

Railway Civil Engineering-Courses 31-51.
Railway Electrical Engineering-Courses 60-68.
Railway Mechanical Engineering-Courses 2-10.
Common to all groups-Courses 25 and 30.
2. Locomotive Design.-Calculations and designs of engine and boiler details; current standards and proportions. I; (3).

Assistant Professor Snodgrass
Prerequisite: Mechanical Engineering 12, 62; Railway Engineering 6.
5. Railway Laboratory.-Locomotive testing; experimental work with electric and steam railway test cars, brakeshoe testing machine, drop testing machine, and air-brake apparatus. I; (3). Assistant Professor Snodgrass

Prerequisitc: Mechanical Engineering 12, 62; Railway Engineering 6.
6. Locomotives.-Mechanics; performance; design. II; (4).

Professor Schmidt
Prerequisite: Theoretical and Applied Mechanics 21, 29; registration in Mechanical Engineering 12 and 62.
7. Advanced Design.-Problems in locomotive and car design. II; (3). Assistant Professor Snodgrass
Prerequisite: Railway Engineering 2.
8. Railway Laboratory.-Investigation of train resistance and locomotive tractive effort by the use of the railway test car. Analysis of the results and their application to the problems of tonnage rating. $I I$; (2).

Mr. Beyer

## Prerequisite: Railway Engineering 5.

9. Seminar.-Current topics; review of railway journals; assigned topics and reports. $I$; (1).

Professor Schmidt
25. Railway Development.-History and organization of steam and electric railways; statistics; costs. I; (3).
Professor Schmidt, Assistant Professor Snodgrass, Assistant Professor Buck, Mr. Comstock

Prerequisite: Open to juniors in railway engineering only.
30. Thesis.-Independent solution of some railway problem or the investigation of some subject. The thesis may be an original design or an original experimental investigation, or the analysis and discussion of facts already in existence. $I I$; (3).
Professor Schmidr, Assistant Professor Snodgrass, Assistant Professor Buck, Mr. Comstock
31. Railway Yards and Terminals.-Theory of design; arrangement of grades in gravity yards; problems in yard design. II; (3). Mr. Сомstock

Prerequisite: Civil Engineering 51.
32. Railway Construction.-(Advanced course.) Design of railway structures; cost analysis; estimates of cost, working drawings, and contracts and specifications for assigned problems. I; (3). Mr. Сомstock

Prerequisite: Civil Engineering 51.
33. Economic Theory of Railway Location.-Influence of volume of traffic, alignment, and gradient on operating expenses; locomotive and grade problems; relocation of existing lines. II; (4).

Mr. Сомstock
Prerequisite: Civil Engineering 51; Theoretical and Applied Mechanics 20. 21.
34. Railway Maintenance.-Systems; track design; standards and charts; classification of accounts; measuring efficiency; emergency organization. II; (4).

Mr. Сомstock
Prerequisite: Civil Engineering 51.
35. Railway Signaling.-Block and route signaling; systems in use; history; railway accidents. $I$; (1).

Mr. Сомstock
Prerequisite: Civil Engineering 51.
50-51. Seminar.-Current topics; review of journals; assigned topics and reports. $I, I$; (1).

Mr. Comstoce
60. Electric Railway Principles.-Mechanics of traction; train resistance; braking of electric railway trains; methods of solving fundamental electric railway problems. $I I$; (2).

Assistant Professor Buck
Prerequisite: Theoretical and Applied Mechanics 25; Electrical Engineering $25,75$.
61. Electric Traction.-Selection and operation of equipment. (A condensed course for students in railway mechanical engineering and others.) II; (3).

Assistant Professor Buck
Prerequisite: Theoretical and Applied Mechanics 21 or 25; Electrical Engineering 11,62 , or 25,75 .
62. Electric Railway Laboratory.-Tests of electrical machinery used in railway service. $I$; (2).

Assistant Professor Buck
Prerequisite: Railway Engineering 60.
63. Electric Railway Laboratory.-(A continuation of Course 6Z). Tests with the electric test car and the dynamometer car to determine train resistance and power consumption. $I I$; (2).

Assistance Professor Buck
Prerequisite: Railway Engineering 62, 64.
64. Electric Railway Practise.-Types of equipment; energy consumption; methods of distribution. $I$; (3).

Assistant Professor Buck
Prerequisite: Theoretical and Applied Mechanics 25 ; Electrical Engineering 26, 76; Railway Engineering 60.
65. Electric Railway Economics.-Location and operation; choice of systems; location of power plant and sub-stations; calculation of transmission and distribution of circuits; maintenance of way and of equipment; electrification of steam roads. $I I$; (4).

Assistant Professor Buck
Prerequisite: Railway Engineering 64.
66. Electric Railway Machinery.-Electrical machinery used for railway service; transmission and distribution lines. I; (3). Assistant Professor Buck

Prerequisite: Railway Engineering 60.
67-68. Seminar.-Current topics; review of journals; assigned topics and reports. $I, I I$; (1).

Assistant Professor Buck

## Courses for Graduates

Entrance upon graduate work in railway engineering presupposes full undergraduate training in that subject.
102. Locomotive Design.-Steam pressure; compounding; superheating. Once a week; I, II; (I unit).

Professor Goss
106. Locomotive Operation.-Train resistance and tractive effort; tonnage ratings. Once a week; I, II; (I unit). Professor Schmidt
108. Electric Railway Practise.-The design, selection, operation, and maintenance of central station, sub-station, rolling stock, and line equipment. Once a week; I, II; (I unit).

Assistant Professor Buck
110. Railway Location.-The effects of location on earning capacity; problems in original location and in the relocation and reduction of grades of existing lines. Once a week; I, II; (I unit).

Mr. Сомstock

# RHETORIC <br> (See English Language and Literature.) <br> <br> ROMANCE LANGUAGES AND LITERATURE 

 <br> <br> ROMANCE LANGUAGES AND LITERATURE}

Kenneth McKenzie, Ph.D., Professor
*Thomas Edward Oliver, Ph.D., Professor
Joen Drscoll Fitz-Gerald, in, Ph.D., Professor, Spanish
David Hobart Carnahan, Ph.D., Associate Professor
Datid Simon Blondhein, Ph.D., Assistant Professor
Arthur Romeyn Seymour, Ph.D., Associate
Olin Harris Moore, Ph:D., Associate
Cearles Seraphin Carry, Assistant
Louis Allen, A.M., Assistant
James Kessler, A.M., Assistant
Rafael Arcangel Soto, A.B., Assistant
Eric Allen Dawson, A.M., Assistant
Cincinnati Giovanni Battiste Laguardia, A.B., Assistant
Herbert King Stone, A.B., Assistant
John Raymond Shulters, A.M., Assistant
Jane Coulson Watson, A.B., Assistant
FRENCH
Major: 20 hours of French, exclusive of French 1a, 1b, 2a, 2c, 2d, 9a, and 9 b .

Minors: 20 hours in not more than three of the following subjects: English (excluding Rhetoric 1-2), German, Greek, Italian, Latin, Spanish, history, and philosophy, provided that 8 hours must be taken in one subject other than a Romance language.

## ROMANCE LANGUAGES

Major: 20 hours in French and one other Romance language, exclusive of French 1a, 1b, 2a, 2c, ?d, 9a, 9b, Spanish 1a, 1b, and Italian 1a, and 1 b .

Minors: 20 hours in nol more than three of the following subjects: English (excluding Rhetoric 1-?), German, Greek, Italian, Latin, Spanish, history, and philosophy, provided that the minor does not include any language contained in the major in Romance languages.

## A. FRENCH

## Courses for Undergraduates

1a-1b. Elementary Course.-Grammar; pronunciation; reading of modern authors; composition; conversation. I, II; (4).
Professor McKenzie, Dr. Mcore, Mr. Carry, Mr. Allen, Mr. Kessler, Mr. Dawson, Mr. Stone, Mr. Shulters
2a-2b. Modern Prose, Poetry, and Drama.-Rapid reading of modern authors; advanced syntax and composition. I, II; (4).
Professor Oliver, Associate Professor Carnafan, Assistant Professor Blondheim, Dr. Moore, Mr. Kessler, Mr. Shulters
Prerequisite: French 1a-1b.

[^89]2c-2d. Second-Year Conversation.-Mainly classroom work. (Does not count toward a major in French.) I, II; (1).

Mr. Carry
Prerequisite: French la-1b, with a grade of at least 85 .
3a-3b. Intermediate Composition and Conversation.-Reading; themes; talks upon France and French life. (Conducted entirely in French). I, II; (2).

Mr. Carry
Prerequisite: French 2a-2b.
Note: Required of those who are given the recommendation of the department to teach French.

4a-4b. Advanced Composition and Conversation.-French life and literature. Idiomatic constructions; syntax; themes. (Conducted entirely in French.) I, II; (2).

Mr. Carry
Prerequisite: French 3a-3b.
9a-9b. Masterpieces of Romance Literature in Translations.-Dante, Petrarch, Boccaccio, Cervantes, Rabelais, Montaigne, Molière, and other writers. (May not be counted toward a major in French). I, II; (2). Dr. Moore

Prerequisite: Two years of university work.
22a-22b. Modern Novel and Drama.-The novel and drama in France from the beginning of the nineteenth century to the present time. Lectures; reports on collateral reading. $I, I I$; (2).

Professor Fitz-Gerald
Prerequisite: French 2a-2b.
25. Course for Teachers.-Methods of teaching French in this country and abroad ; actual contact with class-room problems. $I$; (2).

Associate Professor Carnaran
Prerequisite: Twenty-four hours' credit in French, including French 3a-3b.
28a-28b. Senior Thesis.-For candidates for honors in French; open to other seniors. $I, I I$; (1).

## Courses for Advanced Undergraduates and Graduates

10a-10b. Survey of French Literature.-Special periods and authors. The main currents of French literature from the beginning to the present time. I, II; (3).

Associate Professor Carnaran
Prerequisite: French 22a-22b, or 24a-24b.
17a-17b. Contemporary French Drama.-The leading French dramatists from 1850 to the present time: Augier, Dumas fils, Becque, Brieux, Bourget, Bernstein, Rostand, Donnay, and others. I, II; (2). Professor McKenzie

Prerequisite: French 22a-22b, or $24 \mathrm{a}-24 \mathrm{~b}$.
[24b. Seventeenth and Eighteenth Century Dramatists.-Corneille, Racine, Molière, Voltaire, Marivaux, Sedaine, Beaumarchais. Lectures; interpretation. II; (2). Not given, 1915-16. Professor Oliver

Prerequisite: French 3a-3b, or 22a-22b. (In special cases French 2a-2b, with the consent of the department.)]

26a-26b. French Literary Criticism.-Criticism in antiquity and in the Italian Renaissance; French critics; classicism and romanticism in the seventeenth and nineteenth centuries. $I, I I$; (2). Assistant Professor Blondheim

Prerequisite: Three years of French, and the consent of the instructor.

## Courses for Graduates

Candidates for an advanced degree in Romance languages must have 2 total of at least thirty hours of college work in these languages of which eighteen must be in either French, Italian, or Spanish; with at least twelve hours in French. A candidate must also have had satisfactory training in Latin, and be able to read German prose.

Graduate students who select Romance languages as a first or second minor must have had at least sixteen hours of college work in the language desired and be able to read German prose.
[101. Old French Epic Literature.-Critical reading and interpretation of national and courtly epics and collateral study of their history. Twice a week. II; (I unit). Not given, 1915-16. Professor Oliver]
[102. Old French Lyric and Prose Literature.-Critical interpretation of the earlier Old French dramatic, didactic, chronicle and lyric writers. (For students who prefer it, the collateral work may consist of the elements of Old French historical grammar.) Twice a week; I, II; (I unit). Not given, 1915-16. Professor Oliver]
[103. Seventeenth Century Prose Writers.-Lectures on French culture, society, and prose literature of the seventeenth century ; the great preachers and moralists; Jansenism and Port Royal ; the classic ideals. Collateral readings of the greater masterpieces, with assigned problems for special investigations. Once a week; I, II; (1/2 unit). Not given, 1915-16. Professor Oliver]
[104. Eighteenth Century Prose Writers.-Society, culture, and prose literature of the eighteenth century; the attack upon the classic ideals; growth of the revolutionary spirit; first movements towards romanticism. Readings; collateral study. Once a week; II; (1/2 unit). Not given, 1915-16.

Professor Oliver]
106. Early French Drama.-Origins and development to the Renaissance. Twice a week; I, $I$; ( 1 unit). Associate Professor Carnainan
110. Introduction to Romance Philology.-Historical phonology and morphology. Linguistic problems of the teacher of French, Italian, and Spanish. Twice a week; I, II; (I unit).

Professor Fitz-Gerald
119. Old French Phonology and Morphology.-Development of Old French from Vulgar Latin. Twice a week; I, II; (I unit).

Assistant Professor Blondereim
120. French Lexicography.-Old French word-history. Once a week; I, II; ( $1 / 2$ unit).

Assistant Professor Blondherm
125. Seminar.-Research work in preparation for theses. Twice a week; $I, I I$; (I unit). Members of the department
B. ITALIAN

Course for Undergraduates
1a-1b. Elementary Course.-Grammar; composition; conversation; reading. $I, I I$; (3).

Professor McKenzir

## Course for Advanced Undergraduates and Graduates

[2a-2b. Italian Literature. -Italian writers of the nineteenth century. I, II; (2). Not given, 1915-16.

Dr. Moore
Prerequisite: Italian 1a-1b.]

## Course for Graduates

140. Italian Literature of the Thirteenth and Fourteenth Centuries.Dante, Petrarch, Boccaccio. Twice a week; I, II; (I unit).

Professor McKenzie
C. SPANISH

## Courses for Undergraduates

1a-1b. Elementary Course.-Grammar; pronunciation; reading; composition; conversation. $I, I I$; (4).
Dr. Seymour in charge; Mr. Allen, Mr. Soto, Mr. Stone, Mr. Laguardia, Miss Watson
2a-2b. Conversation and Composition.-Conversation; composition; reading of modern prose with practical vocabulary. Commercial correspondence. I, II; (3).

Dr. Seymour, Mr. Soto
Prerequisite: Spanish la-1b.
3a-3b. Introduction to Spanish Literature.-Rapid reading of modern authors, and of the more important writers of the seventeenth century. $I$, II; (3).

Professor Fitz-Grbald
Prerequisite: Spanish 1a-1b.
4a-4b. Business Correspondence and Conversation.-Reading of facsimile business correspondence; writing of business letters; conversation. Reports in Spanish on consular and governmental documents. (Conducted in Spanish.) I, II; (2).

Dr. Seymour
Prerequisite: Spanish 2a-2b.

## Courses for Advanced Undergraduates and Graduates

11a-11b. The Spanish Drama of the Sixteenth and Seventeenth Cen-turies.-Earlier dramatists; representative plays of Lope de Vega, Calderon, Ruiz de Alarcon, and Triso de Molina. Reports on outside reading. I, II; (2).

Dr. Seymour
Prerequisite: Spanish 3a-3b.

## Courses for Graduates

132. The Novela of the Golden Age.-Political and social conditions in Spain from 1560 to 1700 ; prose fiction of this period; Don Quixote and the Novelas Exemplares of Cervantes. Twice a week; I, II; (I unit).

## Professor Fitz-Gerald

135. The Modern Novel in Spain.-The modern novel in Spain from the middle of the nineteenth century to the present time. The development of the novel in Spain, France, and ltaly. Lectures; collateral reading. Twice a week; I, II; (I unit).

Dr. Seymour
[131. Oldest Monuments of the Spanish Language; Origins of Spanish Poetry.-Historical grammar and paleography; critical interpretation of texts. Twice a zveek; I, II; (I unit). Not given, 1915-16.

Professor Fitz-Gerald]
[133. Origins of the Spanish Novela and Comedia.-Spanish prose fiction drama previous to the Golden Age. Twice a week; I, II; (I unit). Not given, 1915-16.

Professor Fitz-Gerald]
[134. The Spanish Ballad.-Types of the ballad; lectures; collateral reading; reports. Twice a week; I, II; (I unit). Not given, 1915-16.

Dr. Seymour]

## Summer Session Courses

FRENCH
S 1. Elementary Course.-Pronunciation, grammar, composition, reading. (4).

Mr. Carry
S 1a. Elementary Course (continued).-(2-4).
Associate Professor Carnahan
Prercquisite: French 1, S1, one year of high-school French, or the consent of the instructor.

S 2. Modern French.-Rapid reading; composition, conversation. Comfort's French Prose Composition; Loti's Pêcheur d'Islande; Merimée's Colomba; Erckman-Chartrian's Le Juif Polonais; Bazin's Les Oberlé; Hugo's Ruy Blas; Scribe's Bataille de Dames. (3). Associate Professor Carnaman

Prerequisite: One year of university French or its equivalent.
S 3. Composition and Conversation.-Practise in speaking and writing simple French. (1).

Mr. Carry
Prerequisite: The approval of the instructor.
S 8. Modern French Drama.-Rapid reading of modern authors. Collateral reading. (1). Associate Professor Carnahan

Prerequisite: Two years of university French or its equivalent.
*S 100. Seminar.-Graduate work for properly qualified students.
Associate Professor Carnahan
Spanish
S 1. Elementary Course.-Grammar, reading. (4).
Mr. Soto
Equivalent: Spanish 1a.
S 2. Conversation and Composition.-For description see Spanish 2a2b. (1).

Mr. Soто
Prerequisite: One year of university Spanish or its equivalent.
SCANDINAVIAN LANGUAGES AND LITERATURE
(See Germanic Languages and Literature.)

## THE SOCIAL SCIENCES

(See Economics, History, Political Science, and Sociology.)

## SOCIOLOGY

Edward Cary Hayes, Ph.D., Professor
James Garpield Stevens, Ph.D., Instructor
Gordon Watkins, A.M., Assistant
Major: 20 hours from any courses offered in the department.
Minors: 20 hours chosen from two or three of the following subjects: history, economics, political science, philosophy, and psychology.

## Courses for Undergraduates

1. The Principles of Sociology and Their Application to Present Problems.-I; (3).

Professor Hayes, Dr. Stevens
Prerequisite: Junior standing.
7. The Social Problems of the Rural Community.-II; (2).

Professor Hayes
Prerequisite: Junior standing.

## Courses for Advanced Undergraduates and Graduates

2. Social Control.-The methods by which society controls the conduct, opinions, and sentiments of its members. I; (3). Professor Hayes

Prerequisite: Sociology 1.
3. Social Evolution.-Modes of social activity among savage, barbarous, and civilized people; family organization, practical arts, economic wants and institutions, origins of government and law, codes of morality, religions; theory of social evolution and method of progress. II; (3). Professor Hayes

Prerequisite: Sociology 1.
8. Charities.-Evolution of modern organized philanthropy, public and private; causes and prevention of poverty; organization and management of charitable institutions. $I$; (3).

Dr. Stevens
Prerequisite: Junior standing and Sociology 1 or Economics 1.
9. Criminology.-Nature, causes, and treatment of the criminal; evolution of modern methods of criminal procedure and penology; recent experiments and tendencies. $I I$; (3).

Dr. Stevens
Prcrequisite: Senior standing.
10. Population.-Theories and policies of population; Malthus' Principle and its critics; problems in population of the United States; immigration, race-mixture, conditions affecting public health, death-rate, birth rate, marriage, divorce; selective influences at work on the "population type." $I$; (3).

Dr. Stevens
Prerequisite: Senior standing and Sociology 1 or Economics 1.
[11. Principles of Sociology.-Principles and teachings of sociology, derived from analysis and classification of the elements that make up the life of a people, types of change to which they are subject, and causes by which they are affected. $I$; (3). (Not given, 1915-16.) Professor Hayes

Prercquisite: Senior standing.]
12a-12b. The Labor Problem.-The same as Economics 12a-12b.
Assistant Professor Heilman
Prerequisite: Economics 1, 3; students whose major subject is sociology and who have had 6 hours in history, and Sociology 1, may be admitted without Economics 3.
[15. The Family.-Evolution of the family and marriage; its educational, moral, and political significance at different stages of social development. II ; (3). Not given, 1915-16.]
14. Social Statistics.-Social investigation and research. Social and community surveys. The verification of sociological laws and principles by
the statistical method. Vital statistics and population in the light of data afforded by official publications and special investigations. The statistical method applied to sociology and social problems. $I I$; (3). Dr. Stevens

Prcrequisite: Senior standing and Sociology 1 or Economics 1, and, except in special cases, Sociology 10.
21. Socialism and Social Reform.-The same as Economics 21.

Assistant Professor Heilman
Prerequisite: Economics 1, 3; students whose major subject is sociology and who have had 6 hours in history, and Sociology 1, may be admitted without Economics 3.
[20. Social Education.-Education as a factor in social progress; present day educational policy and organizations in the light of theoretical and applied sociology. II; (3). Not given, 1915-1б.

Prerequisitc: Senior standing, and Sociology 1 or Psychology 1.]

## Courses for Graduates

Preparation for graduate work in sociology must include the equivalent of twelve semester hours in the social sciences, of which at least three must be in sociology, and three in the principles of economics. The remainder may be in any combination of these two subjects, or of history and political science.
[101. Sociological Method.-Methods of advancing the science of sociology; adaptability to sociological investigation of methods described in Pearson's Grammar of Science, Wundt's Methodenlehre, zweite abtheilung, Seignobos' La Méthode Historique Appliquée aux Sciences Sociales, Bernheim's Historische Methode, Spencer's Study of Sociology, and Giddings' Inductive Sociology. Three times a week; I; (I unit). Not given, 1915-16.]
102. The Development of Sociology.-Reading of sociological works; discussions; lectures. Twice a week; I, II; (I unit).

Professor Hayes
150. Seminar.-Detection and statement of problems. Preparation of theses. Twice a week; I, II; (I or 2 units). Professor Hayes

## Summer Session Courses

S 1. Principles of Sociology.-Lectures; discussions; assigned reading. (2). Professor Hayes
Prerequisite: Junior standing or equivalent preparation; should if possible be preceded or accompanied by elementary psychology and the principles of economics.

Note: Courses S 1 and S 5 cover the ground of Sociology 1.
S 5. Charities and Correction.-Effects, causes, prevention, and treatment of poverty and crime. (2).

Professor Hayes
Presequisite: Sophomore standing or equivalent preparation.
S 7. The Social Problems of the Rural Community.-(1).
Professor Hayes

## SPANISH

## TRANSPORTATION

Ernest Ritson Dewsnup, A.M., Professor

## Courses for Undergraduates

1. Transportation System of the United States.-Development and economic problems of transportation in this country. $I$; (3).

Professor Dewsnup
Prerequisite: Economics 1 and 3.
2. Transportation Policy in Europe and in the United States.-Regulation of railways. $I I$; (3).

Professor Dewsnup
Prerequisite: Transportation 1.
7. Railway Organization.-Departments and functions of the American railway; traffic and operating departments; departmental, divisional, and unit systems; foreign railways; railway associations, labor, discipline, and training. I; (2).

Professor Dewsnup
Prerequisite: Accountancy 1 and Economics 1, previously or concurrently.
12. Freight Shipment.-Preparation of goods for shipment, freight classifications, class ratings; express and parcel post. II; (2).

Professor Dewsnup
Prerequisite: For railway administration students Economics 1, concurrent registration in Economics 3, and credit or concurrent registration in Accountancy 1; for others Economics 1 and 3, Accountancy 1.
13. Railway Traffic Administration.-Passenger traffic management. $I$; (3). Professor Dewsnup
Prerequisite: Credit or concurrent registration in Transportation 1.
[17. Railway Terminal Management.-Freight and passenger terminals. I; (3). Not given, 1915-16.

Professor Dewsnup
Prerequisite: Credit or concurrent registration in Transportation 1.]
22. Railway Train Service.-The standard code of train rules; train dispatching; block-signaling practise; time-table construction. II; (3).

Professor Dewsnup
Prerequisite: Credit or concurrent registration in Transportation 2.
[26. The Economics of Railway Construction and Maintenance.Location and types of construction; maintenance policy of railways in regard to roadway and equipment. II; (3). Not given, 1915-16. Professor Dewsnup

Prerequisite: Credit or concurrent registration in Transportation 2.]
35a-35b. Thesis.-(Only students specializing in railway administration may register in this course.) $I, I I$; (2).

Professor Dewsnup
Prerequisite: Senior standing.

## Courses for Graduates

[101. Railway Rate Policy.-Railway rate making; government regulation. Twice a week; I; (I unit). Not given, 1915-16.] Professor DewsNur
102. The Significance of the Financial Policy of American Railways.Capitalization and regulation; rates; physical valuation; inter-railway finance. Twice a week; II; (I unit).

Professor Dewsnup
103. The Literature of Railway Economics.-Critical reading, beginning with Dr. Lardner's Railway Economy of 1850. Twice a week; I; (I unit).

Professor Dewsnup

## ZOOLOGY

Henry Baldwin Ward, Ph.D., Professor
John Sterling Kingsley, D.Sc., Professor
Frank Smith, A.M., Professor
Charles Zeleny, Ph.D., Professor
Victor Ernest Shelford, Ph.D., Assistant Professor
Harley Jones VanCleave, Ph.D., Instructor
Henry Gustav May, B.S., Research Assistant
Bessie Rose Green, A.M., Assistant
Harry Virl Heimburger, A.M., Assistant
Jesse LeRoy Conel, A.M., Assistant
Edwin Booth Powers, A.M., Assistant
Francis Marsh Baldwin, A.M., Assistant
Thomas Byrd Magath, M.S., Graduate Assistant
George Marsh Higgins, B.S., Graduate Assistant
Rachel Ann Baumgartner, A.B., Graduate Assistant
James Ernest Kindred, A.M., Gradıate Assistant
Robert Hills Kingman, A.B., Graduate Assistant

Thomas Walton Galloway, Ph.D., Professor of Biology in James Millikin University (Summer Session)
William Franklin Henderson, A.B., Instructor in Chentistry in James Millikin University (Summer Session)
Major: 20 hours from any courses offered in the department, excluding Zoology 1, and including Zoology 3, 4, and 5.

Minors: 20 hours chosen from two or three of the following subjects: animal husbandry (Animal Husbandry 30), bacteriology, botany, chemistry, entomology, physics, physiology, psychology, paleontology, and physiography.

Courses 1 and 2 constitute an introduction to later work in zoology. In the second year, a student may choose as a line of work either morphological, experimental, ecological, faunistic, or systematic courses. The courses on microscopical technique (3), heredity and evolution (5), and current literature (20) are of value for all students. Medical students should take courses 3 and 6 the second year. Those preparing to teach zoology in the high school should take invertebrate morphology (4), field zoology (16, 17), and ecology (9, 11), and a course in general entomology.

## A. ZOOLOGY

## Courses for Undergraduates

1. General Zoology.-Animal biology; structure; function, inter-relations, origin, and development of animal life; generalizations. Lectures; laboratory; quiz work. $I$ or $I I$; (5).
Professor Ward, Assistant Professor Shelford, Dr. VanCleave, and assistants
2. Vertebrate Zoology and Comparative Anatomy.-The Chordata; early stages of vertebrate embryology; structure of vertebrate tissues; anatomy
of systems of organs considered in respect to their function, ontogeny, and evolution in the vertcbrate series; types of the Chordata. Lectures; laboratory; quiz work. II; (5).

Professor Kingsley, and assistants
Prerequisite: Zoology 1.
4. Invertebrate Morphology.-Invertebrate structure and development; biological principles. Laboratory; lectures; demonstrations. II; (3).

Dr. VanCleave
Prerequisite: Zoology 1.
5. Heredity and Evolution.-Facts and present views; proofs of organic evolution; probable factors involved. Lectures; demonstrations; assigned reading. $I I$; (2).

Professor Zeleny
Prercquisite: One year of university work.
16. Field Ornithology.-The birds of the vicinity. Identification; food relations; seasonal distribution; migration activities. (Students are advised to provide themselves with opera or field glasses.) Field work; lectures. II; (2). Professor Smith and assistants
19a-19b. Advanced Ornithology.-(Continuation of 16.) Difficult groups of birds; economic and technical literature. $I, I I ;{ }^{*}(2$ to 5$)$.

Professor Smith
Prerequisite: Zoology 16 or equivalent.
3. Microscopical Technics and Vertebrate Embryology.-Vertebrate embryo in early stages of development; fixation, embedding, section cutting, staining, and mounting; preparation of material. Lectures; laboratory. I; (3). Professor Kingsley and assistants
Prerequisite: Zoology 1, 2.
6. Vertebrate Organogeny.-Lectures; assigned readings; laboratory studies on embryos of the chick, dogfish, Amblystoma, and pig. (A continuation of course 3.) $I I$; (3).

Professor Kingsley and assistants
Prerequisite: Zoology 1, 2, 3.
9. Animal Ecology.-The relations of animals to their natural environments. Field and experimental work; lectures on the natural history of mammals, birds, reptiles, and amphibians. $I I$; (3). Assistant Professor Shelford

Prerequisite: One year of zoology or one and one-half years of university work, including Zoology 1.
11. Experimental Ecology and Geography.-The physiology of environmental relations; analysis of behavior. World and regional aspects of behavior and ecology; animal distribution as reiated to climate and vegetation. $I$; *(2 or 4). Assistant Professor Shelford

Prerequisite: One year of zoology and senior standing.
25-26. Experimental Zoology.-Experimental embryology; regeneration; heredity; variation; evolution. Laboratory; assigned reading; conference. I, II; (5).

Professor Zeleny
Prerequisite: Two years of university work, including one year in zoology.

[^90]17. Field Zoology.-Collection, preservation, and identification of common representatives of the lower vertebrates and of the various groups of land and fresh-water invertebrates (excluding insects) in the vicinity; identification work on living and preserved material from larger rivers and lakes; observations on the habits and life histories of selected forms. Field and laboratory work; assigned readings. $I$; (4).

Professor Smith and assistants.
Prerequisite: One year in zoology, and senior standing.
18. Advanced Field Zoology.-Taxonomic or distributional problems in connection with the local fauna. (A continuation of course 17.) $I I ; *(3$ to 5 ).

Professor Smith
Prercquisite: Zoology 17.
22-23. Morphology of Vertebrates.-The skeleton and the brain, the cranial nerves, and the eye and ear. Lectures; laboratory work; dissection of types. $I, I I$; (4).

Professor Kingsley
Prerequisite: Zoology 1, 2, 3, and 6.
21a-21b. Introduction to Zoological Research.-Morphology, life history, or reciprocal relations of invertebrate forms, especially parasites of man and the domestic animals. Laboratory; conferences; assigned reading. I, II; *(2 to 5).

Professor Ward
Prerequisite: One year in zoology and senior standing.
20a-20b. Current Literature.-Presentation and discussion of the results of recent zoological investigation. (Open to all students of zoology; should be taken by those intending to graduate with a thesis.) $I, I I$; (1).

Professor Zeleny
Prerequisite: Three years of university work, including one year in zoology.
8a-8b. Thesis Investigation.-Individual work on assigned topics. I, II; (5).
Professor Ward, Professor Kingsley, Professor Smith, Professor Zeleny, Assistant Professor Shelford

Prerequisite: Two years in zoology.

## Courses for Graduates

Students entering upon graduate study in zoology should have two years of undergraduate work in the subject. When chosen as a minor the courses listed for graduates and undergraduates must be preceded by at least one full year's undergraduate work in zoology. Work done at other institutions will be valued on conference with the head of the department.
102. Vertebrate Morphology.-Origin of vertebrates; segmentation of the head; morphology of special systems. Lectures; required reading. Twice a week; I; ( $1 / 2$ unit).

Professor Kingsley
[107. Parasitology.-Structure and life history of animal parasites; their relations to disease; origin and biological significance of parasitism. Conferences; assigned readings; demonstrations. Twice a week; I, II; (I unit). Not given, 1915-16. To be given in 1916-17]. Professor Ward

[^91]［109－109e．Physiological Ecology．－The regulatory mechanisms oi orsaisms；$=e$ ertality：osmotic pressure：：mmusis；and temperature in rela－ tion to astural exvircmencs．Giver in 191ب－15 and alternate years；not given， 1915－15 IT；（ 52 or 1 wwit．）Assistant Professor Suelroed］

110－110a．Economic Ecology．－Fisteries and pollation；insect pests and westher：Eotestry and ocssenction Given in 1915－15 and alternate years．110，
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115．Favtors of Individal and Racial Development－Experimental emeroios：rezenetica；heredit；variztion：evolution Tuice a wect；I，II； （ 2 moid

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：27．Theories of Animsl Paylogeny．－Reiatioss of sroups of animals；
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［123．Fanristic and Srstematic Zoology．－Indivicual research course． I，$H$ ；${ }^{\prime}:=2$ 么mits）．No：siven，1915－15．

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125．Ani－al Ecology and Dekatior－T－2vidual reseach course Cridit $\therefore$ St rangez． $\therefore$ sistent Professor Sexporu

> B. HUMAY AM?TOMY



Symmer Session Courses





field, and laboratory for the high-school course; teaching value of economic aspects of biology, as agriculture; outline of courses for secondary education. Lectures, assigned readings, reports, discussions. (1). Professor Galloway

Prerequisite: Open to teachers of zoology, to those haring had a course in zoology, or to those taking the course in General Zoology. See Zoolog: 527 for practical laboratory and field guidance.

S 27. Elementary Zoological Methods.-Laboratory, feld work, and discussions. For high-school teachers; ase of laboratory and Seld; collection and identification of animals in the field; cultivation in the laboratory; microscopic mounts; hand sections; microtome sections; staining and mounting, dissections for laboratory demonstration; use of apparatus; charts, diagrams, and illustrative material (1). Mr. Hendesson

Prerequisite: Open to those who have had a course in zoology or are taking General Zoology. May be taken separately, or as the laboratory potion of S 19, and in connection with it.
*S 21. Introduction to Zoological Research-Inrestigation on morphology, life-history, or interrelations of invertebrate animals Laboratory; literature; conferences; report.

Professor Galloway
Prerequinite: One year of college work in Zoology and senior standing, o: its equivalent.

S 41. Sex and Education-Inficence of sex derelopment; biology of sex; effects upon physical, mental, and emotional development; social and moral bearings of sex; instruction in the school (1/2). Professor Galioway

Prerequisite: Open to teachers.

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## PART IV <br> UNIVERSITY EXTENSION

## UNIVERSITY EXTENSION

Extension work has not been organized as a separate administrative unit in the University of Illinois. Several departments, however, have initiated activities, both on the campus and in the State at large, which serve to make some of the facilities of the University available to groups of mature persons who are engaged in various industries and professions.

## AGRICULTURE

Each of the departments of the College of Agriculture does extension work and so far as possible provides special men for this purpose. In addition to this, a separate department known as Agricultural Extension, offers courses in the principles and methods of extensive work, (see page 260), conducts extension enterprises that do not deal with technical subjects, and cooperates with the other departments in projecting their work in the State.

Some of the more general extension enterprises are:
(1) A two-weeks course in agriculture, known as the Corn Growers' and Stockmen's Convention, held annually at the College of Agriculture since 1898. The enrollment in this course in 1914 was 1065. The work includes lectures, conferences, and demonstrations in the subjects of stock-judging, milk-testing, farm mechanics, and farm crops. (Omitted in 1915 and 1916 on account of the "foot-and-mouth disease".)
(2) Agricultural-extension schools of a week's duration. About thirtysix such schools were held in different parts of the State during 1914-15.
(3) Demonstrations held in connection with soil-fertility and crop fields throughout the State.
(4) Cooperation, by furnishing teachers and lecturers, with other educational agencies for rural communities, e. g., farmers' institutes, special lecture railway trains, the Boys' State Fair School.
(5) Educational exhibits at fairs and expositions.
(6) School and community excursions to the University.

For the Cooperative Extension Service in agriculture and home economics conducted by the University of Illinois and the United States Department of Agriculture, under the provisions of the Federal Smith-Lever Act of May 8, 1914, see pp. 419-421.

## CERAMIC ENGINEERING

In addition to the regular four-year technical curriculum, the department of ceramic engineering cooperates with the clay and allied industries by offering annually, at Urbana, during the second and third weeks in January, a two-weeks industrial course in the principles underlying the manufacture of clay products, for those who have not the time nor the preparation required for academic studies. The work includes lectures, laboratory work, practise in firing kilns, and informal gatherings for question-asking. A common-school education is sufficient to enable one to do the work of this course. No charge of any kind is made. The number enrolled in January, 1915, was 47; in January, 1916, 25.

## COMMERCE

The University offered, during the week of January 31-February 4, 1916, a short course for business men, designed to meet the needs of both employer and employee. The enrollment was 302 .

Instruction was given by the members of the staff of the College of Commerce and Business Administration. Among the subjects treated were commercial law, banking, investments, credits and collections, marketing, accountancy, advertising, and salesmanship. A part of each instruction period was devoted to the discussion of problems that business men particularly are called on to solve. This method was intended to bring to the attention of the members of the different classes the best practises in their respective businesses. During the week three conferences were held: Wednesday, Problems and Functions of Commercial Clubs; Thursday, Retailing; Friday, The Traveling Salesman. Each of these conferences was presided over by a well known business man and every one present was given the opportunity to speak. There were no entrance requirements for this course, and no fees were charged.

## COMMUNITY ADVISER

An officer known as Community Adviser, employed by the University, meets with chambers of commerce, neighborhood associations, and other community organizations, advising with them as to the best means of utilizing whatever interests and impulses may be available at the time for furthering the general welfare.

## EDUCATION

In cooperation with the County Superintendents of Champaign, Piatt, and Iroquois Counties, the department of education held at the University during the week of August 2, 1915, a Demonstration Teachers' Institute. A report of this Institute has been published as a bulletin of the School of Education.

The Department of Education cooperated with the State School Board Association and the State City Superintendents' Association in a meeting of these Associations which was held at the University November 17, 1915, just prior to the High School Conference.

## HIGHWAY ENGINEERING

In January, 1914, the department of civil engineering offered a two-weeks course in highway engineering, primarily for the county superintendents of highways appointed under the Tice road law. One hundred ninety-one persons, including sixty-three of the sixty-six county superintendents then appointed, were enrolled. Addresses were made by members of the technical staff of the State Highway Commission, members of the staff of the department of civil engineering of the University, the state engineers of several adioining states, and other prominent engineers.

A similar but more advanced course was given in January, 1916. This course covered the design and construction of roads, pavements, culverts, and bridges of the different materials used in modern practise and adapted to conditions in Illinois. The lectures were illustrated by practical tests of materials and by inspection trips wherever possible. The attendance in 1916 was 103.

# COOPERATIVE EXTENSION SERVICE 

## University of Illinois and United States Department of Agriculture Under the Smith-Lever Act

Eugene Davenport, M.Agr., LL.D., Director of Agricultural Extension Service

## Agriculture

Walter Frederick Handschin, B.S., Vice-Director of Extension Service, State
$\quad$ Leader of County Aavisers
George Nelson Coffey, Ph.D., Assistant State Leader
James Henry Greene, M.S., State Leader in Junior Entension
Harold Clayton M Case, B.S., Assistant in Farm Management Demonstration

## Department Specialists

Agronomy<br>Clarence Chester Logan, B.S.<br>Animal Husbandry<br>Daniel Otis Barto, B.S.<br>William Herschel Smith, M.S.<br>Dairy Husbandry<br>William Truman Crandall, M.S.<br>William Wodin Yapp, M.S.<br>William Barder Nevens, B.S.<br>Horticulture<br>Bethel Stewart Pickett, M.S.<br>Alfred Joseph Gunderson, B.S.

County Advisers
County
William George Eckhardt, B.S.......................... De Kalb
John S. Collier, A.B.......................................... Kankakee
Roy C. Bishop, B.S.......................................... . . Livingston
Delos Lawrence James, B.S............................... McHenry

Edward B. Heaton, B.S.A................................. Du Page
Ernest Thompson Robbins, B.S..........................Tazewell
Frank Cravens Grannis, B.S.....................................Will

Charles Hubert Oathout, B.S........................Champaign
Albert M. TenEyck, M.S..............................Winnebago


Ira Sanford Broons, B.S....................................... LaSalle
Frank H. Demaree, M.S...........................................................

*A. M. Wilson.................................................. Hancock
David O. Thompson, B.S......................................... . . . 1 .
Frank D. Baldwin, B.S.......................................................

[^92]Under the provisions of the Smith-Lever Act, approved by the President of the United States on May 8, 1914, and the terms of its acceptance by the State of Illinois, the University becomes cooperatively responsible for a system of demonstration service designed to combine the results of scientific discovery with the most approved practise on the farms and in the households of the State.

A further cooperative relation has been established by the Department of Agriculture whereby the University undertakes to become jointly responsible for certain extension work which the department is conducting out of its own funds. This cooperative work consists of the following:
(1) Cooperation with county farm bureaus in the employment of agricultural advisers.
(2) Cooperation with local associations in home-economics demonstrations.
(3) Employment of extension specialists in agriculture and home economics as special advisers in the field.
(4) Cooperation with the United States Department of Agriculture in its extension activities:
a. In support of county advisory work
b. In farm management demonstrations
c. In junior extension

## Home Economics

Isabel Beyier, Ph.M., Vice-Director of Extension Service in Home Economics Mamie Bunch. B.S., State Leader in Home Economics Extension Olive Percival, B.S., Assistant in Home Economics Extension Fanny M Brooks, A.B., Assistant in Home Economics Extension Grace Linder, A.B., Assistant in Home Economics Extension Frederick Jackson Blackburn, B.S., Assistant in Home Economics Extension

The service in home economics may be classified as follows:

1. Correspondence.-Numerous requests come from individuals and clubs for help in solving some problem of preparing food, planning a house, or feeding a child, or in preparing topics for club study. All such requests receive careful attention.
2. Service for Organizations.-This includes demonstrations and addresses before farmers' institutes, federated or local clubs, parents' and teachers' associations, the State Fair School, or other groups of people. In 1914-15, 117 such organizations were served, reaching 11,905 people.
3. The School for Housekeepers.-This is held annually, at Urbana, during the last two weeks in January. It offers instruction in food, clothing, and shelter, and provides an opportunity for the discussion of some of the fundamental problems of home life and management. The attendance has increased during the past six years from 45 to 480 . No fees are charged in connection with this school.
4. Movable Schools.-The department of household science will, in so far as possible, provide instruction on request for a movable school in any community which is sufficiently interested to pay the local expenses (hire of hall, etc.) and the traveling and living expenses for the week of one or two instructors. During the year 1914-15, forty-seven movable schools were held in the State, with an enrollment aggregating 4289. Fifteen of these were two-instructor schools, and thirty-two were one-instructor schools.
5. Demonstration Car.-This car is equipped with a variety of appliances for the home and is accompanied by two demonstrators who explain the purpose of the equipment and demonstrate its use.

## Program for a Movable School with One Instructor

| Monday | $2: 00-4: 00$ | Lecture: Food and its functions. |
| :--- | :--- | :--- |
| Tuesday | $2: 00-4: 00$ | Exhibit showing relative values of foods. |
| Lecture: Foods containing nitrogen. |  |  |

## Single Lectures

Any one of the following list of subjects will be treated in a single lecture:
The care of food in the home.
The planning of meals.
The cost of living.
Infant foods and feeding.
Food for the child.
The composition and cooking of meals.
The use of vegetables as food.
The lunch basket.
Selection of textiles for the home.
Suggestions for home dressmaking-use of patterns.
Color and furnishing and their relation to interior decoration.
The well dressed woman.
Planning the farm house.
The bedroom and its furnishings.
The dining room and its appointments.
Household science and the home.
Essentials and non-essentials in good housekeeping.
How to improve our homes.
Appliances in the home.
System in housekeening.

## PART V <br> EXPERIMENT STATIONS AND OTHER SCIENTIFIC BUREAUS

# THE AGRICULTURAL EXPERIMENT STATION 

Edmund Janes James, Ph.D., LL.D., President of the University<br>\section*{STAFF*}

Eugene Davenport, M.Agr., LL.D., Director<br>Cyril George Hopkins, Ph.D., Vice-Director<br>Thomas Jonathan Burrill, Ph.D., LL.D., Professor of Botany, Emeritus<br>Stephen Alfred Forbes, Ph.D., Consulting Entomologist<br>$\dagger$ Donald McIntosh, V.S., Consulting Veterinarian<br>Henry Lewis Rietz, Ph.D., Statistician<br>Roy Hansen, B.S., Assistant in Nitrogen Fixation Research<br>Anna Cushman Glover, Secretary<br>Florence E Smith, Editorial Assistant

In Agronomy
Cyril George Hopkins, Ph.D., Chief, Agronomy and Chemistry
Jeremiah George Mosier, B.S., Chief, Soil Physics
Louie Henrie Smith, Ph.D., Chief, Plant Breeding
$\times$ Robert Stewart, Ph.D., Associate Chief, Soil Fertility
$\not$ William Leonidas Burlison, Ph.D., Associate Chief, Crop Production
Axel Ferdinand Gustafson, M.S., Assistant Chief, Soil Physics
Ernest Van Alstine, B.S., Assistant Chief, Soils Laboratory
Joseph Paul Aumer, B.S., Associate, Chemistry
Frederick Charles Bauer, B.S., Associate, Soil Fertility
Walter Byron Gernert, Ph.D., Associate, Plant Breeding
Sidney Viel Holt, B.S., Associate, Soil Physics
Ezekiel Edward Hoskins, B.S., Associate, Soil Fertility
Clarence Chester Logan, B.S., Associate, Soils Extension
Ward Hanson Sachs, B.S., Associate, Chemistry
Henry Clyde Wheeler, B.S., Associate, Soil Physics
John Ezra Whitchurch, B.S., Associate, Soil Fertility
Albert Lemuel Whiting, Ph.D., Associate, Soil Biology
Wilbur Roy Leighty, B.S., First Assistant, Chemistry
Frank William Garrett, B.S., First Assistant, Soil Fertility
Frederick Martin William Wascher, B.S., First Assistant, Soil Physics
Forrest Addison Fisher, B.S., First Assistant, Soil Physics
Orr Milton Allyn, B.S., First Assistant, Crop Production
Edward Harvey Walworth, B.S., Assistant, Crop Production
Edward Fritchoff Torgerson, B.S., Assistant, Soil Plhysics
Howard John Snider, B.S., Assistant, Soil Fertility
Warren Rippey Schoonover, B.S., Assistant, Soil Biology
Harry Charles Gilkerson, B.S., Assistant, Soil Fertility

[^93]George Edward Gentle, B.S., Assistant, Soil Physics
Harrison Fred Theodore Fahrnkopf, B.S., Assistant, Soil Fertility
Orland I Ellis, B.S., Assistant, Soil Physics
Robert William Dickenson, B.S., First Assistaitt, Soil Physics
Henry August de Werff, B.S., Assistant, Soil Physics
Clinton B Clevenger, M.S., Assistant, Chemistry
Frank Archibald Wyatt, Ph.D., Assistant, Soil Fertility
Arthur Maxwell Brunson, B.S., Assistant, Plant Breeding
Friedel Chapin Richey, B.S., Assistant, Soil Physics
Alfred Thorpe Morison, B.S., Assistant, Crop Production
In Animal Husbandry
Herbert Windsor Mumpord, B.S., Chief
Harry Sands Grindley, D.Sc., Chief, Animal Nutrition
Walter Castella Coffey, M.S., Chief, Sheep Husbandry
John A Detlefsen, D.Sc., Assistant Chief, Genetics
Henry Perly Rusk, M.S.A., Assistant Chief, Beef Cattle
James Lloyd Edmonds, B.S., Assistant Chicf, Horse Husbandry
Walter Frederick Handschin, B.S., Assistant Chief, Farm Management
Walter Edward Joseph, Ph.D., Associate, Animal Husbandry
Sleeter Bull, M.S., Associate, Animal Nutrition
Harold Hanson Mitchell, Ph.D., Associate, Animal Nutrition
Willinm Herschel Smith, M.S., Associate, Animal Husbandry Extension
Wilbur Jerome Carmichael, B.S., First Assistant, Animal Husbandry
James Burron Andrews, B.S., First Assistant, Animal Husbandry
Elmer Roberts, B.S., First Assistant, Genetics
Charles Ivan Newlin, M.S., First Assistant, Animal Husbandry
Roscoe Raynond Snapp, B.S., First Assistant, Animal Husbandry
Mary Helen Keith, B.S., A.M., Assistant, Animal Nutrition
Claude Harper, B.S., Assistant, Animal Husbandry
Roy Harold Wilcox, B.S., Assistant, Animal Husbandry
James Wilbur Whisenand, B.S., Assistant, Animal Husbandry
Eard Kirkwood Augustus, B.S., Assistant, Animal Husbandry
Maynard Elmer Slater, B.S., Assistant, Animal Nutrition
Joseph Rossiter Ziesenheim, B.S., Assistant, Animal Nutrition
John Benjamin Rice, B.S., Assistant, Animal Husbandry
Lawrence Emerson Thorne, B.S., Assistant, Agricultural Statistics and Genetics
Whliam Garfield Kammlade, B.S., Assistant, Animal Husbandry
In Dairy Husbandry
Harry Alexis Harding, Ph.D., Chief, Dairy Bacteriology
*Wilber Join Fraser, M.S., Chief, Dairy Farming
Nelson William Hepburn, M.S., Assistant Chief, Dairy Manufactures
Martin John Prucha, Ph.D., Assistant Chief, Dairy Bacteriology
LeRoy Lang, M.S., Associate, Dairy Manufactures
William Truman Crandall, M.S., Associate, Milk Production
Ray Stillman Hulce, M.S., Associate, Milk Production
Harrison August Ruehe, B.S., Associate, Dairy Manufactures
Edward Frederick Kohmann, Ph.D., Associate, Dairy Chemistry

[^94]Frank Ashmore Pearson, B.S.A., First Assistant, Dairy Husbandry William Wodin Yapp, M.S., First Assistant, Dairy Husbandry Harry Montgomery Weeter, A.B., Assistant, Dairy Husbandry Frank Turner, B.S., Assistant, Dairy Husbandry William Barbour Nevens, B.S., Assistant, Dairy Husbandry Paul William Allen, M.S., Assistant, Dairy Bacteriology Harold Kirk Rulison, B.S., Assistant, Dairy Husbandry William Harold Chambers, B.S., Assistant, Dairy Bacteriology Leighton J True, B.S., Assistant, Dairy Manufactures Harold Gosser, B.S., Assistant, Dairy Husbandry

In Horticulture
Joseph Cullen Blair, M.S.A., Chief, Horticulture
Charles Spencer Crandall, M.S., Chief, Plant Breeding
*John Whliam Lloyd, M.S., Chief, Olericulture
Herman Bernard Dorner, M.S., Assistant Chief, Floriculture
Bethel Stewart Pickett, M.S., Assistant Chief, Pomology
Ernest Winfield Bailey, M.S., Assistant Chief, Plant Breeding
Oscar S Watikins, B.S., Associate, Horticultural Chemistry
Warren Albert Ruth, A.M., Associate, Horticultural Chemistry
Charles Elmer Durst, M.S., Associate, Olericulture
Simeon James Bole. A.M., Associate, Pontology
John Joseph Gardner, M.S., Associate, Pomology
Ira Dent Allison, B.S., Associate, Horticulture
Fred Weaver Muncie, Ph.D., Associate, Floricultural Chemistry
George Leo Peltier, Ph.D., Associate, Floricultural Pathology
Alpred Joseph Gunderson, B.S., First Assistant, Pomology
William Sanford Brock, B.S., A.B., Assistant, Pomology
William King Palmer, B.S., First Assistant, Floriculture
James Hutchinson, Assistant, Floriculture
Howard Dexter Brown, B.S., Assistant, Olericulture
August George Hecht, B.S., Assistant, Floriculture
Duane Taylor Englis, A.M., Assistant, Floricultural Chemistry
Edward George Lauterbach, B.S., Assistant, Floricultural Pathology
Edward Albert Scewing, B.S., Assistant, Plant Breeding
Julia Alberta Harper, A.B., Editorial Assistant
By an act approved March 2, 1887, the national government appropriated $\$ 15,000$ a year to each state for the purpose of establishing and maintaining, in connection with the colleges founded upon the congressional act of 1862, agricultural experiment stations, "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 applications of agricultural science." Under this provision the Agricultural Experiment Station of the University of Illinois was founded in 1888 and placed under the direction of the Trustees of the University; a part of the University farm, with buildings, was assigned for its use.

The federal grant has since been increased to $\$ 30,000$ a year. This is supplemented by state appropriations which make an aggregate fund of nearly a quarter of a million dollars devoted wholly to research in agriculture.

[^95]Investigations are conducted in the growing and marketing of orchard fruits, the methods of production of meats and of dairy goods, the principles of animal breeding and of nutrition, and the improvement and the economic production of crops. All the principal types of soil of the State are being studied in the laboratory under glass and in the field. A soil survey is in progress which when finished will map and describe the soil of every farm of the State down to an area of ten acres. Between forty and fifty fields and orchards are operated in various portions of the State for the study of local problems, and assistants are constantly on the road to conduct experiments or to give instruction to producer or consumer. The results of investigation are published in bulletins, which are issued in editions of 40,000 and distributed free of charge.

Much of this work is of interest to students, especially of graduate grade, and it is freely available for this purpose, so far as is consistent with the interests of the Station.

# THE ENGINEERING EXPERIMENT STATION 

Edmund Janes James, Ph.D., LL.D., President

STAFF
Willam Freeman Myrick Goss, M.S., D.Eng., Director Clarence Stanley Sale, B.S., Assistant to the Director the heads of the departments of the college of engineering

## Special Investigators

Herbert Fisher Moore, M.M.E., Research Professor of Engineering Materials in the Department of Theoretical and Applied Mechanics
Samull Wilson Parr, M.S., Professor of Applied Chemisiry in the Department of Chemistry
Wilims Appleford Slater, M.S., C.E., Research Assistant Professor of Applied Mechanics in the Department of Theoretical and Applied Mechanics
*Stephen Osgood Andros, A.B., B.S., E.M., Assistant Professor of Mining Research in the Department of Mining Engineering
Trygee D Yensen, M.S., E.E., Research Assistant Professor of Elcctrical Engineering
Alonzo Plumsted Kratz, M.S., Research Associate in the Department of Mechanical Engineering
Harrison Frederick Gonnerman, M.S., First Assistant in the Department of Theoretical and Applied Mechanics
Leroy Alonzo Wilson, M.E., M.M.E., First Assistant in the Department of Mechanical Engineering
Otro Sternoff Beyer, Jr., M.E., First Assistant in the Department of Railway Engineering
Harold Houghton Dunn, M.S., Assistant in the Department of Railway Engineering

## Research Fellows

Jasper Owen Draffin, B.S., Theoretical and Applied Mechanics
Walter Arthur Gatward, B.S., Electrical Engineering
Lester Clyde Lichty, B.Sc., Mechanical Engineering
Willam Penn Lurens, A.B., Mechanical Engineering
Everett Gllifam Young, B.S., Railway Engineering
Harry Rheinhardt Fritz, E.E., Electrical Engineering
Frank Allen Kirkpatrick, b.S., Ceramic Engineering
Louis J Larson, B.S., C.E., Theoretical and Applied Mechanics
William Asbury Manuel, A.B., M.S., Chemistry
Louis Aubrey Mylius, B.S., E.M., Mining Engineering
Stetfan Fujita Tanabe, B.S., M.S., Physics
Benito Rene Ordonez, B.S., Railway Engineering

[^96]Richards Laurence Templin, B.S., Theoretical and Applied Mechanics Camillo Weiss, Graduate of Kaiserl. Koenigl. Teclnnische Hochschule, Vienna, Civil Engineering
The Engineering Experiment Station was established by action of the Board of Trustees, December 8, 1903. Its purposes are the stimulation and elevation of engineering education, and the study of problems of special importance to professional engineers and to the manufacturing, railway, mining, and industrial interests of the State and the country.

The control of the Station is vested in the heads of the several departments of the College of Engineering. These constitute the Station Staff, and, with the Director, determine the character and extent of the investigations to be undertaken.

Up to the present time eighty-one bulletins of value to engineering science have been published. The experiments have related chiefly to tests of highspeed tool steels; the resistance of tubes to collapse; the holding power of railroad spikes; the effect of scale on heat transmission; roof trusses; base and bearing plates in columns and beams; stresses in chain links; extensions of the Dewey decimal system of classification; tests of electric lamps; lighting country homes by private electric plants; street lighting; high steam pressures in locomotive service; rate of formation of carbon monoxide in gas producers; fuel tests; the weathering of coal and the spontaneous combustion of coal; thermal conductivity of fireclay; heat transmissions; freight train resistance; tests of a suction gas producer; tests of concrete; reinforced concrete beams and columns; tests of cast-iron and reinforced concrete culvert pipe; tests of brick columns and terra cotta block columns; tests of timber beams; tests of built-up columns under load; tests to determine the resistance to flow through locomotive water columns; tests of nickel-steel riveted joints; strength of rolled zinc; inductance of coils; mechanical stresses in transmission lines; starting currents of transformers; superheated steam in locomotive service; a new analysis of the cylinder performance of reciprocating engines; effects of cold weather upon train resistance and tonnage rating; coking of coal at low temperatures; characteristics and limitations of the series transformer; electron theory of magnetism; entropy-temperature and transmission diagrams for air; tests of reinforced concrete buildings under load; the steam consumption of locomotive engines from indicator diagrams; properties of saturated and superheated ammonia vapor; reinforced concrete wall footings and column footings; strength of I -beams in flexure; coal washing in Illinois; mortar-making qualities of Illinois sands; bond between concrete and steel; magnetic and other properties of electrolytic iron melted in vacuo; acoustics of auditoriums; tractive resistance of a 28 -ton electric car; thermal properties of steam; analysis of coal with phenol as solvent; the effect of boron upon the magnetic and other properties of electrolytic iron melted in vacuo; a study of boiler losses; the coking of coal at low temperatures with special reference to the properties and composition of the products; wind stresses in the steel frames of office buildings; and influence of temperature on the strength of concrete.

# THE STATE LABORATORY OF NATURAL HISTORY 

Edmund Janes James, Ph.D., LL.D., President

STAFF

Stephen Alfred Forbes, Ph.D., LL.D., Director Charles Arthur Hart, Systematic Entomologist Robert Earl Richardson, A.M., Biologist, in charge of Biological Station Victor Ernest Shelford, Ph.D., Biologist, in charge of Research Laboratories Mary Jane Snyder, Secretary
Charles Edwin Janvrin, Ph.B., B.L.S., Librarian
In 1885 the General Assembly passed an act transferring the State Laboratory of Natural History from the Illinois State Normal University to the University of Illinois. This laboratory was created for the purpose of making a natural history survey of the State, the results of which should be published in a series of bulletins and reports; and for the allied purpose of furnishing specimens illustrative of the flora and fauna of the State to the public schools and to the State museum. For these purposes direct appropriations are made by the legislature from session to session. Material of all classes has been collected in all parts of the State, field observations and experiments have been conducted, extending over many years, and twelve volumes have been published in the form of bulletins and final reports.

The most important problem upon which the work of the survey is at present concentrated is the effect of drainage operations, sewage contaminations, and other results of industrial occupancy upon the general system of life in our principal rivers.

# THE STATE ENTOMOLOGIST'S OFFICE 

## STAFF

Stephen Alfred Forbes, Ph.D., LL.D., State Entomologist
Charles Arthur Hart, Systematic Entomologist
Wesley Pillsbury Flint, Assistant for Central Illinois
Lindley Malcolm Smith, B.S., Assistant for Southern Illinois
David Kent MacMillan, B.S., Assistant for Northern Illinois
Pressley Adams Glenn, A.M., Chief Horticultural Inspector
John Russell Malloch, Illustrator and Custodian
The work of the State Entomologist's Office has been done at the University of Ilinois since January, 1885; by legislative enactment in 1899 it was permanently established at the University, the Trustees of which are required by that act to provide for the Entomologist and his assistants such office and laboratory rooms as may be necessary to the performance of their duties.

It is the duty of this officer to investigate all insects dangerous to any valuable property or dangerous to the public health, and to conduct experiments for the control of injuries to persons or property by insects, publishing the results of his researches biennially in his official report. He is required also to inspect and certify annually all Illinois nurseries and all importations of nursery stock, and to maintain a general supervision of the horticultural property of the State with respect to its infestation by dangerous insects and its infection with contagious plant disease.

Twenty-eight reports have now been published by the Entomologist, fifteen of them since the transfer of his office to the University.

# THE STATE WATER SURVEY 

Edmund Janes James, Ph.D., Ll.D., President<br>STAFF

Edward Bartow, Ph.D., Director
Samuel Wilson Parr, M.S., Consulting Chemist
Arthur Newell Talbot, C.E., Consulting Engineer
Paul Hansen, B.S., Engineer
Wilfred Francis Langelier, M.S., Inspector
*Harry Peach Corson, Ph.D., Chemist and Bacteriologist
*Ralph Hilscher, B.S., Assistant Engineer
Floyd William Mohlman, M.S., Assistant Chemist
Harry Foster Ferguson, B.S., Assistant Engineer
Maurice Charles SjoBlom, B.S., Engineering Assistant
John Francis Schnellbach, B.S., Engineering Assistant
Arthur Norton Bennett, M.S., Assistant Chemist
William Durrell Hatfield, B.S., Assistant Bacteriologist
A chemical survey of the waters of the State was begun in the latter part of September, 1895. In 1897 the legislature authorized the continuance of the work and directed the Trustees of the University to establish a chemical and biological survey of the waters of the State. In 1911 the legislature made an increased appropriation and imposed additional duties on the State Water Survey, authorizing it to employ field men to inspect water supplies and watersheds, and to make, free of charge, sanitary examinations of water for citizens of Illinois. The Survey has collected data concerning the most of the water supplies and sewerage systems, and many water-sheds, making chemical and bacteriological examinations to demonstrate the sanitary condition of water supplies and streams, and to determine standards of purity for drinking waters. The Survey advises municipal authorities how best to obtain and conserve an adequate supply of pure water for domestic and manufacturing purposes.

The Survey is a division of the department of chemistry of the University of Illinois, and special laboratories are equipped in the Chemistry Building for conducting the work. The engineering division is located at present in Engineering Hall, but is to be transferred to the Chemistry Building early in 1916.

[^97]
# THE STATE GEOLOGICAL SURVEY 

## COMMISSION

Governor Edward F Dunne, Chairman<br>Professor T. C. Chamberlin, Ph.D., D.Sc., LL.D., Vice-Chairman<br>President Edmund Janes James, Ph.D., LL.D., Secretary<br>\section*{STAFF}

Frank Walbridge DeWolf, B.S., Director, Urbana
Edward Bartow, Ph.D., Consulting Chemist in Water Analysis, University of Illinois, Urbana
Ulysses Sherman Grant, Ph.D., Consulting Geologist in Lead and Zinc Studies, Northwestern University, Evanston
Samuel Wilson Parr, M.S., Consulting Chemist in Coal Investigations, University of Illinois, Urbana
Charles Wesley Rolfe, M.S., Consulting Geologist in Clay Investigations, University of Illinois, Urbana
Albert Victor Bleininger, B.S., Consulting Ceramist, University of Illinois, Urbana
Rollin D Salisbury, A.M., LL.D., Consulting Geologist in Preparation of Educational Series, University of Chicago, Chicago
Fred Hall Kay, B.S., Assistant State Geologist, Urbana
Thomas Edmund Savage, Ph.D., Geologist, University of Illinois, Urbana
Stuart Weller, Ph.D., Geologist, University of Chicago, Chicago
Gilbert H Cady, A.M., Geologist, Urbana
Helen Jeanne Skewes, A.B., Assistant Geologist, Urbana
E Wesley Shaw, B.S., Assistant Geologist in Cooperative Surveys, Urbana, Ill., and Washington, D. C.
Wallace Lee, Assistant Geologist in Cooperative Surveys, Urbana, IIl., and Washington, D. C.
Walter Stephen Nelson, Engineering Draftsman, Urbana
Justa M Lindgren, A.M., Chemist, Urbana
William Henry Herron, B.S., Geographer in charge of Topographical Surveys in Illinois, Urbana, Ill., and Washington, D. C.
The Forty-fourth General Assembly passed an act, in force July 1, 1905, providing for the establishment at the University of Illinois of the State Geological Survey. The Survey is under the control of a Commission, of which the President of the University is an ex officio member.

The purpose of the Survey is primarily the study and exploration of the mineral resources of Illinois. Field parties are organized for the investigation of oil, clay, coal, stone, artesian water, cement materials, and road materials, and for general scientific investigations. The Survey is charged also with the duty of making a complete topographical and geological survey of the State. Topographical and geological surveys are now being carried on in cooperation
with the United States Geological Survey. These will lead to the publication of a series of bulletins and maps, eventually covering the entire State.

The Forty-fifth General Assembly further charged the Commission with the duty of making surveys and studies of lands subject to overflow, with a view to their reclamation. Work has been carried on in cooperation with the Rivers and Lakes Commission, the United States Geological Survey, and the United States Department of Agriculture, along the Sangamon, Kaskaskia, Big Muddy, Little Wabash, Embarrass, Spoon, and Saline rivers. Reports have been issued on the Little Wabash, Kaskaskia, and Embarrass.

The laboratory work is done in connection with various department laboratories of the University. The equipment includes a working library, maps, and a growing collection, illustrating the geological and the economical resources of the State. Twenty-six bulletins and a large number of maps have been published. Many temporary assistants besides the regular corps are employed each summer.

Under an agreement between the State Geological Survey and the Engineering Experiment Station on the one hand, and the United States Bureau of Mines on the other, a branch station has been located at Urbana for a cooperative investigation of the Illinois coal mining industry. The Forty-seventh General Assembly made appropriations to carry on the work for two years, and the Forty-eighth and Forty-ninth General Assemblies repeated the appropriations for equal periods. See page 437.

# THE BOARD OF EXAMINERS IN ACCOUNTANCY 

Edmund Janes James, Ph.D., LL.D., President<br>BOARD OF EXAMINERS

James Hall, C.P.A., Chairman, Chicago
Clarence Martin DeLany, A.B., C.P.A., Secretary, Chicago
Nathan William MacChesney, A.B., Ll.B., Chicago

## UNIVERSITY COMMITTEE

David Kinley, Ph.D., LL.D., Chairman
Cbarles Maxwell McConn, A.M., Secretary
Edward Harris Decker, A.B., LL.B.
By a law passed in 1903 the State University is made an examining board of applicants for certificates as certified public accountants. To carry out the provisions of the law the Board of Trustees have appointed a board of three examiners to prepare, conduct, and grade examinations, and a University committee to conduct the routine work. Under the law one examination must be held each year in May, but examinations have been held also in November or December of each year in which there were a sufficient number of applicants. All the examinations thus far given have been held in the city of Chicago.

Applicants for the certificate of Certified Public Accountant are required to pass examinations in the theory of accounts, commercial law, auditing, and practical accounting.

The Illinois Society of Certified Public Accountants offers annually a gold medal and a silver medal to be awarded to the persons passing the C. P. A. examination with the highest total marking in all subjects and with the second highest total marking in all subjects respectively.

# CO-OPERATIVE INVESTIGATION OF ILLINOIS COAL PROBLEMS 

Edmund Janes James, Ph.D., LL.D., President<br>STAFF<br>Engineering Experiment Station<br>William Freeman Myrick Goss, M.S., D.Eng., Director<br>Harry Harkness Stoek, B.S., E.M., Professor of Mining Engineering<br>*Stephen Osgood Andros, A.B., B.S., E.M., Assistant Professor of Mining Research<br>Special Mining Engineers and Field Samplers

## State Geological Survey

Frank Walbridge DeWolf, B.S., Director Fred Hall Kay, B.S., Assistant State Geologist Gilbert Haven Cady, A.B., M.S., Geologist Thomas Edmund Savage, M.S., Ph.D., Geologist
Walter Stephen Nelson, Engineer

## United States Bureau of Mines

Van H Manning, A.B., Director
George S Rice, E.M., Chief Mining Engineer, Pittsburgh, Pa.
Howard I Smith, B.S., (Min.) District Mining Engineer
James Russell Fleming, E.M., Assistant Mining Engineer, studying the use of explosives
Robert Jasper Hamon, B.S., Junior Chemist
Horace Chamberlain Porter, M.S., Ph.D., Chemist, Pittsburgh, Pa.
The Engineering Experiment Station through the department of mining
engineering of the University of Illinois, the State Geological Survey, and the United States Bureau of Mines are cooperating in the investigation of some of the problems connected with the mining of coal in the State of Illinois, under authority granted by the Forty-seventh General Assembly.

This cooperative work is constructive as well as statistical, based upon accurate data and taking account of all existing conditions, to enable the operators and miners of the State to produce coal more safely, more cheaply, and with less waste.

A staff of trained mining engineers, geologists, and chemists has been placed at the disposal of the coal industry of Illinois.

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## PART VI <br> LIST OF STUDENTS, ETC. <br> (1915-1916)

## LIST OF STUDENTS

## THE GRADUATE SCHOOL

Albrecht, William Albert-Agronomy
*A.B., B.S., 1911, 1914
Alden, Earle Stanley-English
A.B. (Colorado Coll.) 1909
A.M. (Harvard Univ.) 1913

Alexander, John Alva-Education
(Work for A.B. completed)
Allen, Alice Alexandria-Psychology
(Work for A.B. completed)
Allen, Louis-French
A.B., 1913

Allen, Otho William-French
A.B., 1915

Allen, Paul William-Dairy Bacteriology
B.S. (St. Lawrence Univ.) 1910
M.S. (Cornell Univ.) 1914

Alssid, Lazare B-French A.B. (Allegheny Coll.) 1915

Alvord, Idress Head-History (Howard-Payne Coll.)
Amsterdam, Harry-Philosophy
A.B. (Lake Forest Coll.) 1915

Anderson, Andrew John Albert-Tbeoretical and Applied Mechanics
B.S.M.E. (Lewis Inst.) 1913

Andrews, James Burton-Animal Husbandry B.S., 1913

Andros,'Stephen Osgood-Mining Engineering A.B. (Bowdoin Coll.) 1897
B.S., E.M. (Michigan Coll. of Mines) 1902, 1903

Anthony, Mamie Elizabetlh-Education
A.B,, A.M. (Greenville Coll.) 1907, 1911

Asher, Henry Tourner-English
A.B. (Indiana Univ.) 1914

Applegate, Albert Angelo-English A.B., 1914

Atwell, Clarence Allen-Electrical Engineering B.S. in EE. (Univ. of Nebraska) 1914
\$Atwood, Levi Patten-Civil Engineering B.S., 1894

Augustus, Earl Kirkwood-Animal Husbandry B.S., 1914

Babbitt,'Harold Eaton-Municipal and Sanitary Engineering B.S. (Massachusetts Inst. of Tech.) 1911

Bailey, Ernest Winfield-Genetics
B.S. (Massachusetts Agrl. Coll.) 1908

Bailey, LaForce-Architecture B.S., 1915

Baker, James Chamberlain-Philosophy A.B. (Illinois Wesleyan Univ.) 1898 S.T.B. (Boston Univ.) 1905

Baldwin, Francis Marck-Zoology
A.B., A.M. (Clark Coll.) 1906, 1907

Ball, Theodore Rolly-Chemistry B.S. (Drake Univ.) 1908

Bates, Lew Wallace-Education B.S. (Hiram Coll.) 1913

Bauer, Frederick Charles-Agronomy B.S., 1909

Baumgartner, Rachel Ann-Zoology A.B. (Univ. of Kansas) 1912

Bayley, Paul Levern-Physics A.B. (Univ. of Arkansas) 1913

Beach, Walter Spurgeon-Plant Pathology B.S. (Minnesota Coll. of Agr.) 1914 M.S. (Mich. Agr. Coll.) 1915

Beattie, Harry James-Chemistry A.B., A.M.(Univ. of Denver) 1914, 1915

## Champaign

Los Angeles, California
Urbana
Urbana
Clinton
Clinton

Urbana
Pittsburgh, Pennsylvania
Urbana
Russia
Chicago
Urbana

Champaign
Greenville
Bellaire, Ohio
$\mathrm{SS} \dagger$ Atlanta
Urbana
Madison, Wisconsin
Urbana
Urbana
Worcester, Massachusetts
Wilmington
Urbana
West Upton, Massachusetts
Des Moines, Iowa
SS Hebron, Ohio
Champaign
Halstead, Kansas
Ft. Smith, Arkansas

Hutchinsan, Minnesota
Denver, Colorado

[^99]Beatty, Albert James-Education
B.S. (N. Illinois Normal School) 1894
A.B. (Kno.r Coll.) 1900

Beck, Clyde Byron-English
A.B. (Earlham Coll.) 1906
-Beekley, John Sherman-Mathematics
A.B. (Miani Uniz.) 1915

Bennett, Arthur Norton-Chemistry
B.S., M.S., 1907, 1915

Berninger, Harriett Josephine-Education A.B., 1915

Biegler, Philip Sheridan-Electrical Engineering
B.S. (Univ. of Wisconsin) 1905
'Billings, Ralph-Mathematics
A.B. (Yanktan Coll.) 1914

Bissell, Don Warren-Organic Chemistry
B.S. (New Hampshire Coll.) 1914

Bixby, Madeline-Chemistry
(Work for B.S. completed, Tufts Coll., 1916)
Bohn. John Edward-Pomology
B.S. (Univ. of Missouri) 1912

Bole, Simeon James-Edrication
A.B. (Uniz. of Michigan) 1906

Bond, Ethel-Sociology
A.E. B.L.S., 1907,1908

Booth, Harry Tyler-Physics

$$
\text { B.S.(Carleton Coll.) } 1915
$$

- Borden, Raymond Franklin-Mathematics

Ph.B., A.M. (Brawn Univ.) 1914, 1915
Botteron, George Washington-Education A.B. (Defiance Coll.) 1913

Boughton, Thonas Harris-Pathology
M.S. (Univ. of Chicago) 1904
M.D. (Rusi: Medical Coll.) 1906

Bowden, Robert Douglas-Political Science
A.B. (State Coll. of Oklahoma) 1913

Bowlar. Felix Fielding--English
A.B. (Howard Univ.) 1906
\$Boyle, Clarence Jr.-Mechanical Engineering B.S., 1910

Brady, St. Elmo-Chemistry
A.B. (Fisk Univ.) 1908

Braham, Joseph Marvin-Physical Chemistry
B.S. (Unĩ. of Idaho) 1914

Braley, Silas Alonzo-Industrial Chemistry A.B. (Morningside Coll.) 1913

Breese, Carl Shipman-Electrical Engineering
B.S. (Kansas State Agrl. Coll.) 1912

Erill, Jesse Hugo-Education

$$
\text { A.B. (Miami liniv.) } 1914
$$

- Brinkerhoff, Verne William-Mathematics (Work for A.B. conipleted)
Brock, William Sanford-Horticulture A.B. (Waynesaille Coll.) 1910 B.S., 1915

Brown, Enid Ware-English A.B. (Olio Wesleyan Univ.) 1910

Brown, Howard Dexter-Horticulture B.S.. 1914

Brown, John Bernis-Chemistry B.S., 1915

Brown, Pembroke Holcomb-Economics

$$
\text { A.B., } 1915
$$

Bruce, Villiam Robert-Organic Chemistry A.B. (Lawrence Coll.) 1915

Bruner, Mary Viola-Latin

$$
\text { A.B., } 1913
$$

Brunson, Arthur Maxwell-Agronomy B.S., 1913

Brush, Elizabeth Parnlam-History A.B. (Smith Coll.) 1909 A.M., 1912

Buell, Mary Van Renssalaer-Organic Chemistry A.B., A.M. (Univ. of Wisconsin) 1914, 1915

Bull, Sleeter-Arimal Husbandry B.S. (Ohio State Univ.) 1910 M.S. (Pennsylvania State Coll.) 1911

Burgeleit, Walter Henry-Physics (Technical Univ, Dresden, Germany)
Callen, Alfred Copeland-Mining Engineering B.S., II.S. (Lchigh Univ.) 1909, 1911

Carmichael, Wilbur Jerome-Animal Husbandry B.S., 1913

Urbana
Richmond, Indiana
West Chester, Ohio
Chicago
(SS) Mt. Carmel
(SS) Urbana
SS Geddes, South Dakota
Keene, New Hampshirs
Nortll Andover, Mass.
St. Lowis, Missouri
(SS) Champaign
Champaign
Stewartsville, Minnesota
Melville, Rhode Island
SS New Haven, Indiana

Ei'anston
SS Sedalia, Kentucky
Cairo
Chicago
Louisville, Kentucky
Spokane, Washington
Cherokee, Iowa
Manhattan, Kansas
SS Camden, Ohio
Rock Island

Waynesburg, Pennsylvania
Jeurett, Ohio
Tiffn, Ohio
Rock Falls
Rockford
Appleton, Wisconsin
Mattoon
Urbana

Carbondale
Madison, Wisconsin

Urbana
SS Springfield
(SS)

Carroll, Daniel Bernard-Political Science
Carter, Álice-History
A.B., 1915

Casserly, Joseph Bernard-Agronomy B.S., 1915

Chambers, William Harold-Bacteriology B.S., 1915

Chandler, Edwin Marion Augustus-Organic Chemistry A.B. (Howard Univ.) 1913 A.M. (Clark Univ.) 1914

Charlton, Ernest Edward-Industrial Chemistry A.B. (Grinnell Coll.) 1913

Checkley, Joseph Harvey-Economics B.S., 1913

Chen, Lan-sung-Railway Administration (Work for A.B. completed)
Clark, Fred Emerson-Economics A.B. (Albion Coll.) 1912

Clark, Helen-Fellow in Psychology A.B., (Vassar Coll.) 1913

Clarke, Philena-English
A.B. (Earlham Coll.) 1911

Clayberg, Harold Dudley-Botany A.B., M.S., 1913, 1914

Clevenger, Charles Henry-Mathematics B.S. (Ohic State Univ.) 1902 M.S. (Univ. of Chicago) 1910

Clevenger, Clinton B.-Agronomy B.S., M.S. (Ohio State Univ.)1912, 1913

Cobb, Margaret Vara-Education A.B. (Radcliffe Coll.) 1910
$\ddagger$ Coghlan, Byron Kemp-Civil Engineering B.S., 1908

Colby, Arthur Samuel-Horticulture
B.S. (New Hampshire Coll.) 1911

Colcord, Mary Elizabeth-Latin A.B. (Greenville Coll.) 1910

Collings, Gilbert Hooper-Agronomy B.S. (Virginia Poly. Inst.) 1915

Collom, Mary Elizabeth-Household Science A.B., 1915

Conel, Jesse LeRoy-Zoology
A.B. (Millikin Univ.) 1912

Cook, Willard Oliver-Organic Chemistry A.B. (Wabash Coll.) 1914

Cooke, Delmar Gross-Fellow in English A.B., 1912

Cooper, Arthur Reuhen-Fellow in Zoology A.B. (Victoria Coll., Toronto Univ.) 1910 A.M. (Univ. Coll., Toronto Univ.) 1911

Copley, Beatrice Virginia-English A.B., 1915

Corzine, Bruce Herbert-Education (Work for A.B. completed)
Cox, Samuel Francis-Chemistry A.B., A.M. (Central Coll.) 1913, 1914

Crawford, Frederick North-Chemistry B.S. (Wesleyan Univ.) 1908

Crawford, James Alfred-Horticulture B.S. (New York State Coll. of Agr.) 1915

Crooker, Sylvan Jay-Fellow in Physics B.S. (Carleton Coll.) 1914

Cruzan, Myrtle Amy-English A.B., 1914

Cullum, William Henry-Scholar in Mathematics A.B. (Albion Coll.) 1915

Dalbey, Nora Elizabeth-Plant Physiology A.B., A.M. (Univ. of Kansas) 1913, 1914

Danielson, Ralph Raymond-Ceramics B.S., 1914

Darrah. Juanita Elizabeth-Chemistry A.B., 1913

Davidson, Carl Nathan-Chemistry A.B.' (Lawrence Coll.) 1914

Davidson, Levette Jay-Scholar in English A.B. (Eureka Coll.) 1915

Davis, John Williams--Electrical Engineering M.E. (Cornell Univ.) 1910

Davis, Mary Belle-Mathematics A.B., 1901

Davis, Raymond Earl-Theoretical and Applied Mechanics B.S. (Miami Univ.) 1911

## Pittsfield

Evanston

## Champaign

## Evanston

Washington, D. C.
Cherokee, Iowa
Mattoon
Peking, China
Albion, Michigan
Cortland, New York
SS Noblesville, Indiana
Oak Park

Urbana
Fletcher, Ohio
Falls Church, Virginia
College Station, Texas
Tilton, New Hampshire
Greenville
Creme, Virginia
Urbana
Decatur
New Salem, Indiana
Piper City
Ontaria, Canada
Joliet
Charleston
Shoole, Indiana
Middletown, Connecticut
Buffalo, Ncw York
Fairmont, Minnesota
Mattoon
Detroit, Michigan
Sterling, Kansas
Chicago
Champaign
Manston, Wisconsin
Eureka
Petersburg, Virginia
Urbana
Urbana

Davis, Robert Lesley-Botany A.B. (Univ. of Nebraska) 1914

Dawson, Eric Allen-French
B.S., A.M. (Univ. of Mississippi) 1908, 1914

Debel, Niels Henricksen-Fellow in Political Science
A.B., A.M. (Univ. of Nebraska) 1913, 1914

Dean, Paul Marshall-Organic Chemistry
A.B., A.M. (Uniz. of Colorado) 1908, 1911

DeLeuw, Charles Edmund-Civil Engineering B.S., 1912

Dent, John Adlum-Mechanical Engineering M.E. (Lehigh Uniu') 1905

Dickey, Lloyd Blackwell-Zoology A.B. (Fargo Coll.) 1915

Dickerson, Ira William-Electrical Engineering B.S., 1909

Dighton, Andrew Jackson-English
A.B. (Uniz. of Michisa:) 1909

Dixon. Clifrord Harrison-History
(Work for A.B. completed, Illinois College, 1916)
Dixon, Raymond Ephraim-English

$$
A \text {. (Uniz. of Wisconsins } 1909
$$

(Work fo- A.M. completed)
Doisey, Edward Adelbert-Physiological Chemistry A.B., 1914

Dole, Lillian Dora-Scholar in Zoology A.B., 1915
\#Doyle, Edgar Dwight-Electrical Engineering B.S., 1910

Drafin, Jasper Owen-Fellow in Theoretical and Applied Mechanics
B.S. (Uniz'. of Vermont) 1913

Dreesen, William Henry-Economics
A.B. (Grcenzille Coll.) 1907

Dryden, Dean Daisy-History
A.B. (Unir. of Kcrsas) 1905

DuRois. Henry Mathusaiem-Paleontology
A.B., A.M., (Indiana Uniz.) 1913, 1914

Durst, Charles Elmer-Genetics B.S., M.S.. 1909, 1912

Dwyer. Ellen Frances-German
(Work for A.B. completed)
Dyar. Hubert Lee-Education
A.B. (Ewreka Coll.) 1905

Eastman, Otis Miles-Education A.B., 1909

Ebersol., Elmer Tryon-Agronomy A.B., 1902

Eckstein, Henry Charles-Chemistry (Work for A.B. completed)
Edwards, M. Reece-Agronomy B.S., Pd.B. (Valpcraiso Uniz.) 1909 (Work for B.S. completed)
Elliott, John Asbury-Fellow in Plant Pathology A.B. (Fairmont Coll.) 1913
A.M. (Uniz. of Konsas) 1914
$\ddagger$ Enger. Arthur Ludwig-Civil Engineering B.S., 1911

Engle, Edgar Wallace-Fellow in Chemistry B.S. (Drury Coll.) 1912 M.S., 1914

Engle, Jeannette Morrison-Education A.B., 1915

Englis. Duane Taylor-Chemistry A.B. (Eureka Coll.) 1912 A.M., 1914

Ensign, Hewton Edward-Theoretical and Applied Mechanics A.B. (McKendree Coll.) 1905
A.B. (Oxford Liniz.) 1908
B.S., 1911

Everett., Louis Lee-Education
B.S. (Muskingum Coll.) 1914

Fahrnkopf, Harrison Frederick Theodore-Agronomy B.S., 1913

Falls, Frederick Howard-Pathology B.S. (Uriz'. of Chicago) 1908
M.D. (Rush Medical Coll.) 1910

Fanning, Ralph Stanley-Architecture
B.Arch. (Cornell Uni='). 1912

Fazel, Charles Stever-Physics
A.B. (Faimmount Coll.) 1914

Feik, Roy William-Education
B.S. (Northwestern Coll.) 1913

Lincoln, Nebraska
Okolona, Mississippi
Blair, Nebraska
SS Boulder, Colorado
Chicago
Champaign
Esmond, North Dakota
Newton
Monticello
UTbara
Dalton, Wisconsin
San Diego, California
Manteno
New York City

Nayon, Qwebec
Urbana
Wichita, Kansas
Rochester, Indiana
(SS) Urbana
Cherleston
SS Low Point
Horvard
Champaigr
Peoria
Urbana

Ness City, Kansas
Tucson, Arizona
Springfield, Missouri
Ürbana
Eureka

Urbana
Lisbon
Urbana

Chicago
Riverhead, New York
Wichita, Kansas
La Moille

Fell, Frances-English
A.B. (Millikin Univ.) 1908

Feng, Kaimin Kay-Civil Engineering B.S., 1915

Fisher, Forrest Adison-Agronomy B.S., 1911

Fleming, Denna Frank-Education (Work for A.B. completed)
Flowerree, Trennace-Agronomy B.S., 1913
$\ddagger$ Foersterling, Frederick John-Electrical Engineering B.S., 1911

Footitt, Frank F-Inorganic Chemistry
A.B. (Albion Coll.) 1914

Ford, Jay Thomas-Industrial Chemistry A.B. (DePauw Univ.) 1914

Frank, Edwin Diederich August-Mechanical Engineering B.S. (Massachusetts Inst. of Tech.) 1906

- Frary, Hobart Dickinson-Mathematics M.E., M.S.(Univ. of Minnesota) 1908, 1909
$\ddagger$ Freeman, Perry John-Mechanical Engineering B.S.. 1907

French, Beals Ensign Litchfield-Education B.S. (Alfred Univ.) 1913

French, Herbert Ephraim-Organic Chemistry A.B.(Morningside Coll.) 1915

Fritz, Harry Rhinehardt-Fellow in Electrical Engineering C.E.(Univ. of Texas) 1914

Gardner, Ella Waterbury-English A.B. (Univ. of Iowa) 1905

Gardner, John Joseph-Pomology B.S. (Massachusetts Agricultural Coll.) 1905 B.S. (Boston Univ.) 1912

Garman, Philip-Fellow in Entomology B.S. (Kentucky State Univ.) 1913 M.S., 1914
$\ddagger$ Gaston, Ralph Mayo-Electrical Engineering B.S., 1903

Gatward, Walter Arthur-Fellow in Electrical Engineering B.S. (Washington State Coll.) 1913

Gaynor, Elizabeth Prudence Webb-History A.B. (Univ. of Wisconsin) 1907

Geiger, Charles Francis-Ceramics B.S., 1915

Geiling, Eugene Maximilian Karl-Agricultural Chemistry A.B. (Univ. of Cape of Good Hope) 1911

Geist, Harry Forest-Electrical Engineering B.S., 1912

Gilmore, Ross Earlby-Industrial Chemistry A.B., A.M. (McMaster Univ.) 1911, 1913

Godeke, Harry Frederick-Mechanical Engineering B.S., 1905

Graham, William Morland-Sociology B.S. (McKendree Coll.) 1913

Green, Bessie Rose-Zoology A.B., A.M., 1907, 1910

- Green, Charles Francis-Mathematics A.B., A.M. (Univ. of Kansas) 1914, 1915

Greene, James Henry-Education B.S., M.S., 190S, 1915

Greenfild, Edman-Chemistry A.B. (Univ. of Kansas) 1914

Greengard, Louis Jacob-Horticulture (Work for B.S. completed)
Griffin, Clare Elmer-Fellow in Economics A.B. (Albion Coll.) 1914

Gross, Cecil Robert-Bacteriology B.S. (Cornell Univ.) 1915

Grotaphorst, Waldo Edward-Animal Husbandry B.S. (Univ. of California) 1914

Guild, Frederic Howland-Fellow in Political Science A.B. (Brown Univ.) 1913
A.M. (Indiana Univ.) 1915

Gulick, Edward Everett-Education B.L., 1892
$\ddagger$ Gulley, Lawrence Richard-Mechanical Engineering B.S., M.S., 1910, 1911

Gunderson, Alfred Joseph-Pomology B.S.. 1911

Gusler, Gilbert-Animal Husbandry B.S. (Ohio State Uniz.) 1912

Gustafson, Axel Ferdinand-Agronomy B.S., 1907

Decatur
Pei-lui, Kwangsi, China
Urbana
Paris
Champaign
Peoria
St. Johns, Michigan
Pendleton, Indiana
Milwaukee, Wisconsin
Minneapolis, Minnesota
Manhattan, Kansas
Ellicottville, New York
Sioux City, Iowa
St. Louis, Missouri

## Champaign

Champaign
Lexington, Kentucky
Chicago
Spokane, Washington
Grand Rapids, Wisconsin
Chicago
Vryberg, South Africa
Racine, Wisconsin
Toronto, Canada
Urbana
Almyra, Arkansas
Ivesdale
Holton, Karsas
Urbana
Urbana
Chicago
Traverse City, Michigan
Ithaca, New York
Chicago
Pautucket, Rhode Island
Urbana
Urbana
Urbana
Urbana
Aledo

Haessler, Carl Herman-Philosophy
A.B. (Uniz.. of Wisconsin) 1911
A.B. (O.rford Univ.) 1914

Hamilton, Clyde Carney-Entomology
B.S. (Kansas State Agr. Coll.) 1913

Hamon, Robert Jasper-Organic Chemistry
B.S. (Oklahoma State Coll.) 1911

Hansen, Roy-Agronomy B.S., 1914

Hanson. Frank Blair-Zoology
A.B. (George Washington Univ.) 1913

Hao, Tso Chang-Economics
(Work for A.B. completed)
Harbarger, Sada Annis-English
A.B. (Ohio State Univ.) 1906 A.M., 1909

Harklewad, Frank Samuel-Animal Husbandry B.S. (Univ. of Ternessee) 1914

Harper, Claude-Animal Husbandry
B.S. (Purdue Uniz.) 1914

Harris, Olive Caroline-Scholar in German A.B. (Hedding Coll.) 1915

Harris, William-Education
A.B. 1914

Harrison, Bernice-Education A.B., 1912

Harshbarger, James Francis-Education A.B., 1913

Hatfield, William Durrell-Chemistry B.S. (Illinois Coll.) $191+$
$\ddagger$ Haungs, Howard Charles-Civil Engineering B.S., 1907
, Hebbert,' Clarence Mark-Fellow in Mathematics B.S. (Otterbein Univ.) 1911 M.S., 1914

Hecht, August George-Horticulture B.S., 1914

Heimburger, Harry Virl-Zoology A.B. (DePauw Univ.) 1911

Hcinzelmann, Alfred Martin-Industrial Chemistry B.S., 1915

Henderson, James Bruce-Animal Husbandry (Work completed for B.S.)
Henrich, Louis Joseph-Education B.S. (Kentucky State Univ.) 1913 M.S. (Iowa State Coll.) 1915

Henry, Theodore Spofford-Education A.B. (Hedding Coll.) 1903

Hess, Roy Washington-Organic Chemistry A.B. (Morningside Coll.) 1912 A.M., 1914

Hicks, John Frederick Gross-Inorganic Chemistry B.S. (Univ. of Pennsylzania) 1906

Higgins, George Marsh-Zoology B.S. (Knox Coll.) 1914

言Hight, Eugene Stuart-Electrical Engineering M.S., 1911

Higley, Ruth-Fellow in Zoology A.B. (Grinnell Coll.) 1909

Hill, Charles Francis-Physics A.B., 1914

Hill, Howard Rice-Zoology A.B. (Carroll College) 1913

Hobler. Harriet Wells-History A.B. (Rockford Coll.) 1882

Hofto, Jacob Arnold-Fellow in History A.B., A.M.,(Univ. of North Dakota) 1913, 1914
$\ddagger$ Holbrook, Elmer Allen-Mechanical Enginecring B.S. (Mass. Inst. Tcch.) 1904

Hoskins, Mary Mildred-History

$$
\text { A.B., } 1913
$$

Hoskinson, Bruce Quin-Education A.B. (Union Christian Coll.) 1905

Hoskinson, Ottis-Education
A.B. (Union Christian Coll.) 1900

Howell, Lloyd Brelsford-Chemistry A.B. (Wabash Coll.) 1909

Hsu, Chuan-Ying-Applied Economics A.B. (Nanking Univ.) 1905

Hufferd, Ralph William-Organic Chemistry A.B. (H)ashington Univ.) 1915

Hulce, Ray Stillman-Animal Husbandry B.S., (Univ. of Wisconsin) 1911 M.S., 1913

## Milwaukee, Wisconsin

Holton, Kansas
Urbana
Rock Island
Bloomington
Wuchinghsien, China
Columbus, Ohio
Bristol, Tennessee
Ligonier, Indiana
Abingdon
SS Altamont
Champaign
Arcola
Jacksonville
Peoria
Bloomdale, Ohio
Overland, Missouri
Kewanna, Indiana
Aurora
Millers Ferry, Alabama
Newport, Kentucky
Urbana
Plover, Iowa
Stillwater, Oklahoma
Des Plaines
Pcoria
Grandviczv, Iow'a
Toledo
Chicago
Batavia
Grand Forks, North Dakota
Urbana

SS

Hull, Anna Leo-American History
Hull, Sidney Marion-Industrial Chemistry B.S., 1915

Hultgren, Reuben Hartvic-Chemistry
A.B. (Augustana Coll.) 1915

Hursh, Ralph Kent-Ceramic Engineering B.S., 1908

Hypes, James Lowell-Entomology (Work for A.B. completed)
Hyslop, William Henry-Physics A.B. (Knox Coll.) 1908 A.M., 1911
$\ddagger$ Ireland, Washington Parker-Civil Engineering B.S., 1903

Jamison, Michal Velma-Latin
A.B. (Northwestern Univ.) 1912

Jennings, Walter Wilson-Scholar in History A.B., 1915

Jewell, Minna Ernestine-Fellow in Zoology A.B. (Colorado Coll.) 1914

Johnston, Joseph Henry-Fellow in Education A.B., A.M. (Univ. of North Carolina) 1910, 1914

Jones, Easley Stephen-English A.B. (Uniz' of Colorado) 1907 A.M. (Harvard Univ.) 1913

Jones, Lester Seaman-Education B.S., (Northwestern Univ.) 1905 SS

Jordan, Harvey Herbert-Theoretical and Applied Mechanics B.S. (Univ. of Maine) 1910

Jordan, Louis-Chemistry A.B. (Bates Coll.) 1915

Kammlade, William Garfield-Animal Husbandry B.S. (Univ. of Wisconsin) 1915

Karr, Walter Gerald-Chemistry B.S. (Alfred Univ.) 1913

Karrer, Sebastian-Physics A.B., A.M. (Univ. of Washington) 1911, 1913

Kawamoto, Tane-Electrical Engineering (Work for B.S. completed)
Kean, Hugh Pratt-Mathematics A.B. (Albion Coll.) 1906 A.M., 1909

Keith, Mary Helen-Animal Nutrition B.S. (Mt. Holyoke Coll.) 1894 A.M. (Columbia Univ.) 1904

Kelso, Ruth-English A.B., A.M. 1908, 1909

Keltner, Charles Henry-Botany A.B., 1910

Kempton, Forrest Ellwood--Botany B.S.' (Earlhan Coll.) 1906 M.S. (Univ. of Wisconsin) 1913

Kennedy, Luther Eugene-Geology (Work for A.B. completed)
Kernall, Morris Johnson-Fellow in Zoology A.B. (Univ. of North Dakota) 1906 A.M. 1914

Kessler, James-French A.B. (Indiana Univ.) 1908

Kile, Jessie June-American History A.B. (Rockford Coll.) 1912 A.M., 1914

Kindred, Jannes Ernest-Zoology A.B. (Tufts Coll.) 1914

King, Josepl Lyonel-Entomology B.S. Ohio State Univ.) 1914

Kingman, Robert Hills-Zoology A.B. Washburn Coll.) 1913

Kingsley, Mary Winship-History A.B., A.M. (Tufts Coll). 1903, 1904

Kirkpatrick, Frank Allen-Fellow in Ceramics B.S., 1914

Kirkpatrick, Harold H-Education A.B., 1897

Kline, Earl Kilburn-Germanic Philology A.B. (Univ. of Oklahoma) 1906 A.M. (Oxford, England) 1913

Knight, Abner Richard-Electrical Engineering M.E. (Ohio State Univ.) 1909

Knight, Henry Granger-Chemistry A.B. (Univ. of Chicago) 1903 A.M. (Univ. of Washington) 1905

## Urbana

Montello, Wisconsin
Andover

## Champaign

Roncer'erte, West Virginia

## Galesburg

Sacramerto, Califoruia

## Monmouth

## Champaign

Colorado Springs, Colorado
Chapel Hill, North Carolina

## Urbana

Oak Park
Waltham, Maine
Woodford, Maine
Sparta, Wisconsin
Almond, New York
Roslyn, Washington
Kyoto, Japan
Urbana
Braintree, Massachusetts
Columbus, Ohio
Mount Morris
Centerville, Indiana
Springfield

Valley City, North Dckota
Portland, Indiana

Rockford
Dorchester, Massachusetts
Clcreland, Ohio
Topeka, Kansas
Urbana
Unionville, Michigan
West Chicago
Champaign
Champaign
Laramie, Wyoming
$\ddagger$ Candidate for professional degree in engineering.

Krausse, Leo John-Economics
B.S. (Knox Coll.) 1915

Kremers, Harry Cleveland-Inorganic Cbemistry A.B. (Hope Coll.) 1913

Krieger, Augusta May-Education A.B., 1910
A.B. (Baldwin Wallace Coll.) 1913

Kumano, Kichijiro-Education
Graduate of Hiroshima Higher Normal Coll. (1908)
Koons, Guy J-Education
A.B., 1912
'Lackey, Kate-Mathematics
(Work for A.B. completed)
Laguardia, Cincinnatti Giovanni Battista-Spanish
A.B. (Columbia Univ.) 1915

Lamkey, Ernest Michael Rudolph-Botany
A.B., A.M., 1913, 1914

Langelier, Wilfred Francis-Chemistry
B.S. (New Hampshire State Coll.) 1909 M.S., 1911

Larson, Louis
-Fellow in Theoretical and Applied Mechanics
B.S., C.E. (Univ. of Minnesota) 1914, 1915
(Work for B.S. completed)
(Work for B.S. completed)
B.S., 1915
LeCato, John Marvin-Botany
A.B. (Univ. of Michigan) 1913

Lee, Emmett Chambers-Organic Chemistry
A.B. (Lonisiana State Univ.) 1915

Lee, Henry Rhodes-Chemistry
A.B. (Carroll Coll.) 1914

Lentz, Clarence Alonzo-Economics
(Work for A.B. completed)
Leung, Chin-Yuk-Railway Administration
C.E., M.C.E. (Cornell Univ.) 1914, 1915

Levey, Harold Alvin-Organic Chemistry B.E. (Uniz' of Louisiana) 1911

Lewis, Charles Dickens-Education
B.Ped. (Kentucky Agrl. and Mech. Coll.) 1903

Lewis, Harry Fletcher-Fellow in Organic Analysis B.S., M.S. (Wesleyan Univ.) 1912, 1913

Liang, Tu Hung-Agronomy

$$
\text { B.S., } 1915
$$

Lichty, Lester Clyde-Fellow in Mechanical Engineering B.S. (Univ. of Nebraska) 1913

Linkins, Ralph Harlan-Fellow in Zoology A.B. (Illinois Coll.) 1911 A.M., 1914.

Littleton, Ananias Charles-Economics A.B., 1912

Lloyd, Thomas Harold-Animal Husbandry B.S., 1915

Lukens, William Penn-Feflow in Mechanical Engineering A.B. (Swarthmore Coll.) 1913

McAnulty, Leona-English
B.S. (Carthage Coll.) 1896

McClugage, Harry Bruce-Chemistry A.B., 1915

McClure, Leila Violet-Latin A.B. (Hedding Coll.) 1913

McComis, Samuel Jay-Scholar in Education LL.B. (Jefferson Univ.) 1910
McDermet, Rudolph-Electrical Engineering M.S., 1914

McJohnston, Harrison-Economics A.B. (Northwestern Univ.) 1907

McKenna, Edward Lawrence-Economics A.B. (Columbia Coll.) 1913 A.M., 1914

McMillen, George Burr-Railway Administration A.B., 1915

McNally, John Leo-Geology (Work for A.B. completed)
Maddock, Alice E.-Zoology A.B., 1907

Maddock, Kathryn-Scholar in History A.B. (Rockford Coll.) 1915

Magath. Thomas Byrd-Zoology Ph.B. (Emory Coll.) 1913
M.S. (Millikin Uniz.) 1914
Mahannah, A. Ernest-Political Science
A.B. (Fairmount Coll.) 1914

Manuel, William Asbury-Fellow in Industrial Chemistry A.B. (DePauw Unv.) 1912

## Troy Grove

## Hudsonville, Michigan

## Peoria

Edgerton, Ohio
Tokio, Japan
Murphysboro

## Lawrenceville

## New York City

## (SS) Riverton

## Urbana

Windom, Minnesota

Chicago
Bushenell
Huntington, West Virginia
Jackson, Louisiana
Urbana
Anna
Canton, China
New Orleans, Louisiana
Berea, Kentucky
Pottsville, Pa.
Canton, China
Carleton, Nebraska
Jacksonville
Urbana
Girard
Woodlyn, Pennsylvaria
Carthage
Peoria
Abingdon
Lacon
Scattle, Washington
$\mathrm{McCutcheonsville}$,
Brooklyn, New York
Champaign
Pueblo, Colorado
SS
Chicago
Evanston
Oxford, Georgia
Sedgwick, Kansas
Greencastle, Indiana

Marker, Albert Washington-Physics
Ph.B. (Northwestern Coll) 1907
Marshall, Robert Haskell-Mathematics A.B., 1914

Marvel, Carl Shipp-Scholar in Chemistry A.B. (Illinois Wesleyan Univ.) 1915

May, Henry Gustav-Zoology
B.S. (Univ. of Rochester) 1913

Melrose, Mary Hazel-Education A.B., 1910

Meltz, Nathon-Chemistry
B.S., 1915

Mengel, George Henry-Organic Chemistry B.S., 1915

Meyer, Winliam-Education B.S., 1912

Mickle, Friend Lee-Water Chemistry
A.B. (Allegheny Coll.) 1911

Mikami, Goro-Economics
B.S. (Waseda Univ.) 1912

Miles, Lee Ellis-Plant Physiology A.B. (Wabash Coll.) 1914

Miller, J. Earll-History A.B., LL.B. (Univ. of Kansas) 1910, 1912 A.M., 1913

Miller, Mahel Lucile-English A.B., 1912

Miller, Wilford Stanton-Education A.B., A.M. (Indiana Univ.) 1910, 1911

Mise, Kozaburo-Civil Engineering C.E. (Tokio Imperial Univ.) 1911

Mizuno, Tsunekichi-Education A.B. (Hiroshima Normal Coll.) 1908

Mohlman, Floyd William-Sanitary Chemistry B.S., M.S., 1912, 1914

Moore, Charles Ruby-Electrical Engineering B.S., E.E. (Purdue Univ.) 1907, 1910

Moore, Josiah. John-Pathology and Bacteriology S.B. (Univ. of Montana) 1907 M.D. (Rush Medical Col!.) 1912

Moore, Laura McAllister-History A.B. (Indiana Univ.) 1892

Moore, Lawrence Shaw-History
A.M. (Harvard Univ.) 1910

Morgan, Effie Marguerite-Scholar in English A.B. (Millikin Univ.) 1913

Morkel, William Algernon Kingsmill-Animal Husbandry Diploma (Gov't Agrl. Coll., S. Africa)
Morison, Alfred Thorpe-Agronomy B.S. (Pennsylvania State Coll.) 1915
$\ddagger$ Morrison, Roger Leroy-Civil Engineering B.S., 1912

Moutray, Madeline-English B.S. (Columbia Univ.) 1914

Murphy, Maurice Elgin-Economics A.B. (Central Normal Coll.) 1910 A.B. (Indiana Univ.) 1913

- Murray, Forrest Hamilton-Scholar in Mathematics A.B., 1915

Myers, John Calvin-Education A.B. (Northwestern Univ.) 1912

Mylius, Louis Aubrey-Fellow in Mining Engineering B.S., E.M. (Columbia Univ.) 1911, 1915

Nakanishi, Shimaji-Hydro-Electricity Certificate for 148 hours, (Univ. of Idaho) 1915
Nathanson, Jonas Bernard-Physics A.B. (Ohio State Univ.) 1912 A.M., 1913

Nebel, Merle Louis-Fellow in Geology B.S., 1913 M.S., 1915

Neill, Alma Jessie-Physiology A.B., 1913 A.M., 1915
$\ddagger$ Nelson, Benjamin-Mechanical Engineering B.S., 1911

Nevens, William Barbour-Dairy Husbandry B.S. (Univ. of Wisconsin) 1914

Newlin, Charles Ivan-Animal Hushandry B.S., M1.S., 1912, 1914

Danville
Gamaliel, Kentucky
Midland City
Dallas, Oregon
Grayville
SS New York City
SS Moline
SS Rock Island
Garland, Pennsyliania
Kори, Japan
(SS)
Crawfordsville, Indiana
Champaign
Urbana
Champaign
(SS) Awadzu, Japan
Koizumi, Japan
Urbana
Urbana
Chicago
SS Terre Haute, Indiana
(SS)
Champaign
Springfield
Cape Town, South Africa
Champaign
College Station, Texas
SS New York City
(SS) Eldorado
(SS) Mazon
Stockton
Urbana
Aichiken, Japan
Toledo, Ohio

Urbana
Chillicothe
Chicago
Urbana
Urbana

Newlove, George Hillis-Economics Ph.B. (Hamlin Univ.) 1914 A.M. (Univ. of Minnesota) 1915

Nickoley, Edward Frederick-Economics A.B., A.M., 189S, 1915

Milton, North Dakota
Beirut, Syria

Nickoley, Emma May Rhoads-English
A.B., A.M1., 1S99, 1915

Nordby, Julius Edward-Scholar in Animal Husbandry B.S. (Univ. of Idaho) 1915

O'Conner, Ethel Louise-Scholar in German A.B. (Hcdding Coll.) 1915

Odell, Arthur Allen-Transportation A.B., 1915

Okey, Ruth Eliza-Chemistry
B.S. (Monmouth Coll.) 1914
M.S., 1915

Olewine, James Harris-Organic Chemistry
B.S. (Pennsylvania State Coll.) 1915

Olmsted, Margaret-Scholar in Classics
A.B. (Augustana Coll.) 1915

Ordonez, Benito Rene-Fellow in Railway Engineering B.S., 1914

Osborn, Howard Grenell-Chemistry
B.S. (Nortlizuestern Univ.) 1915

Owens, Albert W-Inorganic Chemistry
B.S. (Bicknell Univ.) 1909

Palm, Frank:Iin Charles-Fellow in History
A.B. (Oberlin Coll.) 1914

Parker, Edwin Kenney-Scholar in Entomology
B.S. (Massachusetts Agrl. Coll.) 1915

Parr, Rosalie Mary- Botany
A.B., A.M., 1906, 1911

Partridge, Newton Layman-Fellow in Horticulture
B.S., M.S., 1913, 1914

Pasmore, Daniel Frederick-Fellow in German
A.B. (Albion Coll.) 1913
A.ML., 1914

Pearson, Frank Ashmore-Economics
B.S. (Corncll Univ.) 1912

Perry, Margaret Campbell-Chemistry A.B., 1915

Perry, Winifred Almina-English A.B., 1908
A.M., 1914
rson, Alvah-Fellow in Entomology
B.S. (Knox Coll.) 1911
A.M., 1913

Phelps, James Manley-English A.B. (Northwestern Univ.) 1912

Phillips, John Breen-Education A.B., 1912
$\ddagger$ Pickett, Ray Ernest-Architectural Enginecring B.S., 1911

Pickler, William Eugene-Plant Physiology A.B. (Wabash Coll.) 1914

Pierce, Thirza May-Education A.B., 1911

Portz, Harry Glenn-Chemistry
B.S. (Ohio Northern Uniz.) 1914
B.S. (Uniz. of Chicago) 1915
*Potterf, Loran Ogdan-Organic Chemistry A.B., A.M., (Miami Univ.) 1909, 1910

Powell, Alfred Richard-Organic Industrial Chemistry B.S. (Uniz. of Kansas) 1914
A.M. (Univ. of Nebraska) 1915

Powers, Edwin Booth-Zoology
A.B. (Trinity Univ.) 1906
M.S. (Univ. of Chicago) 1913

Putnam, William James-Theoretical and Applied Mechanics B.S., 1910

Radcliffe, Barney Simonson-Ccramics A.B. (Miami Uniz.) 1908

Randolph, Oscar Alan-Physics
B.S. (Missouri School of Mines) 1911
M.S., 1913

Rayner, William Horace-Education B.S., 1909

Read, Mason Kent-Stratigraphic Geology B.S. (Denison Univ.) 1914

Reece, Ernest James-Political Science
Ph.B. (Western Resericc Univ.) 1903
Reed, James Keel Jr.-Chemistry
A.B. (IVabash Coll.) 1915

Rees, Edwin Arthur-Organic Chemistry
A.B., A.M. (Univ. of Denver) 1913, 1914

- Renich. Mary Emma-Mathematics
A.B., 1911, A.M., 1912

Beirut, Syria
Genesee, Idaho
Abingdon
Champaign

## Kirkwood

Bcllefonte, Pensylvania
Rack Island
Saltulle, Mexico
Urbana
Lerisburg, Pennsylvania
Wellman, Minnesota
Northampton, Mass.
Urbana
Chicago

Swartz Creek, Michigan
Urbana
Urbana

Urbana

Galesburg
DeKalb
Sullivan
Smithers, B. C.
Louistille, Kentucky
Elgin
Fresno, Ohio
Eaton, Ohio

Ottawa, Kansas

Waralachie, Texas
Urbana
Harrison, Ohio

Urbana
Urbana
Springfield, Ohio
Urbana
Indianapolis, Indiana
Garfield, Utah
Urbana

[^100]Reyerson, Lloyd Hilton-Physical Chemistry A.B. (Corlcton Coll.) 1915

Rice, John Benjamin-Animal Husbandry B.S. (Univ. of Nebroska) 1915

- Richardson, Clarence Mudson-Mathematics B.S. (Univ. of Kentucky) 1913

Ripley, Lewis Bradford-Scholar in Entomology B.S. (Trinity Coll.) 1915

Roberts, Elmer-Genetics B.S., 1913
$\ddagger$ Roberts, Harry Ashton-Civil Engineering B. S., 1902

Robinson, Rodney Potter-Latin A.B., A.M. (Univ. of Missouri) 1910, 1911

Robinson, William Kean-Bacteriology
B.S. (Maryland Agrl. Coll.) 1913
M.S. (George Washington Univ.) 1915

Roessler, William Otto-Agronomy
(Work for B.S. completed)
Rogers, Anna Sophie-Psychology A.B., A.M., 1911, 1914

Rolfe, Martha Decte-History
B.S., A.M., 1900, 1904

Rolfe, Mary Annette-Semitics A.B., 1902

Ross, Clarence Samuel-Geology A.B., 1913

Ross, Join Carl-Chemistry A.B. (South African Coll.) 1911
-Roth, William Edward-Mathematics A.B., (Univ. of Wisconsin) 1915

Roviland, Floyd Elba-Industrial Chemistry B.S. (Oregon Agrl. Coll.) 1907 A.B., 1914
uehe, Harrison August-Dairy Bacteriology B.S., 1911

Rugg, Earle Underwood-Political Science A.B., 1915
ulison, Harold Kirk-Economics B.S. (Neze York State Coll. of Agr.) 1915

Russel,Robert Royal-Fellow in History A.B. (McPherson Coll.) 1914 A.M. (Univ. of Kansas) 1915

Russel, Robbins-Water Chemistry B.S. (Illinois Coll.) 1914

Russell, Frederic Arthur- Fellow in Economics A.B., A.M., (Albion Coll.) 1908, 1909

Ruth, Warren Albert-Pomology
A.B., A.M. (Wabash Coll.) 1906, 1909

Rutherford, Geddes William-Political Science A.B. (Columbia Univ.) 1913

Sabin. Ethel Ernestine-Fellow in Philosophy
A.B., A.M. (Univ. of $W$ isconsin) 1908, 1914

Sayre, Rollo Clifton-History

$$
\text { B.S., (McKendree Coll.) } 1909
$$

Schaarman, Emil Ferdinand-German A.B., 1913, A.M., 1914

Schalck. Michael Andrew-Agronomy (Work for B.S. completed)
thehlader, Theodore Henry-Architectural Engineering B.S., 1885

Schoepperle, Katherine--Fellow in History A.B., 1915

Scholl, Clarence-Fellow in Chemistry B.S., M.S., 1913, 1914

Schoonover, Warren Rippey-Agronomy B.S. (Occidental Coll.) 1912

Schutte, Tenjes Henry-Scholar in Education A.B., 1912

Schwing, Edward Albert-Horticulture B.S., 1915

- Scoficld,'Harriet-Scholar in Mathematics B.S. (Carthage Coll.) 1915
$\ddagger$ Scott, James Robinson Jr.-Civil Engineering B. S., 1907

Seely, I.red B.-Theoretical and Applied Mechanics B.S. (Worcester Polytechinic Inst.) 1907

Seiler, Eleanor Frances-Scholar in Physics A.B., A.M. (Univ. of Denver) 1913, 1914

Sekine, Sentaro-Railway Engineering B.S., A.B., 1913, 1914

Sellards, John Armstrong-Romance Languages A.B., 1912

Dawson, Minnesota
Norfolk, Nebraska
Buffalo, Kentucky
Glastonbury, Conn.
Urbana
Pocatello, Idaho
Perry, Oklahoma

Franktozon, Virginia
Shelbyville
Bushucll
Champaign
Champaign
Champaign
(SS) Sea Point, South Africa
Manston, Wisconsin

Corvallis, Oregon
Urbana
Fitchburg, Massachusetts
Angclica, New York
Urbana
Jacksonville
Urbana
Urbana
Columbia, Missouri
Madison, Wisconsin
SS Grayville
Edgington
Butler, Kcutucly
Chicago
Hamburg, New York
Watseka
Alhambra, California
Lenzburg
Peoria
Carthage
Denver, Colorado
(SS) Urbana
Denver, Colorado
Saitama, Japan
Champaign
$\ddagger$ Candidate for professional degree in engineering.

Sendenburgh, Edith Irene-Scholar in English

$$
\text { A.B., } 1913
$$

Seyster, Ernest Wilford-Zoology A.B., 1915

Shaffer, Earl William-Physiological Chemistry (Work for B.S. completed, Illinois College, 1916)
$\ddagger$ Shaw, Benjamin Bruce-Civil Engineering B.S., 1911

Shaw, Hazel Yearsley-Political Science A.B., 1907

Shepard, Alhert Durand-Animal Chemistry B.S. (South Dakota State Coll.) 1914

Shiner, Rohert Tobias-Animal Husbandry B.S., (Univ. of Missouri) 1914

Shulters, John Raymond-French A.B., 1910

Shum, Nim Chi-Chemistry B.S., 1914

Skinner, Glenn Seymour-Organic Chemistry A.B., 1914

Slater, Maynard Elmer-Animal Hushandry B.S., 1915

Smith, Ernest James-Scholar in Political Science A.B. (Lakc Forest Coll.) 1915
, Smith, Guy Watson-Mathematics B.S., M.S. (Uniz. of Colorado) 1908, 1909

Smith, Irene Fern-Chemistry
(Work completed for B.S.)
$\ddagger$ Smith, Kenneth Gardner-Mechanical Engineering B.S., 1905

I Smith, Merlin Grant-Scholar in Mathematics B.S. (Greenville Coll.) 1915

Smith, Rose-Botany A.B., 1911

Snapp, Roscoe Raymond-Animal Husbandry
A.B., B.S., 1913
$\ddagger$ Snodgrass, John McBeath-Mechanical Engineering B.S., 1902

Soto, Rafael Arcangel-Spanish

$$
\text { B.S., A.B., 1912, } 1915
$$

$\ddagger$ Spierling, Arthur Otto-Mechanical Engineering B.S., 1910

Spindler, George Washington-Fellow in German A.B., A.M. (Univ. of Indiana) 1900, 1908

Stanford, Howard Russel-Horticulture B.S., 1908

Stanley, Thomas Blaine-English Literature A.B. (Earlham Coll.) 1913

Stanton, William Macy-History of Architecture B.S., M.S. (Univ. of Pennsylvania) 1913, 1914

Stark, John Edwin-Eeonom:cs (Has 132 hours credit)
Stark, Robert Watt-Agronomy B.S., 1895

Steele, Annette-English A.B. (Transylvania Univ.) 1911

Stevens. Wayne Edson-Fellow in History A.B. (Knox. Coll.) 1913 A.M., 1914

Stewart, Jay-Chemistry B.S. (Ottawa Üniテ.) 1912

Stice, Henry Sylvester-Education A.B., 1915

Stokes, John Edward-History A.B. (Wecst Maryland Coll.) 1913

Stone, Herbert King-French A.B. (Univ, of Michigan) 1905

Storm, Myrtle Parke-Sociology A.B. (Eureka Coll.) 1903

Storm, William Homer-Philosophy A.B. (Eureka Coll.) 1913

Story, Helen Dale-History A.B. (Moninouth Coll.) 1912

Stowell, Charles Jacob-Fellow in Economics B.S. (Illinois Wesleyan) 1911

Stunkard, Horace Wesley-Fellow in Zoology B.S. (Coe Coll.) 1912 A.M., 1914

Sutcliffe,' Emerson Grant-English A.B. (Harvard Univ.) 1911 A.M., 1914

Swanson, Ruth Pauline-Education A.B. (Millikin Univ.) 1908

Champaign
Champaign
Bridgeport
McAlester, Oklahoma
Urbana
Brookings, South Dakata
SS Braymer, Missouri
Bristol, New York
Canton, China
Cherokee, Kansas
Belvidere
Lale Forest
Castle Rock, Colorado
Red Bud
Ames, Iowa
Youngstown, Ohio
Gibson City
Findlay
Urbana
Urbana
Boston, Massachusetts
Woodland, Michigan
Urbana
Noblesville, Indiana
Philadelphia, Pennsylvania
Urbana
Urbana
Winchester, Kentucky
Avon
Ottawa, Kansas
Urbana
Bridgeport
Chicago
Lexington
Lexington
Chariton, Iowa
Bloomington
Walker, Iowa
Urbana
Hoopeston

Sweney, Merle Arthur-Scholar in English
Swick, Mary Ethel-Philosophy A.B., 1915

Swift, Lola Ernesta-Zoology A.B. (Mt. Morris Coll.) 1911

Tanabe, Stetfan Fujite-Fellow in Physics B.S. (Knox Coll.) 1911

Tanner, Fred Wilbur-Bacteriology B.S. (Wesleyan Uniz.) 1912 M.S., 1914

Tao, Wen Tsing-Political Science A.B. (State Univ. of New York) 1914 A.M., 1915

Nanking, China
Templin, Richard Lawrence-Fellow in Theoretical and Applied
Prairie City
Urbana
DeKalb
Tokyo, Japan

Urbana Mechanics
B.S. (Univ. of Kansas) 1915

Tendick, Elizabeth-German A.B. (Illinois Woman's Coll.) 1913
Thomas, Abner Royce-Animal Hushandry (Work for B.S. completed)
Thompson, Francis-Education A.B., 1915

Thorne, Lawrence Emerson-Genetics B.S., 1915

Thurber, Carryl Nelson-English Literature A.B. (Cornell.Univ.) 1908

Tieje, Ralph Earle-English A.B., A.M., 1910, 1912

Tippet, Ralph Waldo-Chemistry A.B. (Lawrence Coll.) 1913 A.M., 1915

Toland, Jessie May-History and Education AB., 1908
Trams, Albert Francis-English A.B., 1905

Trowbridge, Mary Luella-Scholar in Classics A.B., 1915
release, Sam F.-Botany A.B. (Washington Univ.) 1914

Tupper, James Oliver-Dairy Husbandry (Work for B.S. completed)
Turner, Frank-Economics B.S., 1914

Updegraff, Helen-Chemistry A.B. (Cornell Univ.) 1915

Vallance, Alexander-Theoretical and Applied Mechanics M.E. (Ohio State Univ.) 1909

Van Alstine, Ernest-Agronomy B.S. (Michigan Agrl. Coll.) 1907

Van Winkle, William Alexander-Chemistry B.S. (U'niv. of Michigan) 1911

Vollweiler, Ernest Henry-Organic Chemistry A.B. (Miami Univ.) 1914

Waggoner, Harry Dwight-Plant Physiology A.B., A.M., 1909, 1914

Wait, Bernice-Scholar in Household Science B.S. (McKendree Coll.) 1914
$\ddagger$ Waldo, Edward Hardenburgh-Electrical Engineering A.B. (Amherst Coll.) 1898 M.E. (Cornell Univ.) 1890 M.S., 1913

Walker, Mabel Gregory-History A.B. 1909

Walker, Quinton Forrest-Economics A.B., A.M. (Albion Coll.) 1915

Walworth, Edward Harvey-Agronomy B.S., 1913

Wanzer, James Marshall-Horticulture (Work for B.S. completed)
Warner, Earle Horace-Physics A.B. (Univ. of Denver) 1912 A.M., 1914

Watkins, Gordon-Economics
A.B. (Univ. of Montana) 1914

Watson. Jane Coulson-Spanish A.B., 1915

Watters, James Merton-Education
Wead, Grace-English A.B. (Oberlin Coll.) 1912

Weech, John Glen-Economics A.B. (Knox Coll.) 1915

Urbana
Grand Lcdge, Micizigan
Bay City, Michigan
Shandon, Ohio
Urbana
Greenville

Urbana
Moweaqua
Jackson, Michigan
Urbana
Oak Park

Urbana
Joliet
Champaig"
SS Palestine
Peoria
Galesburg
Minneapolis, Kansas
Canton
Big Rock
Pinckneyville
Huntington, Indiana
Richmond Hill, New York
Urbana

Appleton, Wisconsin
Urbana
Bridgeport
Green Valley
Urbana
Woodstock
DuQuoin
Vallejo, California

[^101]Weeter, Harry Montgomery-Dairy Bacteriology A.B. (Allegheny Coll.) 1911

Fredell, Pennsylvania
Weiland, Henry Joscph-Plysical Chemistry
B.S. (Univ. of Rachester) 1913
M.S., 1915
(SS)
Pittsford, New York
Weirick:, Rohert Bruce-English
A.B. (Colorado Coll.) 1911
A.M. (Harvard Unio.) 1913

Weiss, Camillo-Fellow in Civil Engineering
C.E. (Kaiserlich-Koenigliche Technische Hachschule, Vienna, Austria) 1910
Wells, Lansing Sader-Chemistry
A.B. (Univ. of Montana) 1915

Welo, Lars Alvin-Physics
B.S. (North Dakota Agricultural Coll.) 1911
M.S., 1915
deWerff. Heniy August-Agrono:ny B.S.. 1914

Westergaard, Harold Malcolm-Fellow in Structural Engineering B.S. (The Royal Tcchnical Coll. of Copenhagen) 1911

Westlafer, Terrence Onas-Chemistry
A.B. (Univ. of Oklahoma) 1914

Whisenand, James Wilbur-Animal Husbandry B.S. (Univ. of Nebraska) 1914
(SS) Harvard, Nebraska
White, Leila Olive-ITistory
A.B. (Rockford Coll.) 1914 A.M., 1915

Whitford, Robert Calvin-English
A.B. (Call. of the City of New York) 1912
A.M. (Columbia, Univ.) 1913

## Urbana

Vienna, Austria
Helena, Montana
Church's Ferry, N. Dakota
Farina
$\qquad$
Copenhagen, Denmark
Buffalo, Oklahoma

Rockford

Whitmire, Laura Gwendolen-English A.B., 1914

SS Urbana
Wichers, Edward-Inorganic Chemistry A.1. (Hope Coll.) 1913 II.S., 1915

Wichmann, Gerold Carl-Psychology A.D. (Uniz'. of Chicago) 1914.

Wiedrica, Jacob Cliristian-Education A.B. (Coll. of Emporia) 1913

SS Princeton
Wilcox, Roy Harold-Animal Husbandry B.S. (Minnesota Agricultural Coll.) 1915

Wilkinson, fackson H.-Hydraulics A.B., 1915

Minncapolis, Minnesota
Williams, Arthur Edwards-Ceramics B.S., 1910

Williams, David Willard-Scholar in Animal Husbandry B.S. (Ohio State Univ.) 1915

Bethany
Urbana
Wilson, William Marold-Mathematics A.B. (Albion Coll.) 1913 A.M., 1914

Winkelmann, Herbert August-Chemistry B.S. (North-Western Coll.) 1914 M.S., 1915

Wolf. Otto Fred-Civil Engineering B.S., 1910

Wollenhaupt, Walter Franz-Education Ph.B. (Iowa Wesleyan Univ.) 1908

Urbana
Champaign
Appleton, Minnesota
Des Plaines
Woolbert, Charles Henry-Psychology
A.B. (Northzestern Unir.) 1900
A.M. (Uni $\begin{gathered}\text {. of Michigan) } 1909\end{gathered}$

Worthen, Jeannette Lamb-English A.B., 1907

Wriedt, Christian-Genctics Degree in Agriculture (Uniz. of Christiania)
Wright, Allen Thurman-English A.B., 1913

Sapp, Janes Fook Onn-Civil Enginecring B.S., 1915

Japi, William Wodin-Genetics B.S., 1911

SS Hume

Yensen, 'Trygve-Electrical Engineering B.S., 1907

Sntema, Leonard Trancis-Chemistry
A.B. (Hope Coll.) 1915

Young, Esther-Plant Pathology A.B. (Miami Uniov.) 1914

Young, Everctt Gillhan-Fcllow in Railway Engineering Li.S., 1913

Zieser:heim, Jose;h Rossiter-Animal Husbandry B.S. (Pennsyiadnio State Coll.) 1915

Ziumerman. Robert Paul-German $\therefore . B ., 1913$
(SS, Avonia, Pennsulvania
Champaign

## UNDERGRADUATE AND PROFESSIONAL COLLEGES AND SCHOOLS IN URBANA

(Including the Colleges of Liberal Arts and Sciences, Commerce and Business Administration, Engineering, Agriculture, and Law, the Library School, and the School of Music)

## AEBREVIATIONS

Curriculums


[^102]| Allan, Robert Howard | Agr | 33 | Winchester |
| :---: | :---: | :---: | :---: |
| Allen, Alice Alexendria | HSLAS | 125 | Urbana |
| Allen, Cecil Violet | HSLAS |  | Broadlands |
| Allen, Clyde Harlan | Com |  | Winnebago |
| Allen, Ernest Victor | MnE (SS) | 1241 | Pana |
| Allen, Frank Oscar | LAS (SS) | 112 | Clinton |
| Allen, George Albert | Med | 33 | Clinton |
| Allen, Harriet Ethel | SS |  | Waverly |
| Allen, Hester Ada | HSAgr | 64 | Delavan |
| Allen, Louis, A.M., 1915 |  |  | Clinton |
| Allen, Lucy Elizabeth | HSAgr | 73 | Delavant |
| Allen, Lura Edna |  |  | Waverly |
| Allen, Lucile Marie | SS |  | St. Louis, Missouri |
| Allen, Moffet Barrows | Agr | 20 | Harristown |
| Allen, Paul Glen | LAS | 115 | Chicago |
| Allen, Paul William | SS |  | Champaign |
| Allen, William Robert | AE |  | Peoria |
| Allison, Jay Malcom | Com | 734 | Downers Grove |
| Allison, Worth Arthur | Agr | 135 | Charleston. |
| Allman, John Claude | CE |  | Crown Point, Indiana |
| Allyn, Hester Anne | HSLAS | 63 | Modesto |
| Allyn, Norman | LAS |  | Springfield |
| Almond, Harry Havens | Com | 57 | Anderson, Indiana |
| Alverson, Ruth Amelia | LAS | 31 | Urbana |
| Alvard, Genevieve Raymond | LAS | 98 | Urbana |
| Alwood, Clyde Gobel | Agr | 63 | Clinton |
| Alyea, Melvil Carlyle | SS |  | Earlville |
| Amana, Alfred | LAS |  | Honolulu, Hawaii |
| Amborn, Louise | LAS | 99 | Fort Madison, Iowa |
| Ambruster, John Rea | Agr | 65 | Chicago |
| Ames, Albert Carder | LAS | 65 | Riverside |
| Ames, Waldo Boynton | Com | 55 | Oak Park |
| Amiott, Charles Noah | SS |  | Fitchburg, Massachusetts |
| Amos, Douglas Jacques | Agr | 102 | Cairo |
| Amsbary, Paul Donald | ${ }^{\text {A }}$ | 104 | Urbana |
| Anastassiades, Ernest | $C E$ | 36 | Turkey |
| Anderson, Carl Leonard | Com | 33 | Hudson, Wisconsin |
| Anderson, Carl Ludwig. | SS |  | Rock Island |
| Anderson, Charles Patrick | Com | 26 | Chicago |
| Anderson, Charles Wesley | LAS | 687 | Dixon |
| Anderson, Clarence | EE | $35 \frac{1}{1}$ | Taylorville |
| Anderson, Jennie | LAS |  | Urbana |
| Anderson, Joshua Clayton | Agr (SS) | 96 | Williamsport, Indiana |
| Anderson, Lucille Marian | HSLAS |  | Martinsville, Indiana |
| Anderson, Olive Matilda | HSAgr | 63 | Chicago |
| Anderson, Owen Huntington | ME | 105 | Chicago |
| Anderson, Paul Alexander | LAS |  | Chicago |
| Anderson, Perry John | Com (SS) | 28 | Urbana |
| Anderson, Roy B | Agr (SS) | 3513 | Winnebago |
| Anderson, Roy William | $A g r$ | 58 | Oregon |
| Anderson, William Wilson | ${ }_{\text {Agr }}$ | 92 | Ohio |
| Andert, Fred | SS |  | Morris, Minnesota |
| Andreas, Lewis Peter | Com |  | Sterling |
| Andrews, Elizabeth | HSLAS |  | Urbana |
| Andrews, Harry | SS |  | Washburn |
| Andrews, John Harley | Com |  | Champaign |
| Andrews, Leonard Elmer | Com | 8 | Oak Park |
| Andrews, Mary Alberta | HSLAS | 30 | Pana |
| Andrews, Nellie Eulalic | HSLAS | 51 | Hebron |
| Andrews, Robert Eugene | Agr | 31 | Chicago |
| Andrews, Roscoe Crum |  | 104 | Mattoon |
| Andrews, Ruth Helen | LAS |  | Urbana |
| Andrist, Victor Rudolph | Com |  | West Concord, Minnesota |
| Angus, Gaylord Benton | ${ }_{S}$ S |  | Chicago |
| Ankerson, Helen | SS |  | Chicago |
| Antenen, Harry George | A | 35 | Hamilton, Ohio |
| Antoszewski, Robert Horatius | Agr | 50 | Glencoe |
| Appelgran, Clarence Oliver | Agr | 69 | Chicago |
| Apple, Russell Evans | $A g r$ | 33 | Robinson |
| Applegate, George Evert | Agr |  | Anderson, Indiana |
| Applegate, Ruth | SS |  | Atlanta |
| Arber, Frederick Verne | $L$ | 15 | Brimitield |
| Arbuckle, Leon Archbold Harold Herbert | Agr | 90 | Brockton |
| Arclibold, Harold Herbert | EE |  | Brcokfield |
| Archer, Olin Wellington | LAS | $66 \frac{1}{2}$ | Peoria |
| Arends, Annis Lilian | HSLAS (SS) | 62 | Champaign |
| Arends, Arthur | Agr | 70 | Melvin |
| Arentz, Elizabeth | Ch | 34 | Joliet, Illinois |
| Argo, David | $E E$ |  | Fowler, Indiana |
| Armington, Clara Grace | Mus | 33 | Dixon |
| Armstiong, Alice Nona | LAS |  | Tolono City |
| Armstrong, Arlo James W. | LAS |  | Kansas City, Mo. |
| Armstrong, Donald Alfonso | LAS | 33 | Metrobolis |
| Armstrong, Della | SS |  | Newton, Lowa |
| Armstrong, Elizabeth Emily | LAS | 29 | Champaign |
| Armstrong, Hazel Irene | Mus |  | Champaign |
| Armstrong, Horace | Com | 28 | Rivier Forest |



Armstrong, Paul Leo
Armstrong, Thomas Hunter
Arndt, Paul
Arnett, Anna Ruth
Arnold, Howard Shaver
Arnold, Orville Dayton
Arntzen, Inga Irene.
Arter, Eugenia Jenkins
Asai, Seiji
Ash, Ian Henry
Ash, James Landreth
Ashbeck, William Louis
Ashman, Oscar Harold
Atkins, Bessie May
Atkins, Millicent
Atkinson, Donald Samuel Peabody
Attebery, Hazel
Attebery, Homer Franklin
Atwell, Donald Burgess
Au Buchon, Joseph Montgomery
Augustus, Lalah Marie
Augustus, Ralph Edgar
Auld, Ernest Roland
Austin, Milton
Auten, John Thompson
Avery, Guy Thomas
Avery, Rowland Alonzo
Avey, Helen
Axline, Edward Springer
Babcock, Dan
Babcock, Jennie May
Bach, Bernice
Bachman, Alta Marie
Bacon, Carl Alfons
Bacon, Oliver Greene
Bacon, Robert Hamilton
Bader, Iras Lucile
Badger, Carroll John
Badger, Eunice Louise
Badollet, Marion Smith
Baechtold, Elsie Louise,
A.B. (Grinnell Coll.)

Baer, Sandford Joseph
Bahe, Dorothy Virginia
Bailey, Earl Willis
Bain, Wallace Bothwell
Baird, Ernest
Baird, Grace Jean
Baker, Charlotte Phelps
Baker, Clarence Everett
Baker, Earl Boggess
Baker, Ernest Monroe
Baker, Ferne
Baker, Fred Phelps
Baker, Gerald Clifford
Baker, Leon Joseph
Baker, Walter Earl
Bakhski, Sarva Rupa
Balbach, Nyle Jacob
Balch, Nellie Allison
Balderson, Ted Albert
Baldwin, Janet Christine
Baldwin, Leo Starr
Baldwin, Leonard Leslie
Baldwin, Margaret Helen
Baldwin, Milton Ford
Balkema, Salome Rose
Ball, Frederic Dunham
Ball, Mary Elsie
Ballard, Louise Myers
Ballinger, Emma Matilda
Ballinger, Ione Fredericka
Balthorpe, Elizabeth Margaret
Bame, Robert William
Bamesberger, Velda Christena
Bamford, Thomas
Bancroft, Anna Dewey
Bandy, Lorenson
Bangert, Clarence John
Bannister, John Howard
Barackman, Hazel B.
Baraglia, Anthony Victor
Barber, Franklin Brown
Rarber, Harold William
Barber, Hillis Elwyn

| Agr (SS) | 69 | Champaign |
| :---: | :---: | :---: |
|  |  | Kansas City, Missouri |
| LAS | 31 | River Forest |
| LAS |  | Mound City |
| ${ }^{\text {Agr }}$ | 59 | St. Charles, Missouri |
| LAS |  | St. Louis, Missouri |
| ${ }_{\text {Agr }}$ | 52 | Ottaza |
| LAS |  | Browning |
| LAS | $65 \%$ | Sycamore |
| LAS |  | Danville |
| Com | 49 | Kyoto, Japan |
| Agr |  | Oneida ${ }^{\text {Phida }}$ |
| LAS | 30 | Philadelphia, Pennsylvania |
| $A E$ | 118 | Chicago |
| $A E$ | 70 | Elgin |
| HSAgr | 39 | Evansville, Indiana |
| HSLAS |  | Evansville, Indiana |
| Com | 20 | Champaign |
| Com | 26 | Hillsboro |
| ${ }^{\text {Agr }}$ | 97 | Hillsboro |
| EE | 36 | Oak Park |
| HSAgr | 76 | Champaign |
| Agr | 1071 | Champaign |
| $A g r$ | 33 | Martinsville |
| Agr |  | Effingham |
| $A g r$ | 1091 | White Hall |
| ME | 717 | Three Rivers, Michigan |
| Agr $H S L A S$ | $34 \frac{1}{2}$ | Santa Fe, New Mexica |
| HSLAS |  | Mattoon |
| Com | $66 \frac{1}{2}$ | Wenona |
| AE | 73 | Anderson, Indiana |
| HSLAS | 98 | Danville |
| LAS. | 16 | Chicago |
| Music |  | Tiskilza |
| ME | 36 | Chicago |
| Agr | 58 | Harlan, Iowa |
| $E E$ | 85 | Pasadena, California |
| HSAgr |  | Kansas City, Missouri |
| $\mathrm{Agr}_{\text {( }}$ (S) | 8 | Maury City, Tennessee |
| ${ }_{L A S}^{L A S}(S S)$ | 38 | Riverside <br> Vincannes, Indiana |
| $L b$ | 51 | Talladega, Alabama |
| LAS |  | Murphysboro |
| LAS |  | Maywood |
| LAS (SS) | 30 | Boody |
| Agr | 92 | Martinsville, Indiana |
| Agr |  | Minneapolis, Kansas |
| Agr |  | Champaign |
| CerE |  | Fairmount |
| SS |  | Rome, New York |
| LAS | 20 | McLean |
| ChE | 37 | Denver, Colorado |
| ChE | 65 | Bement |
| A | 37 | Fort Wayne, Indiana |
| Com. | 105 | Bement. |
| RCE | 11512 | Kashmir, India |
| Com (SS) | 30 | Chenoa |
| HSAgr |  | Lerna |
| $A E$ (SS) | 72 | Wilber, Nebraska |
| LAE (SS) | 94 | Paris |
| $A E$ | 176 | Frecport |
| Com |  | Bridgeport |
| ${ }_{L}^{\text {LAS }}$ | 61 | Ottawa ${ }^{\text {New Haven, }}$ Connecticut |
| LAS | 99 | Clicago |
| LAS | 26 | Clinton |
| HSLAS | 65 | Rossville, Indiana |
| SS |  | Chenoa |
| ${ }_{L}^{L A S}$ | 42 | Upper Alton |
| $\xrightarrow{H S L}$ SAS |  | Chenoa |
| SS |  | Ouincy |
| $C E S p$ (SS) |  | Brfalo, New York |
| Agr | 36 | Lancashire, England |
| LAS |  | Maywood |
| ME |  | Lake City |
| Agr |  | Chicago |
| Agr | 28 | Kewanee |
| ${ }_{\text {MS }}^{\text {M }}$ (gr ${ }^{\text {r }}$ |  | Streator |
| Mgr | 23 | ${ }_{\text {Gibson }}$ City |
| $A g r$ | 3.3 | LaSalle |
| $A g r$ | 32 | LaFor |

Barber, John Kienneth
Barber, Wilbur Barrett
Bardwell, Anna Laura
Bardwell, Conrad Morton
Bargh, George Holbrook
Barker, Edwin Franklin
Barkley, Rupert Randolph
Barkman, Marcus Glazer
Barkow, Emory Merill
Barkstrom, Edward Carl
Barnes, Clifton Eugene
Barnes, Donald Jerome
Barnes, Farl Convis
Barnes, Harold John
Barnes, Helen Miriam
Barnes, Howell Hart
Barnes, Mary Grace, A.B.
(Purdue Univ.) 1894
Barnes, Otis Avery
Barnes, Russell Daniel
Barnes, Ruth Lillian
Parnes, Vinifred
Barnett, Herman Kohlsaat
Barnum, Richard Fyfe
Barr, Forest Astley
Barr, Lola Rea
Barr, Oren Augustus
Barreti, Arthur Ernest
Barrett, Frank Newton
Barrett, Lawrence Horatio
Barringer, Panl Charles
Barry, Evelyn Elizabeth
Barry, Jennis Eulalia
Barry, Mary Cordelia
Bartels, Minnic
Bartels, Nellie Flora
Barth, Edward Fred
Bartholomew, Herbert
Bartholow. James Summerfield
Bartlett, Harry Owen
Bartlett, Lowell Wilson
Bartley, Charles Austin
Bartley, Joln Solomon
Bartling, Arthur William
Barto, Harriet Thompson
Barto, Margaret Murray
Bartos, Bohuslay
Bash, David Anderson
Bass, Ozela Zenadia
Bates, Charles Einmett
Bates, Ruth Elizabeth
Gatson, Tohn Thaddeus
Battey, Bradford Reed
Battey, Zilpha Curtis
Battrell, Frank
Bauder, Lewis Augustus
Bauer, Ezra Edward
Bauer, Irving Newell
Baumant, Charles Page
Baysinger, Bertha
Baysinger. Walter George
Beach, Alice Leslie, A.B.
(Univ. Minnesota) 1913
Beach, Amy Adaline, A.B., 1914
Beach. Frank Herman
Beal. Walter Hubert
Beals, Clarence Hubert
Bean, Lillian Bcrtha
Bear, Bess
Bear, Chester Randall
Beard, Odian Swain
Beardsley, Henry Scovel
Beatty, Edward Corbyn Obert
Beatty, Owen Chauncey
Beaubien, Warren Platt
Beauchamp, Pearl Edith
Beavers, ILarrison Bruc.
Beob, Edwin Adams
Bebb. Forrest
Beck, Gerald Eugene
Beck, Lonisa
Beck, Ruth Marie
Becker, Harry Franeis
Becker, Tohn Greenleaf
Becker, Lewis Michael
Becker, Paul
Bccker, Walter Henry
Beckwith, Allen Eugenc

| ${ }_{E E}^{\text {L.AS }}$ (SS) | $95 \frac{1}{2}$ | LaFox Jolict |
| :---: | :---: | :---: |
| HSLAS | 116 | Aurora |
| LAS |  | Aurora |
| $L$ | 10 | Kinmundy |
| ME | 113 | Rock Island |
| SS |  | Cuero, Texas |
| Com | 25 | Princeton |
| Agr | $14 \frac{1}{2}$ | Chicago |
| ME | 100 | Chicago |
| ChE |  | Albion |
| LAS | 31 | Pekin |
| REE | 63 | Decatur |
| ${ }_{L}$ AS | 72 | Jolict |
| ${ }_{A} A S$ |  | Wasliburn Chicago |
| Zb |  | La Fayette, Indiana |
| ChE | 109 | Auburn |
| $A E$ | 111 | Taylorville |
| LAS | 55 | River Forest |
| LAS | 32 | Kansas City, Missouri |
| LAS | 15 | Chicago |
| ME | 99 | LaGrange |
| EE |  | Oak Park |
| ${ }_{S S}$ | 11 | Grecnaille |
| ${ }_{\text {S }} \mathrm{S}$ | 8 | Eldorado |
| Coin |  | Clinton, Iowa |
| Agr $A g r$ | 46 | Chicago |
| Agr Agr |  | Jalena |
| SS |  | Ottaza |
| LAS | 45 | Champaign |
| SS |  | Champaign |
| LAS | 53 | Chicago |
| LAS | 117 | Edziardsville |
| Agr | 115 $\frac{1}{2}$ | Pana |
| Com |  | Indianapolis, Indiana |
| $L A S$ | 104 | Mt. Vernon, New York |
| ${ }_{\text {A }}$ | 70 | Eau Claire, Wisconsin |
| Com |  | Rockford |
| A | 108 | East Waterloo, Iowa |
| EE |  | Litchficld |
| HSLAS | 103 | Urbana |
| HSLAS | 70 | Urbana |
| CE | 13 | Chicago |
| ${ }_{\text {Ch }}$ |  | Hannibal, Missouri |
| SS | 41 | Quincy |
| CerE | 59 | Galcsburg |
| ${ }_{\text {Che }}$ CS |  | Baton Rouge, Lonisiana |
| Com | 27 | Marshalt |
| HSLAS | 70 | Tiskiva |
| SS | 61 | Rusheville |
| Agr | 64 | Berwyn |
| $C E$ |  | Toledo, Ohio |
| Agr |  | Comptor |
| ${ }_{\text {S }}^{\text {L }}$ AS |  | Rantoul |
| Agr |  | Aurora |
| $L b$ |  | Hutchinson, Minnessta |
| SS |  | Champaign |
| LAS | 100 | Champaign |
| $L$ | 14 | Molinc |
| Agr |  | Gulva |
| LAS | 67 | Blue Mound |
| LAS |  | Ludlow |
| Conr | 40 | Ludlow |
| LAS |  | Shabbona Misouri |
| Agr LAS | 480 | Kansas City, Missours |
| Agr | 33 | Urbana |
| $A E$ | 112 | Whiting, Indiana |
| LAS |  | Arenzuille |
| Com |  | Washington, D. C. |
| $A g r$ | 110 | Chicago |
| $A g r$ | 105 | Muskogce, Oklahoma |
| $\stackrel{A}{S} S$ |  | Long Beach, California Pckin |
| HSLAS | 33 | Chanpaign |
| ${ }_{S S}{ }_{S}$ |  | Knowville |
| SS | 112 | Canpbell, Missouri |
| ME | 75 | Berwyn |
| Com (SS) | 57 | Chicago |
| Agr |  | East St. Louls, |

Bee, Winifred Marian
Beebe, Horace Newell
Beers, Otis Edward
Bethel, Wesley Arthur
Behr, Herbert Richard
Behrens, Martin Albert
Behrensmeyer, Helen
Beidelman, Jennings Clyde
Beidler, Herbert Bishop
Beifuss, Edwin Louis
Beilin, David Solomon
Bell, Cecile Mary
Bell, Harrington Alexander
Bell, Harry
Bell, John Haslett
Bell, Kenneth Corwin
Bell, Norma Elizabeth
Bellamy, John William
Belleff, Vladimir Tanee
Belnap, Nuel Dinsmore
Belshaw, Charles Franklin
Beltz, John Shafer
Bemis, Thomas Jr.
Bench, Stella Louise
Bender, John Rhinehold,
Bencdict, Irvin Charles
Benedict, Ralph Preston
Benham, Norman Beach
Benner, Arthur Jacob
Benner, William Jacob
Bennett, Basil
Bennett, Frank Luvern
Bennett, Hazel Marguerite
Bennett, Marie
Bennett, Parker William
Bennett, William Lee
Benson, Eugene LeRoy
Benson, Keith William
Benson, Merrill Manning
Benson, Susan True, A.B.
(Missouri Wesleyan Univ.) 1909
Benton, Frank Washington
Bentz, Clarence Louis
Berg, Ben Conrad
Berg, Fred Leonard
Berger, Cora
Berger, Irene Mae
Bergeson, Ernest Darwin
Bergner, Nils John Andrew Jr.
Berlin, Marie Valentine
Berline, Henry Lee
Berline, Mildred Lee
Bernard, Clifford Shaffer
Berner, Louis Rolland
Bernhardt, Josephine Elizabeth
Bernstein, Charles
Bernstein, Martin
Berryman, Paul Ruytter
Beshers, Paul Carlyle
Bess, Stanley Tohn
Best, Lawson Chester
Best, Leon Henson
Beust, Carl
Bevis, Albon Ledru
Beyer, Charles Anthony
Beyer, Elizabeth Gunder
Beyer, Verne Charles
Bickel, John Joseph Jr.
Bierbanm, Elmer Alfred
Bigel, William Jr.
Bigelow, Lorene E. M.
Bigelow, Lucile L.
Bigelow, Roy St. Lawrence
Bilderback, Byron
Bilik, Samuel
Billman, Dale
Billman, Elliott
Billman, Harry Carl
Binder, George Frederick
Bing, Bertha Helen
Bingham, Charles Lathrop
Bingham, William Frederick
Birch, Stephen Mescrve
Birchard, John Wesley
Birchard, Leola Mary
Birdsall, Lloyd Burton
Birks, John Milton

| LAS | 341 | Chicago |
| :---: | :---: | :---: |
| $C E$ |  | Chicago |
| ME | 88 | Elkhart, Indiana |
| A | 72 | Lake Bluff |
| $E E$ | 112 | Chicago |
| ChE |  | Crete |
| LAS | $97 \frac{3}{2}$ | Quincy |
| A | 29 | Naperville |
| A |  | Auburt, Indiana |
| Agr | 1372 | Chicago |
| SS | 59 | Wilmette |
| LAS |  | West York |
| Com | 413 | Oak Part: |
| SS |  | DeSoto, Iowa |
| Agr | 34 | Rushville |
| Com | 96 | Robinson |
| LAS | 71 | West York |
| $A E$ |  | Sondoval |
| LAS |  | Stromita, Bulgaria |
| $L$ | 49 | Washington, D. C. |
| ME | 108 | Rockford |
| $E E$ | 108 | Nickerson, Kansas |
| ME |  | Indianapolis, Indiana |
| SS | 80 | Galena |
| SS |  | Manhattan, Kansas |
| Cont |  | Sazanna |
| Com |  | Omaha, Nebraska |
| LAS | 24 | Crothersville, Indiana |
| CerE | 135 | Chicago |
| CerE | 130 | Chicago |
| Agr | 33 | Dudley |
| $\mathrm{Agr}^{(S S S}$ ) | 114 | Cortland |
| HSLAS | 99 | Washington |
| HSLAS |  | Champaign |
| Com |  | Metcalf |
| Agr sp |  | Urbara |
| Com |  | Sterling |
| Com | $26 \frac{1}{2}$ | Sterling |
| $\stackrel{L}{b}$ |  | Urbana |
| SS | $6 \frac{1}{2}$ | Worthington, Pennsylvania |
| $A E$ | 118 | Chicago |
| LAS | 103 | Crystal Lake |
| Com | 19 | Moline |
| LAS | 31 | Daverport |
| LAS | 70 | South Holland |
| Agr | 12 | Eariville |
| EE |  | Chicago |
| LAS | 1051 | Chicago |
| Agr | 70 | White Hall |
| Agr sp |  | White Hall |
| $A E$ | 638 | Wellman |
| ChE | 32 | Indianapolis, Indiana |
| LAS (SS) | 98 | Collinsville |
| EE |  | Oglesby |
| CerE | 72 | Chicago |
| Com | 34 | Dounzers Grove |
| ME (SS) |  | El Paso |
| ME (SS) | 712 | Rosamond |
| $C E$ Com |  | Boswell, Indiana |
| ${ }_{\text {Com }}$ | 30 | Galva Wisconsir |
| ${ }_{\text {Agr }}^{\text {Com }}$ | 15 | LaCrosse, Wisconsin St. Louis, Missouri |
| $\stackrel{\text { Com }}{ }$ | 993 | St. Louis, Missouri |
| HSLAS (SS) | 102 | Logansport, Indiana |
| $E E$ | 24 | Princeton |
| A |  | Chicago |
| Agr | 34 | Alton |
| Agr | 84 | Chicago |
| Mus sp |  | Westrield |
| Mus sp |  | Westficld |
| REE | 66 | Chicago |
| Com (SS) | 36 | Champaign |
| LAS (SS) | 31 | Franklin Park, New Jersey |
| LAS |  | East St. Louis |
| $\stackrel{L}{L}$ | 61 | East St. Louis |
| SS |  | Dayton, Ohio |
| ${ }_{\text {Agr }} \mathrm{AS}$ | 50 | Aurora |
| Com | 24 | Riz'er Forest |
| SS |  | Wichita, Kansas |
| Com | 401 | Danz'ille |
| LAS (SS) | 65 | Urbana |
| HSAgr | 30 | Urbana |
| $A g r$ | 26 | Sterling |
| $A g r$ | 32 | Cornland |


| Birong, Helen Margaret | SS | $8 \frac{1}{2}$ | Chicago |
| :---: | :---: | :---: | :---: |
| Bishop, Jessie Elizabeth, A.B., 1911 | Lb | 33 | Evanston |
| Bishop, Walter Giles | A |  | Auburn, Indiana |
| Bjelland, Harold Gerhard | Agr | 32 | Lcland |
| Black, Beryl A. | SS | 12 | Paris |
| Black, Ernest Glenn | LAS |  | Rushrille |
| Black, Rohert Sommerville | $M E$ | 87 | Mendota |
| Blackall, Alfred Harris | ${ }_{S} S_{S}$ | 31 | Chicago |
| Blackburn, John C. | ${ }_{S}{ }_{S}$ | 3 | Columbia, South Carolina |
| Blackburn, Luella Sarah | ${ }_{C E}$ S | $31^{5 \frac{1}{2}}$ | Jacksonville |
| Blair, Daniel Augustus | LAS |  | Murphysboro |
| Blair, Edgar Theron | L.AS | 41 | Chandlerville |
| Blair, Hattie Mary | SS |  | Salem |
| Blake, Clarence Sidney, A.B. (Olivet Coll.) | SS |  | Grand Rapids, Mich. |
| Blake, Jcsse Harold |  | 14 | Chicago |
| Blake, John Dullam | LAS |  | Rockford |
| Bleisch, Selmar Anton |  | 64 | Alhambra |
| Bleuel, Marie Teresa | LAS | 118 | Chicago |
| Bliss, Stanley Waters | A |  | Hope, Arkansas |
| Blix, Einar Thomas | $A E$ |  | Fargo, North Dakota |
| Block, Edward Stevenson | Agr | 102 | Chicago |
| Block, Frieda Emma Alvina | Mus (SS) | 85 | Champaign |
| Blohm, George Charles | LAS | $73 \frac{1}{3}$ | Chicago |
| Blood, Alan St. Clair | Agr |  | Grayville |
| Bloodgood, Wylie | A |  | Aurora |
| Bloom, Peter Earl | Agr | 19 | Caddo, Ok!ahoma |
| Bloomfield, Alice Sayles | SS |  | Urbana |
| Bloomingdale, Paul Harold | SS | 71 | Shabbona Grove |
| Blue, Harry J | SS | 19 | Salem |
| Bluestein. Irwin Jerome | Agr |  | Chicago |
| Bluhm, Harold John | ChE | 75 | Chicago |
| Blum, Harry John | Com |  | Chicago |
| Boardman, Curtis Love | ${ }_{A}$ | ${ }_{1371}$ | Hoopeston |
| Bockemohle, Clinton L. A. | AE | 13712 | Ellinwood, Kansas |
| Bockhoff, Harry William | ME |  | Richmond, Indiana |
| Bodenschatz, Arthur Harold | ME | 3 | Chicago |
| Boerner, Eugene Sonnerberg | Agr | 59 | Port Washington, Wisconsin |
| Boeschenstein, Harold | Com | 33 | Edwardsville |
| Boggs, Hsi Fan | Com | 106 | Shanghai, China |
| Boghasian, Melton Horsep | SS | 71 | Teheran, Persia |
| Bogue, Arthur Reuben | Med | 33 | Sãianna |
| Bohrer, William LeRoy | Com |  | Falls City, Nebraska |
| Bolen, Mabel Helen | $L A S$ | 33 | Kansas City, Missouri |
| Boles, Ewing Thomas | SS | $8 \frac{1}{2}$ | Williamstown, Kentucky |
| Boles, Stanley Atwood | SS |  | Williamstown, Kentucky |
| Poleyn, Charles John | Agr | $24 \frac{1}{2}$ | Oak Park |
| Bolinger, Emerson Franklin | EE | 112 | New Holland |
| Bolling, Robert Hill | Agr | 30 | Chicago |
| Bollman, Irene Lucille | Mus |  | Tuscola |
| Bollman, Jesse Louis | Med | 51 | Springficld |
| Bollman, Marie Christine | SS |  | Champaign |
| Bolton, Ralph Waldo | EE (SS) | $43 \frac{1}{2}$ | Champaign |
| Bolton, Wyman Jesse | ME | 38 | Nauvoo |
| Bond, Ethel, B.L.S., 1908 | SS |  | Chempaign |
| Bond, Lyda, A.B., 1906 | HSLAS |  | Urbana |
| Bon Durant, Walter Hontom | Com |  | South Bend, Indiana |
| Bonnen, Clarence Alfred | Agr |  | Gibson City |
| Bonner, Arthur Lee | ME | 30 | Champaign |
| Boomer. Ruth Lillian | SS |  | Tolono |
| Boone, Bonnie Ellyn | Mus |  | Cleveland, Ohio |
| Boone, Odis Vern | SS |  | Ncweastle, Pernsylvania |
| Booth, Lyman | Agr | $65 \frac{1}{2}$ | Marshall |
| Booth, Norman Ralph | Agr | 16 | South Bend, Indiana |
| Borah, Loco Wilson | Com (SS) | 33 | Urbana |
| Borch, Ruth Halley | SS |  | Chicago |
| Borg, Elmer Ambrose | Agr | 33 | Staunton, Iowa |
| Borgerding, Jerry William | SS |  | Muskegon, Michigan |
| Borman, Mabel Mae | LAS |  | Morrison |
| Born, Charles Edgar | Agr | 34 | Cerro Gordo |
| Born, Katherine Lois | HSAgr (SS) | $71 \frac{1}{2}$ | Champaign |
| Born, Ray | Com | 82 | Champaign |
| Born, Russell | ChE |  | Champaign |
| Borton, Cecil Walden | Com (SS) | 66 | Urbana |
| Borucki, Louis Francis Felix | ME | 39 | Chicago |
| Boston, Paul McConley | Com | 64 | Yorkzille |
| Bosworth, Walter Henry | Com | 34 | Elgin |
| Bote, William Adam | SS | 5 | Pana |
| Bourassa, Reginald Pierre | Agr | 96 | Westfield, Massachusetts |
| Bouton, Charles Sherman, Jr. | Agr |  | Springdale, Arkansas |
| Bovard, Millard Forrest | LAS | 28 | Marseilles |
| Bowditch, Fred Tryon | $E E$ |  | Urbana |
| Bower, Paul Eugene | Agr | 69 | Champaign |
| Bowersock, William Michael | ${ }_{M S E}$ | 32 | Maroa |
| Bowles, Walter Sheriff Bowlus, Hazel W., A.B., 1915 | ${ }_{S S}^{\text {MSE }}$ |  | Springfield |
| Bowlus, Hazel W., A.B., 1915 | SS |  | Urbana |


| Bowman, Emily Maurine | LAS | 47 | Pierceton, Indiana |
| :---: | :---: | :---: | :---: |
| Bowrman, Mabel | LAS | 60 | Danville |
| Boyd, Albert Matthew | CerE |  | Bradford |
| Boyd, Leo Lorraine | Ch |  | Herrin |
| Boyd, Marian Cummings | LAS | 67 | Sherwood |
| Boye, Walter Fred | LAS | 111 | Urbana |
| Boyle, Esther Hortense | HSAgr | 32 | Hennepin |
| Boyle, Harold Ambrose | Com |  | Clicago |
| Boyle, Violet Beatrice | HSAgr |  | Hennepin |
| Boynton, Jay Farnham | Agr | $\frac{1}{2}$ | Pleasant Plains |
| Bradley, John Thomas | Com |  | St. Louis, Mo. |
| Bradley, LeRoy | $A E$ | 72 | Ft. Wayne, Indiana |
| Bradley, Loyd | $L$ | 72 | Carbondale |
| Bradley, Lucile | SS | 105 | Carbondale |
| Bradley, Marie Lynn | SS | 13 | Princeton |
| Brady, George Keyports | LAS (SS) | 96 | Brooklyn, New York |
| Brady, Margaret Mary | LAS |  | Chicaga. |
| Brady, May Frances | LAS |  | Champaign |
| Bragg, Lena | SS |  | Monticello |
| Brain, Oliver Galbraith | EE | 35 | Chicago |
| Bramlet, Hubert Butler | LAS | 69 | Eldorado |
| Brams, Julius | Med |  | Chicago |
| Branch, Nelle Uree, A.B., 1907 | Lb | 56 | Champaign |
| Branch, William Ralph | Agr | 66 | Champaign |
| Brandner, Emil George | LAS | 112 | Chicago |
| Brandon, Eugenie Josephine | LAS | 61 | Farmer City |
| Brandon, Joseph Franklin | Agr | 102 | Washington, Indiana |
| Brandt, Frederick Marius | Com |  | Los Angeles, California |
| Brandt, Richard Clarence | $M E$ | 34 | Evanston |
| Braun, George, Jr. | $A E$ | 5 | Chicago |
| Braun, Richard George | $A E$ | 66 | Hamilton, Ohio |
| Brauns, Helen Marie | HSAgr |  | West Chicago |
| Braunsdorff, Reginald Kenneth | EE | 37 | Mattoon |
| Bray, Leonard Theodore | A |  | Ironwood, Michigan |
| Brazeau, Eugene Francis | Com | $62 \frac{1}{2}$ | New York City |
| Brazeau, Guy Stanton | $A E$ |  | Nekoosa, Wisconsin |
| Brazelton, Calanthe Miriam | LAS | 34 | Greensburg, Indiana |
| Brede, Lothar Homer | Ch | 33 | Collinsville |
| Breece, Howard David | LAS | 30 | Mt. Vernon, Indiana |
| Breedis, John | Ch (SS) | 10012 | Urbana |
| Breese, Carl Shipman, B.S. (Kansas Agr. Coll.) 1912 | SS |  | Manhattan, Kansas |
| Breitstadt, Emma Matilda | LAS | 96 | Quincy |
| Breitstadt, Hulda Charlotte | HSLAS (SS) | 93 | Quincy |
| Bremer, Abraham Meyer | Cont |  | DePue. |
| Breneman, Amos Lloyd | Agr | 97 | Emporia, Kansas |
| Brenneman, Charles Gage | SS |  | Ava |
| Brennan, Wintress, A.B., 1914 | Lb |  | Ogden |
| Brentlinger, Clell McArthur | EE | 107 | Urbana |
| Brew, George Joseph | Com | 21 | Chicago |
| Brewhaker, Harvey Edgar | Agr | 11 | Bardolph |
| Brewster, Harold Spencer | Agr | 34 | Clayton |
| Breyfogle, Ruth Edith | LAS |  | Crown Point, Indiana |
| Bridgan, Erna | SS | 1 | Chicago |
| Briggs, Benjamin Herbert | Com | 11 | Minier |
| Briggs, Byron Gould | LAS |  | North Adams, Massachusetts |
| Briggs, Flora Bernice | HSAgr | 67 | Champaign |
| Briggs, Ray Herbert | $L A S$ | 31 | Clinton, Indiana |
| Brigham, Erwin Risley | Com: | 38 | Glencoe |
| Brinkerhoff, George Norman | LAS | 21 | Springfield |
| Brinkerhoff, Roelof Reynolds | SS |  | Utica, Ohio |
| Brinkerhoff, Verne William | LAS | 141 | Rock Island |
| Brinton, Helen | Agr | 16 | Dixon |
| Bristow, George Washington | LAS | 94 | Metropolis |
| Britt, Charles Allen | Agr | 68 | Penfield |
| Britt, Raymond Lewis | LAS | 53 | Freeport |
| Britt, Thomas Madison | Agr | $26 \frac{1}{2}$ | Wheeler, Texas |
| Brittin, William Allan, Jr. | Agr | 63 | Virdin |
| Broadwell, Agnes Marie | HSLAS | 34 | Fairbury |
| Brock, Thomas Hugh | LAS |  | Waynesburg, Pennsylvania |
| Brockmeier, Angelina Louise | HSLAS | 67 | Freepart |
| Brockmeier, Martha Matilda | HSLAS |  | Freeport |
| Brodfuehrer, Fred Michael | Agr |  | Chicago |
| Brolin, Marion Theodora | LAS |  | Rockford |
| Bromm, Alvin Carl | Agr | 37 | Evanstille, Indiana |
| Bronson, George Durvill | SS | 721 | Urbana |
| Bronson, Paul Jones | Med |  | Terre Haute, Indiana |
| Bronson, Roger Beckwith | Com | 97 | Champaign |
| Brook, Frederik Vail | Agr | 30 | Ardmare, Pennsylvania |
| Brooks, Charles Campbell | $A g r$ | 361 | Illmo, Missouri |
| Brooks, Ethel Isabel | HSLAS | 98 | Beicher City |
| Brooks, Eula Margaret | HSLAS | 21 | Urbana |
| Brooks, Frederick Augustus | E E | 712 | Urbana |
| Brooks, Joseph Chaney | Agr |  | Forreston |
| Brooks, Raymond Harrison Brooks, Roger | $\xrightarrow[\mathrm{Com}]{\text { Agr }}$ | 98 35 | Marion |

Brooks, Viola
Brookshier, Atwill
Brotherton, William Edgar
Brown, Albert Patl
Brown, Albert Willard
Brown, Alice, B.Ped.
(Michigan State Normal) 1892
Brown, Allen Brookins
Brown, Bayard
Brown, Bruce Keith
Brown, Catter Pennell
Brown, Clair William
Brown, Clarence Raymond
Brown, Dayton Reginald Eugene
Brown, Dorothy Sargent
Brown, Earl
Brown, Earl Radford
Brown, Edward Tilden
Brown, Elmer Ellsworth
Brown, Frank Albert
Brown, Frank Spangler
Brown, Grace Voris
Brown, Harlow Wood
Brown, Helen Dorsey
Brown, Irwin Tucker
Brown, John Lawrence
Brown, John Lyman
Brown, Julius
Brown, Kenneth George
Brown, Lelah Craig
Brown, Lisbeth
Brown, Lloyd Warfield
Brown, Paul Maurice
Brown, Ralph Powers
Brown, Robert Rea
Brown, Tom
Brown, Walter William
Browne, William Harcourt
Brownfield, Georgia
Brownficld, Lelah, A.B., 1910
Browning, Thomas Samuel
Brownlee, Kate St. Clair
Bruington, Earl Vivian
Brumbaugh, Rolland Edward
Brumbaugh, Roy Talmadge
Bruner, Georgia Faye,
Bruner, Philip Rexford
Bruns, Clansy Leslie
Bruns, Herman Edward
Brunskill, Eylar William
Brutus, Carl Russell
Brya, Edward Gunning
Bryan, Mabel Ruth
Bryant, Lyle
Bryant, Louis Ralph
Bryant, Mrs. Martin S.
Bryant, Robert Alfred
Buchanan, Ethel Harriet
Euchanan, George V
Buchanan, Richard Bell
Buchen. Helen Louise
Euck, Harold Philbrich
Buckler, Bruce Joseph
Buckler, Carl William, A.B., 1915
Buckler, Helen Irene
Buekley, Harry William
Buckley, Timothy John
Buckner, Orello Simmons
Buehler, Albert Carl
Buell, Charles Clinton
Buell, Temple Hoyne
Buerkin, Julius Allan
Buhai, Abraham Samuel
Buhrman, Elaine Louise
Bull, Willard Edwin
Bullock, Otis LeRoy
Bumann, Albert Theodore
Bunting. Loyd Daniel
Burch, Evelyn Ruth
Burg, Harold Edgar
Burger, Albert Harold
Burgess, Maleolm Herbert
Burgess, Osear William
Burgett, Charles Culbertson
Burgoon, David Warner
Burgston, Clyde Harold
Burke, Edmund

| LAS | 61 | Urbana |
| :---: | :---: | :---: |
| LAS |  | Macon |
| ME | 59 | Guthrie |
| A | 42 | Urbana |
| LAS | 103 | Giffin, Ohio |
| Lb |  | Ypsilanti, Michigan |
| LAS | 66 | Phoenix, Arizona |
| Agr | 66 | Genoa |
| ${ }_{\text {Agr }}$ | 911 | Greensburg, Indiana |
| Com |  | Indianapolis, Indiana |
| A | 18 | Chicago |
| HSLAS | 65 | Geneseo |
| LAS |  | St. Anne |
| Agr |  | Grenada, Mississippi |
| Agr |  | Noblesville, Indiana |
| Med |  | Chicago |
| Agr | 4012 | Elwood |
| LAS |  | Findlay |
| Agr | 62 | Findlay |
| Agr | 105 | Chicago |
| $A g r$ | 50 | Chicago |
| Com | 67 | Tiskilaue |
| ChE | 55 | Anderson, Indiana |
| RCE | 57 | Chicaso |
| $L_{S S}$ (SS) |  | Urbana |
| SS | 513 | Hillsbaro |
| Com |  | Decatur |
| $C E$ |  | Nokomis |
| $C E$ | 100 | Chicago |
| Com | 103 | Urbana |
| $A E$ (SS) | 80 | Winnetka |
| Agr |  | Quincy |
| Com | 32 | Chicago |
| HSAgr | 62 | Urbana |
| Cont |  | Urbana |
| Cers | 70 15 | Benton Benton |
| Agr | 103 | Monmouth |
| $S{ }_{S}$ |  | Philadelphia, Pennsylvania |
| SS |  | Philadelphia, Pennsylvania |
| LASS |  | Eldorado |
| LAS |  | Rack Island |
| EE |  | Hartsburg |
| Agr | 32 | Chicago |
| ${ }_{\text {Agr }}$ | 67 | Pontiac |
| Agr | 471 | Tolono |
| HSLAS |  | Kcwance |
| Ch |  | Clinton |
| Agr | 283 | Princeton |
| ${ }_{\text {Miss }}^{\text {Com }}$ |  | Springfield, Massachusetts |
| Com | 36 | LaGrange |
| LAS |  | Joplin, Missouri |
| Agr (SS) | 74 | Oklahoma, Oklahoma |
| LAS | 51 | Montello. Wisconsin |
| A (SS) | 24 | Chicago |
| ${ }_{S S}{ }^{\text {LAS }}$ (SS) | 26 | Metcalf |
| Mus (SS) | 2 | Champaign |
| ${ }_{S}$ |  | Davenport, Iozua |
| SS |  | Lamont |
| CerE | 102 | Newark, New York |
| Agr | 51 | Chicago Park |
| A | 112 | Highland Park |
| AE (SS) | 110 | Quincy |
| CerE | 102 | Chicago |
| ${ }_{E E}^{L} A S$ |  | Nashrille |
| EE | 34 | Elgin |
| ${ }_{C / h E}^{\text {Agr }}$ | ${ }_{5}^{1}$ | ${ }_{\text {Elkhart, }}^{\text {Litchineld }}$ Indiana |
| $L$ |  | Ellery |
| LAS |  | Sterling |
| EE | 37 | Decatur |
| Agr (SS) | 73 | Elgin |
| ${ }^{\text {Agr }}$ | 30 | Canton |
| Cam | 34 | $\stackrel{\text { Fairfield }}{ }$ |
| EE | 107 | E. St. Louis |
| Agr | $63 \frac{1}{2}$ | Moline |
| Con: | 40 | Mizwankee, Wisconsin |

Urbana
Macon
Urbana
Giffin, Ohio
Ypsilanti, Michigan
Phoenix, Arizona
Genoa
Wilmette
Greensburg, Indiana
Indianapolis, Indiana
Geneseo
St. Anne
Grctada, Mississippi
Noblessille, Indiana
Chicago
Elwood
Findlay
Findlay
Chicago
Tiskilwe
Anderson, Indiana
Cicago
Hillsbaro
Dataia
Decatur
Chicago
Urbana
Winnetka
chicago
Urbana
Urbana
Benton
Monmouth
Philadelphia, Pennsylvania
a, Pennsylvania
orado
Rack Island
Chicago
Pontiac
Champaign
Kewance
Clinton
Springfield, Massachusetts
LaGrange
Chicgo
Oklahoma, Oklahoma
Montello. Wisconsin
Chicago
Metcalf
Champaign
Davenport, Iowa
Newark, New York
Chicago
Highland Park
unincy
Chicago
Elgin

itchneld
Sterling
El
Cantan
Fairfield

40 Milwaskec, Wisconsin

| Buris, William Fogaty | Agr | 251 | Lincoln |
| :---: | :---: | :---: | :---: |
| Burkhart, Paul Henry | EE | 110 | Henry |
| Burleigh, Inez Lillian | LAS |  | Mazon |
| Burns, Clifford Clare | Agr | 102 | East Dıbuque, Iowa |
| Burns, Owen McIntosh |  |  | Danville. |
| Burns, Valerie Irene | HSLAS |  | St. Louis, Missouri |
| Burns, Wayne Emerson | Com |  | Mansfield |
| Burns. Wiibur Maurice | Com |  | Grand Rapids, Michigan |
| Burnside. Karl Ackerman | $A E$ | 31 | Orleans, Iowa |
| Burrell, Beulah | HSLAS | 62 | Effingham |
| Burrell, Thomas Henry | $A E$ | 111 | Albion |
| Burton, Clifiord Ketchum | LAS | 34 | Oak Park |
| Burton, Malcolm Vreeland | ChE |  | Gary, Indiana |
| Burton, Richard Coler | Agr |  | Richmond |
| Burton, Robert Alson, Jr. | LAS | 541 | Chicago |
| Burres, Opal, A.M., 1909 | SS |  | Urbana |
| Burwash, Grace Sarah | LAS | 16 | Champaign |
| Burwash, Louis Stephen | Agr | 65 | Champaign |
| Burwash, Lucie Pauline | HSLAS |  | Chambaign |
| Burwash, Mary Gladys, A.B., 1913 | Lb | 33 | Champaign |
| Burwash, Ralph Samuel | ME | 1082 | Champaign |
| Burwash, Ruth Margaret | HSLAS |  | Champaign |
| Busey, Garreta Helen | HSAgr | 114 | Urbana |
| Busey, Josephine Kathryn | LAS | 82 | Urbana |
| Bush, Alexander | Ch (SS) | 331 | Glencoe |
| Bush, Esther Virginia | LAS |  | Scymour, Indiana |
| Bush, Kenneth Burman | $C E$ | 117 | Quincy |
| Bushman, William Henry Harrison | ChE |  | Edwardsville |
| Buskirk, Donald Vernon | SS | 6 | Westżille |
| Bussard, Samuel Earll | $A g r$ |  | Palestine |
| Bussey, Charlotte Elizabeth, A.B. (Yankton Coll.) 1914 | $L b$ |  | Tabor, South Dakota |
| Butler, Allen Gilman | EE | 35 | Peoria |
| Butler, Gordon Emmett | Com |  | Cratherssille, Indiana |
| Butler, Jennie Rebecca | HSLAS |  | Lebanon, Indiana |
| Butler, Malvin Linwood | Com |  | Downers Grove |
| Butler, Mary | SS | 823 ${ }^{\frac{1}{2}}$ | Cairo |
| Butler, Walter Carter | Agr | 33 | Chicago |
| Butterfield, Francis Eugene | $E E$ | 72 | Urbana |
| Butterficld, Janet Maric | HSLAS |  | Belvidere |
| Butterfield, Ruth Blatt | HSLAS |  | Urbana |
| Butzer, Goldia Grayce | LAS | 15 | Urbana |
| Buzzard, Guy Asbion | SS | 16 | Mason City' |
| Byers, Paul Weaver | Agr |  | Di.ron |
| Cable, Merwyn Harden | Com |  | Mercedes, Texas |
| Cade, Albert Frederick. | LAS | $64 \frac{1}{1}$ | Belle Fourche, South Dakota |
| Cadisch, Gordon Francis | Agr | 70 | Clevcland, Ohio |
| Cadle, Chester Junius | Com | 93 | Charleston |
| Cady, Laurence Charles | ME | 31 | Kerianee |
| Caldwell, George Harold | Agr |  | Fargo, North Dakota |
| Caldwell, Kenneth Ryder | EE | 48 | Decatur. |
| Caldwell, Mary Lathrop | LAS | 33 | Champaign |
| Caldwell, Ruth Maric | LAS | 66 | Milford |
| Caldwell, Waltcr Randolph | LAS | 317 | Fairield |
| Calhoun, Preston Browne | Agr (SS) | 627 | Glencoe |
| Calkin, Charlie James | $M E$ | 36 | Crescent City |
| Calloway, Milton Lewis | SS | 1 | Hot Springs, Arkansas |
| Calvin, Ben Willis | LAS |  | Washington, D. C. |
| Camden, William Ricliard | SS |  | Creal Springs |
| Cameron, Charles Conrad | Com | 4 | Wilmette |
| Cameron, George Martin | Agr | 36 | Carpentersville |
| Campbell, Charles Warren | MnE | 73 | Coad City |
| Campbell, Chester Morgan | Ch | 32 | Elgin |
| Campbell, David Joseph | Agr (SS) | 126 | Urbana |
| Campbell, Douglass Sudmore | Com |  | Cleveland, Ohio |
| Campbell, Duncan McEvoy | CE | 941 | Chicago |
| Campbell, Ella Seaver, A.B. <br> (Morningside Coll.) 1913 | Lb |  | Champaign |
| Campbell, Ethelred Erasmus | ChE (SS) | 341 | St. Elizabeth, Jamaica |
| Campbell, Florence Maud | LAS | 99 | Tolono |
| Campbell, Florence Merle | HSLAS | 47 | Delta, Colorado |
| Campbell, Francis Marion | SS | 27 | Ursa |
| Campbell, George Albert | Lsp |  | Lead, South Dakota |
| Campbell, Grace Alberta, A.B. (Missouri Wesleyan Coll.) 1912 | $L b$ |  | Grant City, Missouri |
| Campbell, James Franklin | SS |  | Milwaukee, Wisconsin |
| Campbell, Jeanne Adeline | HSAgr |  | Pecatonica |
| Campbell, Marshall | Com | 29 | Chicago |
| Campbell, Marvine Margaret | LAS | $30 \frac{1}{2}$ | Doniphan, Missouri |
| Campbell, Mason Herbert | Agr | 645 | Elgin |
| Campbell, William Franklin | Agr | 65 | Urbana |
| Canaday, Miles Edwards | Agr | 54 | Chicago |
| Cannon, Lester Cloyd | Agr |  | Tower Hill |
| Cannon, Tyrone Murphy | $M E$ | 733 | Rapatee |
| Canon, Charles Coulson | ${ }_{\text {Agr }}$ | 72 | San Angelo, Texas |
| Cape, Ruth Charlotte | LAS | 33 | Rockford |
| Cargill, Frederick Chauncy | Agr | 60 | Mason City |

Carkhuff, LeRoy Franklin
Carley, Paul Sterling
Carlsen, Ralph Armond
Carlson, Alice Mae
Carlson, Ansgar Lilius
Carlson, Carrie Esther
Carlson, Harry Leonard
Carlson, Lee Russel
Carlson, Richard John
Carlton, George Alexander
Carman, Cbarles MacArthur
Carman, Florence Mattie
Carnes, John Kenneth
Carney, Sidney Silvester
Carr, Kenneth Wright
Carr, Vernon Wesley
Carr, William Henry
Carrier, Earle Wesley
Carrithers, Henry Havens
Carroll, Alfred Bailey
Carroll, Charles
Carroll, Franklin Otis
Carroll, James Bernard
Carson, Marcus Chesney
Carson, Natalia Margaretta
Carter, Floyd
Carter, Maud Russell
Carter, Wilbur Maxwell
Carter, William Stokely
Cartwright, Nellie G.
Cary, Malcolm Combs
Casey, Dawn Reber
Cash, Mabia Alice
Caskey, Arthur David
Cassella, William Nathan
Cassidy, Grattan George
Castello, Ray Robert
Castendyck, Charles Hamel
Castle, Drew William
Castle, Richard Lloyd
Castle, Russell D V
Castro, Julio Melchor
Cather, LeRoy Heywood
Cauble, Helen Frances
Cavanaugh, Marie Elizabeth
Cavette, Francis Erle
Cavins, William Ferguson
Cavitt, John William
Cawthorne, Dorothy Isabel
Caylor, John McShane
Cecil, Lawrence Keith
Cermak, Joseph Julius
Cessna, Robert
Chabor, Bernice
Chabot, Kathleen Martin
Chadderdon, Alvin Wayne
Chaiken, Edith
Chalcraft, Delos Maurice
Chalcraft, Lloyd Walton
Chamberlain, Ralph Gerald
Chamberlain, Richard Harris
Chambers, Roy Ellsworth
Champlin, Grace Elizabeth
Chan, Shiu Chien
Chan, Ye Young
Chandler, Edward Charles
Cbandler, Ruth
Chaney, Zoe Giadys
Chang, Hung Lieh
Chang, Ju Sinen
Chang, Mabel Rachel
Chang, Tien Tsai
Chang, Tze Li
Chapin, MEnor
Chapman, Donald Vanderburg
Chapman, Harry
Chapman, Harry Albert
Chapman, Harry Henderson
Cbapman, Thomas White
Chappelear, Claude Simpson
Charlton, Tohn R
Charpier, Leonard Louis
Chartrand, John Baptist
Chase, Joseph Harold
Chatten, Carney Edward
Checkett, Mable Irene

| ME |  | Morris |
| :---: | :---: | :---: |
| Med (SS) | 523 | Buckley |
| Com |  | Chicago |
| LAS |  | Oak Park |
| Agr | 65 | Batavia |
| LAS | 104 | Chicago |
| Agr | 70 | LaSalle |
| Com | 107 | Champaign |
| A |  | Chicago |
| ME |  | Chicago |
| ME |  | Oglesby |
| HSLAS | 33 | Goodwine |
| Agr |  | Urbana |
| Agr (SS) | 8 | Steward |
| $A E$ | 37 | Oak Park |
| Com | 65 | Denison, Iowa |
| Agr |  | Bowling Green, Missouri |
| $\stackrel{\text { SE }}{ }$ | 394 | Irving |
| $\mathrm{Ag}^{\prime}$ | 30 | Hudson |
| LAS |  | Chicago |
| Com |  | Shazineetown |
| REE | 100 | Jerseyville |
| A | 90 | Bradford |
| LAS | 57 | Chicaso |
| ${ }^{\text {Ag }}$ | 24 | Clinton |
| SS |  | Pierre, South Dakota |
| ${ }_{\text {A }}^{\text {Med }}$ | 60 | Indianapolis, Indiana Trenton |
| SS | 71 | Pennerille, Indiana |
| ME | 33 | Oak Park |
| HSLAS | 23 | St. Louis, Missouro |
| SS | 16 | Greerup |
| EE |  | Chicago Heights |
| ME |  | East Alton |
| A |  | Champaign |
| Agr |  | Chicago |
| Com |  | LaSalle |
| ME | 72 | Gridley |
| Com | 44 | Urbata |
| Com (SS) | 99 | Urbana |
| Agr | 543 | Cardenas, Cuba |
| AES |  | Lincoln ${ }^{\text {Chanpaign }}$ |
| LAS |  | Urbana |
| Com (SS) | 693 | Lacon |
| Agrsp |  | Mattoon |
| LAS |  | Woodland |
| LAS |  | Nobleszille, Indiana |
| Ch (SS) | $30 \frac{1}{2}$ | Champaign |
| ME | 24 | Chicago |
| Agr | $26 \frac{1}{2}$ | Darville |
| HSAgr | $20 \frac{1}{2}$ | Kankakee |
| HSLAS | 65 | Kgnkakee |
| Agr |  | Adair |
| LAS | 73 | Chicago |
| Agr | 34 | Allion |
| Agr | 78 | Albion |
| SS | 8 | Milwuakee, Wisconsin |
| Coms | 30 | Peru, Indiana |
| LAS | 23 | Cheroa |
| HSAgr | 96 | Chicago |
| Com (SS) |  | Canton, China ${ }^{\text {Shin Nig City, }}$ China |
| LAS (SS) | 157 | Flora ${ }^{\text {Sig City, Chind }}$ |
| SS |  | Chicago |
| SS | 872 | Champaign |
| LAS | 3 | Honan, China |
| Com | 44 | Chekiong, China |
| SS |  | Chicago |
| ${ }_{\text {Agr }}$ | 113 | Canton, China |
| RCE (SS) | 79 | Hunan, China |
| $M n E$ |  | Twin Lakes, Colorado |
| ${ }_{\text {Ag }}$ | 43 | Evianston |
| Agr |  | Raymond |
| ME |  | Hinsdale |
| $L A S$ |  | Belvidere |
| ${ }_{S}{ }^{\text {Agr }}$ | 1 | Greenville |
| LAS | 3 | Belvidere Chicago |
| EE | 133 | East St. Louis |
| ${ }^{\text {Agr }}$ |  | Toulon |
| SS | 1273 | Flora |


| Chen, Jung-ting | Agr | 33 | Canton, China |
| :---: | :---: | :---: | :---: |
| Chen, Lan-sung | Com | 1232 | Peking, China |
| Chen, Queh King | LAS | 92 | Hunan, China |
| Cheng, Fo Hung | Com |  | Shanghai, China |
| Chenoweth, Homer, A.B., 1913 | SS |  | Champaign |
| Chenoweth, Leland Frank | Med |  | Mason City |
| Cherry, Oscar Allen | Ch (SS) | 211 | Pawnee. |
| Chester, Jamie Margaret | HSLAS |  | Champaign |
| Chew, Dorothy | HSLAS | 120 | Puebla, Colorado |
| Childs, James Bennett | LAS (SS) | 40 | Shohonier |
| Chiles, Edna | Mus |  | Carlinville |
| Chiles, Howard Marion | ChE | 821 | Chamapaign |
| Chioco, Juan Ortiz | Agr |  | Sto. Damingo, P. I. |
| Chisum, Oscar Clifton | LAS |  | Little Rack, Arkansas |
| Chittenden, Robert Mearle | CerE | 66 | Brookfield, Missouri |
| Chmelik, Frank, Jr. | Agr |  | Chicaga |
| Choisser, Ferre | LAS | 32 | Benton |
| Choisser, William Carl |  | 26 | Benton |
| Choy, Bung Chen | $C E$ (SS) | 26 | Hanalulu, H. I. |
| Christ, George Phillip | ChE | 39 | Quincy |
| Christen, Lester Howard | $A E$ | 50 | Elgin |
| Christensen, Paul Galen | $A E$ |  | Menominee, Michigan |
| Chistopher, Arthur Bailey | CerE | 65 | Cantan |
| Christophersen, Stanley Marimus | $E E$ | 62 | Rockford |
| Christy, Glen, B.Mus., 1915 | SS |  | Harrisburg |
| Christy, Grace Jean | HSLAS | 35 | Urbana |
| Christy, Otto | Agr | $65 \frac{1}{3}$ | Riley, Indiana |
| Chubbuck, Judson Elson | Com | 68 | Gibson City |
| Church, Leroy | EE | 67 | West Chicago |
| Churchill, Fred Weaver | Agr | 23 | Fairbury |
| Churchill, Woodford | Agr |  | Fairbuy |
| Churton, Florence Helen | HSAgr | 74 | Plainfield, New Jersey |
| Chvatal, Ray James | CerE | 33 | Chicago |
| Cierpik, Casimir Stanley | $M E$ | 37 | Chicaga |
| Cieslik, Edmund | $C E$ | 120 | Chicago |
| Cilley, Lillie, A.B. (Grinnell Coll.) 1914 | $L b$ |  | Independence, Iowa |
| Cinnamon, Floyd Franklin | EE | 30 | Crete |
| Citizen, Carl Christopher | $L$ |  | Danville |
| Claney, Edwin John | Agr |  | Chicago |
| Clapp, Harland Tyler | Agr | 17 | Mentar, Ohio |
| Clarahan, Charles Henry | $C E$ | 38 | Oak Park |
| Clarida, Troy Wayne | Agr | 67 | Marian |
| Clark, Albert LeRoy | Agr | 33 | Chicago |
| Clark, Alice Broaddus, B.L., A.B., 1891, 1911 | SS |  | Urbana |
| Clark, Bayard Hand | LAS | 1231 | DeKalb |
| Clark, Charles M | RME |  | West Chicago |
| Clark, Frank Roundy | ChE |  | Wheaton |
| Clark, George | Agr | 97 | Carthage |
| Clark, George Leroy | Com |  | Bement |
| Clark, Harold Edward | CerE | 103 | Sterling |
| Clark, Harold Lyman |  |  | Minneapolis Minnesota |
| Clark, Harrison Blaine | Com |  | Brooklyn, New York |
| Clark, Harry Cecil | EE |  | Champaign |
| Clark, James Glen | Com | 37 | мошсаqua |
| Clark, Hattie | SS |  | Carmi |
| Clark, James Holbert | SS | 48 | Mattaons |
| Clark, James Russell | A | 114 | Urbana |
| Clark, John Donaldson | Med |  | Chicago |
| Clark, Margaret | Agr | 29 | Pearia |
| Clark, Marshall Grant | Agr | 33 | Cartlage |
| Clark, Mary Chase | Med |  | Pearia |
| Clark, Meribah Eliza | LAS | 116 | Mt. Sterling |
| Clark, Reid William | Agr | 469 | Attica, Indiana |
| Clark, Thomas Edward | $M E$ |  | Indianapolis, Indiana |
| Clark, Van Ness | Com | 31 | Dansville, New York |
| Clarke, George Edward | Med | 72 | Noblesville, Indiana |
| Clarke, Helen Beulah, A.B., 1915 | Mus |  | Urbana |
| Clarkson, Albert Jay | REE | 130 | Champaign |
| Clausen, Clara Alice | LAS | 99 | Secor |
| Clauson, Henry Webster | Med |  | Williamsport, Indiana |
| Clayberg, Dorothea Marion | A | 118 | Ook Park |
| Clears, Harry Loomis | Com |  | Kewanee |
| Clegg, Carl | ME | 37 | Chandlerville |
| Clem, Leona | LAS | 32 | Casey |
| Clem, Orlie Martin | LAS | 34 | Benton |
| Clements, Esther 1914 | Com | 59 | Champaign |
| Clements, Olen Robert, A.B., 1914 | $L$ | 78 | West Unian |
| Clements, Philip Louis | ${ }^{\text {Agr }}$ |  | Staningtan |
| Cleve, Albert | $C E$ | 55 | Chicago |
| Cleveland, Arthur Mortland | ${ }_{M E}{ }_{\text {L }}$ |  | Plymouth, Indiana |
| Cleveland, Warren Eddy Clevenger, Zora Goodwin | ME | ${ }^{39} 6$ | Rockford Muncie, Indiana |
| Clifford, Woodbridge Kenneth | Agr |  | Orion |
| Cline, Albert Ross. | Agr |  | Rock Island |
| Cline, Gerald Morris | Med | 32 | LeRay |
| Cline, Marguerite Arabelle | HSLAS |  | Swain, Arkansas |


| Clinebelh, Howard John | ${ }_{\text {Agr }}$ | 03 | Glasjord |
| :---: | :---: | :---: | :---: |
| Clorfine, Irwin Bernard | Agr |  | Chicago |
| Close, Arthur Buekley | ${ }_{\text {Agr }}$ | 33 25 | Chicago <br> St. Louis, Missouri |
| Cloyd, Louis Sammel | ${ }_{\text {HSAgr }}$ | 25 | St. Louts, Missouri |
| Cobb, 1-rieda | LAS |  | Falls Church, Virginia |
| Cobb, Thomas H | SS | $6 \frac{1}{2}$ | Neze Burnside |
| Cobb, William Henry | Com |  | Tipton, Iowa |
| Cochran, Russell William | LAS | 60 | Champaign |
| Coffey, Clara E | SS |  | Urbana |
| Coffey, Mary litia | SS |  | Lenoir, North Carolina |
| Coffey, Malter Castella, B.S.', M.S., 1906, 1909 | SS |  | Urbana |
| Cohen, Carl | Med | 26 | Atlanta |
| Cohen, Isadore Maurice | $A E$ | 60 | Chicago |
| Cohen, Isadore Perry | CerE |  | Chicago |
| Cohen, Julius | ${ }_{L}$ AS | 66 | St. Louis, Missouri |
| Cohn, Lewis Allen | Com | 13 | Chicago |
| Coile, Sam Henry | ${ }_{S}^{A}$ | 742 | Cookeville |
| Colbert. James R | SS |  | Urbana |
| Colby, Paul Whiting | A | 62 | Sioux City, Iowa |
| Cole, Elwood Bourland | ME | 88 | Pcoria ${ }^{\text {Grecnville }}$ |
| Coley, Glenn | $C h E$ | 100 | Beardstown |
| Colgrove, Vivian Geraldine, A.B. <br> (Uniz. of Minnesota) 1908 | Lb |  | Minneapolis, Minnesota |
| Collier, Ethel Alice | LAS | 65 | Union Grove, Wisconsin |
| Collins, Campbell Stephen | Agr | 27 | Peoria |
| Collins, Charles O. | $C E$ |  | Arthur |
| Collins, Fred Adair | ${ }_{\text {A }}^{\text {A }}$ Sr |  | Evanston |
| Collins, Guy | SS | 1 | Garrett |
| Collins, Helen Beatrice | HSLAS | 41 | Benton Harbor, Michigan |
| Colims, Ina May | LAS |  | Hillsboro |
| Collins, Irvin Bliss | LAS (SS) | $50 \frac{1}{2}$ | Potomac |
| Collins, Julien Hampton | Com |  | Chicago |
| Collins, Lathan Hunter | CE |  | LaMoille |
| Collins, William | LAS |  | Negaunce, Michigan |
| Colnney, Duane Campbell | ME | 36 | Chicago |
| Colson, Robert John | LAS | 33 | St. Charles |
| Colton, Edwin Thome | MSE | 71 | Kansas City, Missouri |
| Colton, Henry Richardson | ChE |  | Hinsdale |
| Colton, Russell Smith | MSE | 111 | Kansas City, Missouri |
| Colvin, Esther Miarie | SS |  | Urbana |
| Comer, Helen Louise | SS |  | Charleston |
| Compton, Donald Elliott | AE | 36 | Tomah, Wisconsin |
| Comstock, Cbauncey Darling | Agr |  | Chicago |
| Comstock, Keyon Phinister | Agr |  | Chicago |
| Conant, Lewis Jasper | LAS (SS) | 231 | Kinmundy |
| Conard, Iva Louise | LAS | 30 | Monticello |
| Conard, Ruth | Mus |  | Monticello |
| Conboy, Mabelle Inez | SS |  | Jacksonville |
| Condon, Edith Frances | HSLAS |  | Shefficld |
| Condrey, Ralph Smith |  |  | Lebanon |
| Conefry, Hal Wynan | LAS | 84 | Le Roy |
| Conger, Almon Mortimor | ME | 35 | Elgin |
| Congleton, Frank Harold | Agr | 33 | Urbana |
| Conklin, Dorsey Tyler | Agr | 23 | Rockton |
| Conklin, Helen Naomi | HSLAS | 15 | Roscoe |
| Conklin, Paul Stanley | SS | 115 | Roscoe |
| Connell, David Evans | CE | 39 | Chicago |
| Connor, John Hal | LAS | 34 | Newton |
| Conrad, Alma Bertha | SS |  | Altamont |
| Conrad, Roy Monroe | SS |  | Darlington, Indiana |
| Conrad, Charles Smedley | $M E$ |  | Sycamore |
| Consoer, George Otto | $C E$ | 78 | Oak Park |
| Cook, Dorothy Elizabeth, A.B. (Denver Univ.) 1914 | $L b$ |  | Denver, Colorado |
| Cook, Eugene | $C E$ | 82 | Odin |
| Cook, Iohn Manchester | Com | 33 | Chicago |
| Cook, Leeson Hay, Ph.B. (Univ. of Chicago) 1913 | $L b$ |  | Warrensburg, Missouri |
| Cook, Morris Henry | EE |  | Greenup |
| Cook, Stephen Wallace | Com |  | Evansrille, Indiana |
| Cooke, Robert Howell | $C E$ |  | Blairstown, New Jersey |
| Cooke, Russell Stewart | $C E$ |  | Chicago |
| Cookson, Linn Palmer | $C E$ | 34 | Corlinville |
| Cooley, Roy Claiborne | Agr | 68 | Clinton |
| Coolidge, Joseph Lexington | Com: |  | Cleveland, Ohio |
| Coolidge, Richard Newell | $C E$ | 110 | Lead, Soath Dakota |
| Coolidge, Robert Blake | Agr | 33 | East Cleveland, Ohio |
| Coolidge, Willian Francis | ${ }^{A g r}$ | 29 | Bloomington |
| Cooling, Kenneth George | $A E$ | 36 | Rockford |
| Cools, Gabriel Victor | LAS | 65 | Ancon, Panama |
| Cooney, Lucile Elizabeth | Mus |  | Pckin |
| Cooper, Charles Edward | Agr | 101 | Carlisle, Indiana |
| Cooper, David William | EE | 103 | Astoria |
| Cooper, Edward Alden | SS |  | LaGrange |
| Cooper, Harry Perkins | $A E$ | 60 | Fayette, Ioze |


| Cooper, Henry Noble, Jr. | Agr | 38 | LaGrange |
| :---: | :---: | :---: | :---: |
| Cooper, Leon Morton | ChE | 72 | Chicago |
| Cope, Lorin Vaughan | Agr | 64 | Tonti |
| Copenhaver, Robert George | $A g r$ | 69 | Polo |
| Corbett, Charles Harold | Com |  | Arthur |
| Corbin, Ruth Ione | LAS | 12 | Sullivan |
| Corcoran, Katherine Mary | SS | 8 | Galena |
| Cordell, Della Grace | Mus | 76 | Macomb |
| Cordell, Ralph vail | SS | 22 | Yates City |
| Cordell, Vail | SS | 13012 | Macomb |
| Corke, Harold Winfred | Com | 71 | Evanston |
| Corkins, Lorette Ora Edna | SS |  | St. Anne |
| Cormack, Joseph Clarence | Com |  | Glencoe |
| Cornelisen, Ralph White | RCE |  | Pittsburg, Kansas |
| Cornell, Donald Sidney | ME | 74 | Western Springs |
| Corper, Philip | Com | 44 | Chicago |
| Corrie, Lester Linn | Agr | 26 | St. Francissille |
| Corrie, Wendell Bliss | Agr | 33 | St. Francisville |
| Corson, Irene Marguerite | LAS |  | Genoa |
| Corzine, Bruce Herbert | LAS (SS) | 116 | Charleston |
| Corzine, Dale Clair | Agr | 65 | Assumption |
| Cost, James Nicks | ME | 39 | River Forest |
| da Costa, Manuel Ferreira | $E E$ | 105 | Coritiba, Brazil |
| Cotta, Homer Willis | Agr | 33 | Rockford |
| Cottingham, Paul V. | $E E$ | 35 | Danville |
| Coudy, Georgia D. | LAS |  | Granite City |
| Coultas, Charles Rufus | Agr | 60 | Virden |
| Coultas, David Eugene | $A g r$ |  | Virden |
| Coulter, Isaac Harry | $A g r$ | 14 | Alton |
| Countryman, Irving Byron | Com | 64 | Dixon |
| Courtney, George Frederick | LAS | 271 | Urbana |
| Courtney, Helen Irene | LAS |  | Urbana |
| Courtright, Raymond Orland | SS | $6 \frac{1}{2}$ | Tonkawa, Oklahoma |
| Couto, Licinio da Silva | EE (SS) | 72 | Rio de Janeiro, Brazil |
| Covey, Edwin Linn | LAS | 71 | Peoria |
| Cowell, Roland Aldemar | Com (SS) | 30 | Lawrence, Kansas |
| Cowell, William Harold | SS | 9 | Lazerence, Kansas |
| Cowgill, Clinton Harriman | A | 126 | Topeka, Kansas |
| Cowles, Rollin James | Com |  | Burlington, Iowa |
| Cox, Claude Gaylord | Agr | 653 | Macomb |
| Cox, Clinton Exum | Agr |  | Rockville, Indiana |
| Cox, Gerald Judy | ChE |  | Bridgeport |
| Cox, Henry Ray | Agr | 66 | St. Louis, Missouri |
| Cox, LaFayette | Agr |  | Farmer City |
| Crabtree, John Bradley | Com |  | Chicago |
| Crackel, Anna Belle | SS |  | Urbana |
| Craft, John Countryman | Agr | 327 | Rachelle |
| Craig, Florence Margaret, A.B., (Univ. of Minnesota) 1914 | Lb |  | Minncapolis, Minnesota |
| Craig, John Andrews | $E E$ |  | Hindsboro |
| Craig, Noel Edwin | SS | $6 \frac{1}{2}$ | Kewanee |
| Craigmile, Mary Agnes | L.AS | 72 | Rantoul |
| Craigmile, Mary Delight | LAS | 41 | Knox, Indiana |
| Craigmile, Robert James | EE | 74 | Kno.r, Indiana |
| Crain, Hersey Nicholas | EE | 60 | Waverly |
| Cramer, Della Lillian | SS |  | Mit. Carroll |
| Crandall, Bert Harrison | Agr | 532 | Huntsville |
| Crane, Charles Sutherland | Com |  | Chicago |
| Crane, Dudley Winthrope | Agr | 100 | Montclair, New Jerscy |
| Crane, Helen Merrill | SS |  | Urbana |
| Cranston, Donald Tulius | LAS |  | Danzille |
| Crary, Mac Ernold | SS |  | Macomb |
| Crate, Ethel Frances | LAS |  | Bellflower |
| Cratty, Stella Emma | LAS |  | Galesburg |
| Cravens, Thomas Carl | Agr | 97 | Bloomfield, Indiana |
| Crawford, Aubrey Bryan | LAS |  | Milford |
| Craw ford, James Louis | CerE | 64 | Macomb |
| Crawford, Louis Noire |  | 91 | West Lafayette, Indiana |
| Crawford, Ruth Marguerite | HSLAS | 62 | Urbana |
| Crawford, Wayne Humiston | LAS |  | Pontiac |
| Crawford, Woodruff Lynden | Med (SS) | 63 | Pontiac |
| Crebs, John Powell | Agr | 101 | Carmi |
| Creighton, David Edward | Agr | 22 | Phoenix, Arizona |
| Creighton, Mary Elizabeth | $L A S$ | 931 | Phoeni.r, Arizona |
| Cremeans, Nida Edith | LAS |  | Urbana |
| Cress, Eldred Everett | $A E$ | 34 | Carlinville |
| Criley, Harlan Russel! | LAS | 36 | Champaign |
| Crim, Charles Harold | $C E$ |  | Estherville, Iowa |
| Croak, John Elmer | LAS | 261 | Decatur |
| Crofts, Carson | Com | 64 | LaGrange |
| Croll, Hilda Marian | HSLAS | 100 | Beardstown |
| Cronin, Marie Louise | LAS |  | Chicago |
| Crooks, Harold Fordyce | LAS | 1387 | Chicago |
| Crosby, Henry Fay | Agr | $92 \frac{1}{2}$ | Detroit, Michigan |
| Crosiar, Arthur Ogan | $A g r$ | 36 | Utica |
| Cross, George Arthur Cross, Hugh Ware | ${ }_{L}^{\text {Agr }}$ | 991 | Polo |

Cross, Mary Ann
Crotbers, Eli Kirk, Jr.
Crouse, Florence Hawley, A.B. (Tulane Univ.) 1910
Crow, Robert Neil
Crowder, Dan Moore
Crutchfield, William
Cryder, Iohn Henry
Cryder, Mary Edna
Cullinane, George
Culp, John Dewitt
Cumfer, Donald Alonzo
Cummings, Robert E.
Cummins, Wayne Hamilton
Cunningham, Opal Claree
Cunningham, Sterling Ross
Curl, Charley Edmund
Currie, Althea Elizabeth
Currie, Nannie
Currier, Lawrence Jenks
Curtis, Burton Tuttle
Curtis, Jane Tuttle
Curtis, Miriam Austin
Curtis, Percy Nelson
Curtis, Smith
Curtis, William
Curtis, William Wheaton
Curtiss, George
Curtiss, Ralph Edwin
Cushman, Kenneth Bruce
Cuskaden, Major
Cuthbert, Dorothy Lucile
Cuthbertson, William Stuart
Cutler, Lloyd Elwell
Cutter, Robert Marshall
DaCosta, Harold Fonseon
Dadant, Harriette Gabriel
Dahlberg. Truman
Dahlin, Edna
Dailey, Arthur Aloysius
Dale, John Herman
Dallenbach, Maybelle May
Daly, Ewing Porter
Daly, Geraldine
Daly, Helen
Dame, Ralph Uhler
Dammers, John William
Daniel, Ruth
Dappert, Anselmo
Darby, Harry Jr.
Darmstatter, Helen Olive
Darrell, George Charles
Daugherty, Alberta Maud
Daugherty, George Henry
Davenport, Dorothy Darleanc
Davenport, Maria Jennings
Davidson, Allen Mayer
Davidson, Blaine Thomas
Davidson, Gaylord Stillman
Davidson, Lola Margaret
Davies, Robert Coleman
Davis, Charles Brewer
Davis, Clara Elizabeth
Davis, Earl Thomas
Davis, Elmer Leon
Davis, Frances Margaret
Davis, Frederick Abram
Davis, George Robert
Davis, Grace Ethel
Davis, Helen
Davis, Helen Powers
Davis, Ida Belle, A.B., 1911
Davis, John Eugene
Davis, Katherine, B.L
(Knox Coll.) 1892
Davis, Kenneth Isaac
Davis, Leonard Hoadley
Davis, Leonard Louis
Davis, Lyman Kent
Davis, Martha Laurafred
Davis, Milton Russell
Davis, Nelson Louis
Davis, Palmer
Davis, Philip Frank
Davis, Roberta Lee
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101 Urbara
73 Chicago

## Chicago

Champaign
LaGrange
Wheaton

## Salem

South Bend, Indiana
Urbana
Springfield
Crazfordsville, Indiana
LaGrange
Champaign

Kankakee
Urbana
Cherry Valley
Mt. Sterling
$\frac{1}{2}$ St. Joseph
Los Angeles, California
Holton, Kansas
Champaign
Chicago

## Galesburg

Tampico
Huron, South Dakota
Frceport
Donnellson
Carbondale
LaGrange
Chicago
Fairmount
63 Windsor Mills, Quebec
Roachdale, Indiana
Roachdale, Indiana
Bloomington
Citronelle, Alabama
Carrollton
Sullivan, Indiana
Chattanooga, Tennessee
Plainfield
St. Louis, Missouni
LaGrange
Chicago
Touston, Texas
LaPorte City, Iowa
Uчвала
Bismarck
Mattoon
Paris
Paxton
Aurora
Decatur
Decatur
St. Louis, Missouri
Edmore, Michigan
Albion
Chicago
Stockton
Yonkers, New York
Gilsum, New Hampshire
Pueblo, Colorado
Rosemond
t. Loulis, Missours

Chicago
Chicago
Geneva
New York City
rnon
Ottowar
Joliet
Monmouth
Oxford, Indiana
Chicago
Kewanna, Indiana
Taylorville
Kansas City, Kansas
ew Athens

Carrollton

| Davis, Raymond Ellis | CerE | 64 | Danville |
| :---: | :---: | :---: | :---: |
| Davis, Waldo Emerson | EE |  | Rapatee |
| Davis, Ward Owen | Agr | 32 $\frac{1}{2}$ | Ramsey, Indiana |
| Davis, Zachary Stephen | A |  | Chicago |
| Davison, Edward Harrison | Agr |  | Bloomington |
| Davison, Joe Miller | Agr |  | Marshall |
| Davison, Lester Smith | Agr |  | Minonk |
| Davison, Victor Harvey | LAS |  | Minonk |
| Dawley, Earle Reed | CE |  | Passaic, New Jersey |
| Dawley, Robert Worthington | ChE |  | Passaic, New Jersey |
| Dawson, Louis Edward | ChE | 48 | Springfield |
| Dawson, Owen LaFayette | Agr | $16 \frac{1}{3}$ | Orland |
| Day, Curtiss LaQ | Com | 66 | Gibson City |
| Day, Dorothy | LAS | 31 | Chicago |
| Day, Harry Warren | Agr | 69 | Shelbyville |
| Day, Helen Roise | HSLAS |  | Harvey |
| Day, Raymond Moore | LAS |  | Maywood |
| Day, Richard Cyrus | Agr |  | Hampshire |
| Day, Vincent Stephen | ME | 80 | Springfield |
| Day, Walter Thomas | $L$ | 65 | Springfield |
| Dayton, Marshall | Com |  | LaMoille |
| Dayton, Wayland Wilbur | Agr |  | West Chicago |
| Deahl, Neulon | Ch | 33 | Champaign |
| Dean, Olive Gertrude | LAS | 47 | Harrisburg |
| Dean, Vaughn Waldow | Com | 30 | Decatur |
| Deaver, Lister Alward | CerE | 161 | Bloomington |
| Decker, Arthur Eli | SS | 11 | Augusta |
| Decker, Edna Mae | HSAgr | 64 | Chicago |
| Deering, Richard Francis | CE |  | Chicago Heights |
| DeGroot, Horace Edward | ME |  | Chicago |
| DeGroot, Walter Charles | Agr |  | Chicago |
| DeHart, Myra Lois | HSLAS |  | Waukegan |
| DeLong, Willard Earl | Com | 74 | Foosland |
| DeLue, Jim Simon | LAS |  | Chicago |
| Dempsey, John Patrick | ${ }_{S}$ S | 31 | Buffalo, New York |
| Dempster, Charles | SS | 70 | Memel, Germany |
| Deneweth, Amelia Elizabeth | Mus |  | Mt. Clemens, Michigan |
| Denison, Irving Alson | Agr | 33 | Washington, D. C. |
| Dennis, Rose Carolyn | HSLAS | 50 | Glencoe |
| Dent, Richard Wilmer | MnE (SS) | 27 | Urbana |
| Denz, Raymond Edward | LAS | 104 | Decatur |
| DeRamus, Joseph Sherrard | LAS |  | Peoria |
| Derby, Harold Leslie | $C E$ | 991 | Kirhsville, Missouri |
| Derby, Sylvester Randall | SS | 142 ${ }^{\frac{3}{2}}$ | Elkhart, Indiana |
| Deuchler, Gustave Herman | $A E$ | 37 | Aurora |
| Deveneau, George Adams, Ph.B. <br> (Univ. of Chicago) 1912 | $L b$ |  | Sheridan |
| Devlin, John Lester | Com (SS) | 612 | Chicago |
| Devlin, Julien Walter | Com |  | Chicago |
| DeVoe, Ray Threadgold | ME |  | Freeport |
| Devol, Everett Rolland | EE |  | Cocoa, Florida |
| Dewey, Elmer Clarence | Com | 66 | Rockford |
| DeWolfe, Lucy Leonora | L,AS | 96 | Assumption |
| Dexter, Grace Ella, A.B., 1911 | SS |  | Urbana |
| Dibelka, James Charles | Med (SS) | 26 | Chicago |
| Dibell, Harry Charles | Com | $90 \frac{1}{2}$ | Wolcott, Indiana |
| Dickerson, Guy Leon | SS | 5 | Clinton |
| Dickson, Gerald Edgar | LAS | 37 | Hampshire |
| Dickson, Lawrence Evans | $L A S$ |  | Chicago |
| Dieserud, Helge Christopher | ME | 39 | Washington, D. C. |
| Dietmeier, Clarence Richard | Com | 973 | Winslow |
| Dietmeier, Homer Ray | Med (SS) | 38 | Winslow |
| Dietrich, Erma Lorena | Com |  | Bremen, Indiana |
| Dietrich, Harry Ben | Com |  | Mason City |
| Dietz, John Wamser | Com | 34 | Belleville |
| Diggins, Gordon Stuart | LAS |  | Harvard |
| Dikis, Alfred Ira | Agr | 47 | Waverly |
| Dillavou, Charles Elmer | Com |  | Champaign |
| Dillavou, Essel Ray, A.B. 1915 | $L$ | 31 | Champaign |
| Diller, Harold Francis | Med | 32 | Rantoul |
| Dippell, Ralph Ellsworth | $A E$ | 73 | Freeport |
| Ditewig, George Bocock | Com |  | Peoria |
| Dittman, Chester Alada | Com |  | Lawrenceville |
| Dix, Ruth Mabel | HSLAS | 54 | St. Louis, Missouri |
| Dixon, Ralph Scott | ChE |  | Vincennes, Indiana |
| Doak, Cranston Homer | Agr | 21 | Stronghurst |
| Dobson, Frank Mills | SS |  | Richmond, Virginia |
| Dodd, Donald Chambers | Com | 21 | Champaign |
| Dodd, Thomas Leo | SS |  | Eldorado |
| Dodds, Josephine | LAS | 59 | Champaign |
| Dodds, Lois Ellen | LAS | 95 | Champaign |
| Dodge, Astrid von Moth | LAS |  | Champaign |
| Doe, Weastell Taylor | LAS | 60 | Kent, Ohio |
| Doepel, Robert Francis | $M n E$ |  | Mattoon |
| Doerr, Clarence Leo | Agr | 23 | Chicago |
| Doerscher, Willis Harry | Com | $31 \frac{1}{2}$ | Chicago |
| Doherty, Chester Cochran | LAS |  | Clay City |


| Doherty, Everett Haisley | SS | 1571 | Fairmount, Indiana |
| :---: | :---: | :---: | :---: |
| Doherty, M1rs. Graee ${ }^{\text {a }}$ ( 15 | SS | 137 | Carthage, Indiana |
| Doherty, Margaret Isabelle, B.Mus. 1915 | LAS | 137 | Urbana |
| Dolan, James Leo | Agr | 68 | Champaign |
| Dolan, Joseph Cuthbert | SS | 8 | Chicago. |
| Dole, Ethel Mary. B.S., 1915 | SS |  | Champaign |
| Dole, Laura Emily | Mus | 66 | Champaign |
| Dollahan. Everett Mahlon | EE |  | Dixon |
| Dolley, Paul Turnley | SS | 7 | Lebanon |
| Domus, Justin Aloysius, A.B., 1915 | SS |  | Shelbyzille |
| Donahuc, William Dale | Cont | 32 | South Bend, Indiana |
| Donaldson, Harold Janes | Agr | 86 | Polo |
| Donaldson, John Riley | CE | 110 | Joliet |
| Donaly, Marie Ruby | Med |  | Carterville |
| Dong, Tsch . | LAS | 31 | Yunnaufu, China |
| Donn, Merrill Carr | LAS | 63 | Chicago |
| Donnell, Allan Douglas | EE | 109 | Mattoon |
| Donovan, Leo Francis | Med | 26 | Jacksonville |
| Donovan, Mary Margaret | Com |  | Champaign |
| Doocy, Helen I.aura | LAS |  | Pittsfield |
| Doolen, Ciem Daniel | EE | 35 | Centralia |
| Doolen, Glen Wesley | Med | 32 | Centralia |
| Doremus. Walter Louis, Jr. | Agr | 56 | Montcluir, New Jersey |
| Dorris, Sylvanus Alpheus | ${ }_{\text {SS }}$ | 28 | Urbana |
| Dorsett, Martha Matilda | HSLAS |  | Augusta |
| Dorsett. Mary Elva | HSAgr | 102 | Augusta |
| Dory, Victor Paul | Com |  | Warsaze |
| Dosher, Guy Hudson | $C E$ | 44 | Harrisburg |
| Doss, Paul Christian. | Agr |  | Philo |
| Doty, Dorothy Lanning | HSLAS (SS) | 44 | Wilmettc |
| Doty, Helene Elcanore | LAS (SS) | 44 | Wilmette |
| Dougherty, Robert Hughes | Che | 28 | Peoria. |
| Douglas, Jonathan Park | Agr |  | Bloomington |
| Dowell, Carl Philip | $A g r$ | $70 \frac{1}{2}$ | Port Richmond, New York |
| Downey, Durbin Ralph | Agr | 83 | Sheffeld |
| Downs, Myron Day | Agr |  | River Forest |
| Downs, Walter Elections | Com |  | Pana |
| Doyle, Frank Butler | ME |  | Raymond |
| Doyle, Grace Margaret | LAS | 70 | Mitchell, South Dakota |
| Doyle, Irene May | LAS |  | Clinton. |
| Doyle, John Francis | Com (SS) | 100 | Champaign |
| Doyle, William James | Com | 35 | Champaign |
| Drake, Charles Arthur | LAS (SS) | 35 | Denucr, Colorado |
| Drake, Jacob Raleigh | $L_{L}$ |  | Lovington |
| Dralle, Henty Edward | EE | 106 | Coatsburg |
| Draper, Arthur William | LAS | 65 | Chicago |
| Draper, Lawrence Francis | Med | 75 | Clinton |
| Drew, Herbert Joseph | SS | 5 | Dixon |
| Drew, Hollis Prescott | Com |  | Dixon |
| Drew, Mrs. Pearl Edith | SS |  | Diron |
| Drew, Mildred Evangeline | LAS | 102 | Evanston |
| Drobisch, Mollie Moore | LAS |  | Decatur |
| Droste, Louis Anthony | Com | 103 | Grand Rapids, Michigan |
| Drummet, Arthur William | Agr |  | Long Point |
| Drummond, Alfred Alexander | Agr |  | Horning, Oklahoma |
| Du, Chuin | LAS |  | Honan, China |
| DuBoff, Abe | RCE |  | Peoria |
| DuBois, Addie Majella | LAS |  | Eldorado |
| DuBois, Marie Mildred | HSLAS | 28 | Eldorado |
| DuBois, Martha Harriet | SS | 761 | Eldorado |
| DuBridge, Walter Stephen | EE |  | Momence |
| Duff, Durward Belmont | LAS | 3 | Chicago |
| Dufty, John Clarence | ${ }^{\text {Agr }}$ | 81 | Ottawa |
| DuFrain, Frank James | LAS (SS) | 121 | Momence |
| Dugger, Donald Ollie | AE |  | Princeton, Kentucky |
| Duke, Harrison Reed | Med | 55 | Chicago |
| Dumas, Velma Burdette | Mus | 18 | Cicero |
| Dumke, Mildred | Com (SS) | 35 | Elmhurst |
| Dunavan, Frank Leroy | CE | 119 | Ottawa |
| Duncan, Lottie | SS | 7 | Martinsuille |
| Duncan, Russell Eugene | Com | 30 | Penfield |
| Dungan, George Harlan | Agr | 65 | Richwood, Ohio |
| Dunlap, Effie Charlotte | Com | 117 | Urbana |
| Dunlap, Francis Ellsworth | A | $112 \frac{1}{2}$ | Mayzood |
| Dunlop, Leonard Eugene | A | $61 \frac{1}{2}$ | Urbana |
| Dunn, Georgiena Evelyn | HSLAS | 24 | Chicago |
| Dunn, George Leslie | Agr |  | Chicago |
| Dunn, Homer Alban | Com |  | Columbus, Indiana |
| Dunn, Theodore Saunders | SS |  | Waukegan |
| Dunn, Ulys Stephen | EE | 72 | Dorrisville |
| Dunn, Walter William | CerE |  | Cleveland, Ohio |
| Dupre, Valentine Harry | EE | $68 \frac{1}{2}$ | Chicago |
| Durfey, Donald | Com | 65 | Tolono |
| Dushek, Vincent John | $E E$ | 72 | Chicago |
| Dusthimer, William Vernon | LAS |  | Chrismant |
| Dustin, Charles Sanderson | Agr |  | Champaign |
| Dutton, Herbert Buell | ME | 75 | Oak Park |


| Dutton, William David | $\underline{L}$ AS |  | Pittsfield |
| :---: | :---: | :---: | :---: |
| DuVall, Nellie Olive | Mus |  | Urbana |
| Duvall, Virgil Henry |  | 25 | Aledo |
| Duzenbury, Grant $\mathbf{P}$ | Med | 29 | Fairbury |
| Dvorak, Joseph |  | 37 | Chicago |
| Dwyer, Ellen Frances | LAS (SS) | 111 | Charleston |
| Dwyer, Katharine Josephine | SS | 7 | Charleston |
| Dyblic, Hiram Victor | Com |  | Jolict |
| Dyer, Ethel Golden | SS | 16 | White Hall |
| Dyer, Harold Ruskin | A |  | Bloomington |
| Eade, Ben Cooper | Agr | 70 | Elizabeth |
| Ealey, Burdelle | LAS |  | Urbana |
| Early, Dwight Holdridge | Agr | 38 | Chicago |
| Earnest, William Franklin | Agr |  | Homer |
| East, Bess | LAS | 102 | Anderson, Indiana |
| Eastman, Herbert Clinton | ${ }_{S S}$ | 5 | Cambridge |
| Eastman, Mrs. Mary Searls | SS | 2 | Amboy |
| Easum, Chester Verne, A.B. (Kno.x Coll.) 1914 | Agr | 117 | Clayton |
| Eaton, Charles Miller | $L A S$ |  | Ouincy |
| Eaton, Rea Lincoln | Agr | 26 | Eaton, Colorado |
| Eaton, Rex Carr | Ag' | 106 | Eaton, Colorado |
| Eaton, William John | SS | 25 | Gilman, Wisconsin |
| Eckardt, Roland Oscar | ${ }_{S}{ }^{\text {S }}$ |  | Sheboygan, Wisconsin |
| Edes, Ethel Frances | SS |  | LaGrange |
| Edds, Vera Oriene | LAS | 60 | Normal |
| Edgerley, Kenneth Hopkins | Agr |  | Granville |
| Edie, Burl Albert | LAS |  | Monticello |
| Edwards, Clarence Leon | SS | 71 | Carrollton |
| Edwards, Dorothy | Agr |  | Tallula |
| Edwards, Gail Phillips | Ch | 32 | Chicago |
| Edwards, Harlan Hammond | CerE | 114 | Clicago |
| Edwards, Howard Milton | Med |  |  |
| Edwards, M Reece | SS |  | Urbana |
| Edwardsen, Vera Kern | LAS |  | Chicago |
| Egan, Lillian Elizabeth | HSAgr | 24 | Quincy |
| Ehlers, Earl Edward | AE |  | Mason City, Iowa |
| Eichberg, Adrian J | LAS | 35 | Chicago |
| Eichhorn, William Hirschel | ${ }^{\text {Agr }}$ | 33 | Mound City |
| Einbecker, William Francis | ChE |  | Chicago |
| Ekstrand, Henry Emanuel | A | 126 | Waukegan |
| Eldridge, Earle Whitney | Agr |  | Greenview |
| Eldridge, Lillian Mary | HSLAS | 60 | Chicago |
| Elerding, Beatrice Irene | LAS |  | Chicago |
| Eleson, Eugene Robert | Med | 48 | Elkhart, Indiana |
| Ellington, Alvin Marthews | LAS |  | Buffalo |
| Elliott, Arthur Roland | $\mathrm{Agr} \mathrm{(SS)}$ | 89 | Streator |
| Elliott, Dana Milton | Com | 461 | Matteson |
| Elliott, Emilio Edgar | Agr |  | Bono, Arkansas |
| Elliott, Eva Lillian | LAS | 66 | Beresford, South Dakota |
| Elliott, Isabel Gertrude | LAS | 82 | Beresford, South Dakota |
| Elliott, Robert Tollington | RCE | 65 | Wilmington |
| Ellis, Harvey ${ }^{\text {d }}$ | Com | 96 | Evanston |
| Ellsworth, Mark Wesley | $C E$ | 70 | Libertyville |
| Elwell, Dan William | Com | 35 | Champaign |
| Emch, Walter | $C E$ | 391 | Urbana |
| Emery, Harold Robert | LAS |  | Bclleville |
| Emmond, Wyatt Goen | Com | 103 | LaGrange |
| Engelhardt, Lora May | HSLAS |  | Harvard |
| Enelow, Helen | SS | 23 | Chicago |
| Engelland, Edmund Franciscus | EE | 37 | Grant Park |
| England, Glenn Lewis | EE |  | Havana |
| England, Leland Stanford | Agr |  | Decatar |
| Engle, Lawrence Washington | $A g r$ |  | Urbana |
| Engle, Mrs. Ralph Nelson | SS | 2 | Urbaна |
| Engle, Ralph Nelson | Agr | 98 | Urbana |
| Engle, Robert Henry | $A g r$ (SS) | 81 | Freeport |
| English, Frank James | $M E$ | 26 | Springfield |
| Eninger, Helen Marie | SS | 153 | Arthur |
| Eppinger, Esther Auguste | HSLAS |  | Quincy |
| Eppinger, John George | Com (SS) | 112 | Quincy |
| Eppinger, Marie Anna | HSLAS | 131 | Quincy |
| Epstein, Karl | Agr | 69 3 | Bloomington |
| Ericlisen, Adrian Edson | ${ }_{\text {Com }}$ | 33 | Gencsco |
| Ericksen, Arthur | Agr |  | Chicago |
| Erickson, Edward Bringle | $C E$ | 721 | Chicago |
| Erickson, Edwin Halmar | LAS |  | Chicago |
| Frnest, Delta | SS | 13: | Carlyle |
| Ernest, Helen Orpha | Mus |  | Urbana |
| Ernest, Ruth, A.B., 1915 | SS |  | Urbana |
| Ernst, Carl Paul | CE | 115 | Chicago |
| Ernst, Elmore George | A (SS) | 1281 | Visilia, California |
| Ernst, Leslie | ${ }^{\text {Agr }}$ |  | Peoria |
| Erwin, Elizabeth | SS | 74 | Mrbana |
| Espy, Murray Greenleaf | LAS |  | Logansport, Indiana |

Ettinger, Charles McKinley
Euston, Jacob Howard
Evans, Bessie Louise
Evans, Donald Grover
Evans, Floyd Evan
Evans, Franklin Batchelder
Evans, Mrs. Frederick Nobel
Evans, Lecye Ward
Evans, Hatibel
Evans, Lois Kathryn
Evans, Maurice Willard
Evans, Melbourne Covell
Evans, Ruth
Evans, Vera Kate
Evans, Wallis Johnson
Eveland, Ted
Everham, William Edward
Everhart, Gladys
Eversole, Harold Baker
Ewald, Paul George
Ewer, Warren Badger
Ewert, Earl Cranston
Ewing, Fred C
Excell, Stuart William
Eyman, Margaret
Fackler. Orpheus A
Fager, Eugene Philip
Fager, George Edward Kirchner
Fahrnkopf, Charles Frank
Fairbairn, William Bryan
Fairbanks, Berthier Wesley
Fairchild, Evelyn VanZandt
Faircloth, Samuel Edwards
Fairfield, Agnes Evelyn
Fairfield, Faith Jeannette
Fairman, Charles
Faletti, Michael Joseph
Falkenberg, George Vigo
Fallis, Clara Louise
Fallon, Vallie Edna
Fang, Sze Voo
Farah, Salim Raji
Farmer, Elma Leola
Farnam, Bertha Lucille
Farnham, Albert Ayrton
Farrow, Tohn Frank
Fasig, Otho Samuel
Fasold, Alice Margaret
Fasold, Miriam Rebecca
Faulk, Merrill Clifford
Fay, Donald Allen
Federmann, Charles Russell
Fedde. Ruth Catherine
Fee, Bess
Fee, Mary Yeannette
Feldnan, Joseph Elmer
Feldman. Nathan
Felger, Walter Blaine
Felmley, John Benjamin
Felton, Harold Norton
Ferguson, Florence Roxana
Ferguson, Frank Cleveland
Ferguson, George Alonzo
Ferguson, Howard Ritchey
Ferguson, Kate Dorothy
Ferguson. Wilbert Homer
Ferree, George Bennett
Ferrell, Cyrus Porter
Ferriss, Edwin Abell
Fetherston, James Edward
Feuer, Bertram
Fickett. Edward Maynard
Field, David Edwards
Field, Howard, Ir.
Fiero, Elmer Elisworth, A.B., 1914
Fifield, Clarence Eugene
Filbey, Edward Toseph, Ph.D.
(Vniz: of Wisconsin) 1908
File, Alvin Harry
File, Vio!a Louise
Finch, Garrett Hobart
Finlay, Eva Leah
Finley, Margaret Alice
Finley, Narion Reece
Fillinger, Oral
Finn, Edmund Matthew
Finnegan, James Henry

| $C E$ | 74 | Bourbon, Indiana |
| :---: | :---: | :---: |
| EE | 36 | Norfolk, Virginia |
| SS | 4 | Champaign |
| EE | 74 | Champaign |
| ME | 75 | Hinckley |
| LAS |  | Chicago |
| M: |  | Stockton, Califorria |
| Mus sp |  | Winchester |
| ${ }_{L} S_{A S}$ |  | $V \mathrm{ircher}$ |
| L.AS |  | Monticello |
| Coin |  | Mattoon |
| SS | 61 | Decatur |
| SS | 6 | Champaign |
| SS | 34 | Cham:paign |
| Ch | 56 | Kenilworth |
| EE |  | Hobson, Montana |
| ${ }_{\text {MS }}^{\text {MSLAS }}$ | 83 | Chicago |
| HSLAS |  | Champcign |
| LAS |  | Hindsboro |
| Agr | 281 | Mt. Carmel |
| AE | 81 | Chicago |
| $L_{S S}^{L .4 S}$ | 713 | Danville |
| ${ }_{C E}{ }^{\text {S }}$ | 75 | Camden, Michigan |
| L.AS | 53 | Oak Park |
| SS |  | Ashto: |
| $L A S$ (SS) | 93 | Murphysboro |
| Agr | 33 | Murphysboro |
| SS |  | Decatur |
| $C E$ |  | Jolict |
| Agr | 83 | Chicago |
| LAS | 28 | Silver Creek, New York |
| ${ }_{\text {ME }}$ |  | Aurora |
| HSLAS |  | Haricy |
| LAS |  | Rutland, Vermont |
| LAS | 34 | Alton |
| $L$ | 28 | Standard |
| ${ }_{\text {A }}^{\text {Ar }}$ |  | Chicugo <br> Danville |
| LAS |  | Urbana |
| SS |  | Ynunan, Chira |
| Agr | 97 | Nazareth, Palestine |
| $A g r$ | 92 | Belleville |
| LAS | $53 \frac{1}{2}$ | Pazenee |
| Agr | 108 | Westield, Massachusetts |
| $S^{\text {S }}$ |  | Alamo, Tennessee |
| LAS |  | Martinszille |
| ${ }_{\text {Med }}$ | 101 | Sunbury, Pernsylvania |
| ${ }_{L}^{L A S}$ | 101 | St. Louis, Missouri |
| LAS | 67 | Urbana |
| Com | 67 119 | Urbana Brookfeld, Indiana |
| $\stackrel{A}{S}$ S | 119 | Brookfield, Indiana |
| HSAgr sp |  | Clarksburg, Indiana |
| HSAgr |  | Champaign |
| Agr | 1142 | Morrison |
| MES | 15 | Chicago |
| ${ }_{\text {AE }}$ | $113{ }^{2}$ | Normal |
| EE | 72 | Mendota |
| HSLAS | 100 | Annawan: |
| LAS | 102 | Annazala |
|  | 72 | Washington, D. C. |
| LAS (SS) | 65 | Champaign |
| Lb (SS) | 33 | Weymouth, England |
| Com |  | Kansas City, Missouri |
| EE (SS) | 1101 | El Paso |
| Com |  | Elgin |
| SS |  | Champaign |
| ChE (SS) | 451 | Chicago |
| Agr | 36 | Chicago |
| $\stackrel{A}{M E}$ | 29 | Slater, Missouri |
| $L_{\text {L }}$ | 33 | New York |
| Com | 102 | Buda |
| Com |  | Urbana |
| SS |  | Chicago |
| HSAgr | 53 | Irzing |
| Com |  | Hoopeston |
| LAS |  | Burlington, Iowa |
| LAS | 33 | Hoopeston |
| ${ }_{S}^{\text {Agr }}$ | 70 | Hoopeston |
| ${ }^{S S}$ |  | Saginaw, Michigan |
| ${ }_{\text {AE }}{ }_{\text {A }}$ | $\begin{array}{r} 76 \\ 122 \end{array}$ | Lawrence, Massachusetts |

Finnigan, Martha Mary
Firebaugh, Raymond Sims
Firebaugh, Richard David
Firoved, Glenn William
Firth, Jacob Gerald
Fischbacha, Antonia
Fischer, Austin Harold Reed
Fischer, Mary Louise
Fischer, Ralph
Fischer, Walter Rathfon
Fish, Vivian Mary
Fisher, Aileen Steele
Fisher, Clarence
Fisher, Clarence John
Fisher, Erwin, Jr
Fisher, Eva Josephine
Fisher, Frederick Harrington
Fisher, Harold
Fisher, Harry Eastman
Fisher, Helen Vastine
Fisher, Ivan Louis
Fisher, Lawrence Glen
Fishman, Alvin Texas
Fishman, Wilbur Harlow
Fisk, Fritz Harris
Fitch, Howard J
Fitch, Hugh
Fites, Harold Bratt
Fitzer, Marian Lucille
FitzGerald, Mrs. Leora Almita
Fitzgerrell, Jack Allen
Fitzgerrell, Sylvester Stanton
Fitzpatrick, James Claude
Fitzpatrick, Margaret Marion
Flagg, Verna Mary
Flannery, Charles Abusdal
Flatt, Harrison Abidiah
Flatt, Nelle Irene
Flaugher, Richard Greer
Fleck, Arthur William
Fleishman, George Samuel
Fleming, Denna Frank
Fleming, Harry Hall
Fleming, Sara Adelaide
Fleming, Stephen James
Flemming, John Herman
Fletcher, Edwin Lott
Fletemeyer, Frederick Rudolph
Flexer, Edna Helen
Flock, Marguerite Pauline
Flock, Ward John
Flood, Grace
Flood, Martin
Flowerree, Trennace, B.S., 1913
Flowers, Violette Vinnetta
Fluke, Autha Maybelle
Flynn, Con C., A.B. (Knox Coll.) 1910: A.M., 1911
Fock, Ernesto Augusto
Fogler, Mayer Farthing
Foley, James Stuart
Foley, Philip Oglesby
Folkers, Herbert Peter
Fontaine, Everett Orren, A.B., 1915
Foote, Lorenzo Stephen
Foran, Cassie Agnes
Forkey, Mildred Lillian
Forsythe, Albert Ernest
Forty, Dominic
Foster, Frank Ward
Foster, Frederick Heath
Foster, George Henry
Foster, John Wellington
Foster, Ralph Nave
Foulke, Claude Clifton
Foulke, Ronald Edward
Fox, James Leslie
Fox, Jessie Lucilla
Fox, Patrick Francis
Fox, Ruth Leda
Foy, Torrey Byers
Fradkin, Benjamin
Frailey, Lester
Frame, Byron
Frame, Edith Maye
Frame, Grace Bryan

| LAS | 25 | Champaign |
| :---: | :---: | :---: |
| Agr |  | Robinson |
| LAS | 69 | Robinson |
| Agr |  | Monmouth |
| ME |  | Green Valley |
| LAS |  | Centralia |
| A |  | Chicago |
| HSAgr | 32 | Bensenville |
| Agr (SS) | $62 \frac{1}{2}$ | Freeport |
| Med (SS) | $93 \frac{1}{2}$ | Chicago |
| HSLAS |  | Benton Geneseo |
| Agr | 38 | LaGrange |
| LAS | 33 | Chicago |
| Com | 104 | Chicago |
| Lom | 93 |  |
| Com | 35 | South Bend, Indiana |
| Agr (SS) |  | Bement |
| MSE (SS) | 895 | Chicago |
| LAS | 103 | Geneseo |
| Com | $8 \frac{1}{2}$ | Logansport, Indiana |
| Agr | $117 \frac{1}{2}$ | Bosky Dell |
| Agr | 27 | Bosky Dell |
| $L$ | 11 | DeKalb |
| Agr | 67 | Rockford |
| $M E$ |  | Greenup ${ }^{\text {a }}$ |
| Agr LAS | 70 | South Bend, Indiana |
| LAS | 115 | Champaign |
| Agr | 107 | Ewing |
| LAS (SS) | 73 | Benton |
| $M n E$ $L A S$ | 76 | Gillespie |
| LAS |  | Peoria |
| ME | 77 | Chicago |
| SS |  | Carrollton |
| LAS |  | Champaign |
| Agr (SS) | 1171 | Cayuga, Indiana |
| $\stackrel{A}{C E}$ | 51 | Indianapolis, Indiana |
| LAS | $40 \frac{1}{3}$ | Paris |
| ${ }_{\text {Agr }}$ |  | Chicago |
| SS |  | Danville |
| Agr |  | Chicago |
| A | 75 | Davenport, Iowa |
| Agr |  | Morris |
| $A E$ | 1121 | Morris |
| HSLAS | 51 | Joliet |
| LAS (SS) | 34 | Urbana |
| Agr (SS) | 64 | Urbana |
| $L A S$ | 58 | Terre Haute, Indiana |
| EE | 32 | Cortland |
| LAS |  | Bondville |
| LAS | 29 | Chicago |
| L |  | Galesburg |
| $C E$ | 107 | Buenos Aires, Argentina |
| Ch | 311 | Champaign |
| Com |  | Onarga |
| L AS |  | Frankfort |
| Mus | 130 | Momence |
| Agr | 17 | Stronghurst |
| $\mathrm{Agr} s p$ |  | Joliet |
| HSAgr | 101 | Prophetstown |
| ChE (SS) | 311 | Port Antonio, Jamaica |
| ME |  | Chicago |
| SS |  | Alexis |
| Com |  | Chicago |
| ChE | 68 | Lenox Dale, Massachusetts |
| Agr ME |  | Spring Grove |
| Coin | 98 | Worthington, Indiana |
| EE | 36 | Aurora |
| CE | 83 | Englewood, New Jersey |
| HSAgr (SS) | 62 | Urbana |
| LAS |  | Indianapolis, Indiana |
| $L A S$ | 68 | Upper Montclair, New Jersey |
| ${ }^{\text {Agr }}$ M |  | Freport |
| MSE | 36 | Chicago |
| SS |  | Eldorado |
| LAS |  | Champaign |
| LAS (SS) | 341 | Champaign |

Robmpaign
Robinson
Monmouth
Green Valley
Chicago
Bensenville
Freeport
Benton
Geneseo
LaGrange
Chicago
South Bend, Indiana
Bement
Chicago
Logansport, Indiana
Orangeville
Bosky Dell
DeKalb
Rockford
Greenup
Belvidere
115 Champaign
107 Ewing
Gillespie
Chicago
Peoria
Carrollto
Champaign
Indianapolis, Indiana
Granite City
Paris
Danville
Chicago
rt, Iowa
Morris
Joliet
Urbana
Terre Haute, Indiana
Cortland
Champaign
Chicago
Galesburg
Buenos Aires, Argentina
Champaign
Paris
Frankfort
Stronghurst
Joliet
Port Antonio, Jamaica
Chicago
Alexis
Lenox Dale, Massachusetts
Spring Grove
Worthington, Indiana
Aurora
Englewood, New' Jersey
Urbana
Indiarapolis, Indiana
Upper Montclair, New Jersey
Freeport
Urbana
Eldorado
Champaign
Champaign

Francis, Arthur Lewis
Francis, Helen Elizabeth
Frankenherger, Edna
Frankenfeld, Walter
Franks, Arthur Jolin
Fraser, Cecil Eaton
Fraser, Reginald Simon
Fraser, Thomas
Frazee, Anna Dora
Frazier, Cleo
Frazier, John
Freark, Parke West
Freark, Ray Menry
Frede, Glenn William
Frederick, Eugcne Mark
Frederickson, Harry Grindley
Freeburg, Walter Sven
Freeburn, Louise Caroline
Freels, John William
Freeman, Kilburn Bartlett
Fireer, Arthar Warren
French, Randall White Burns
Frensdorff, Charles Alugust
Freund, Gustav Louis
Frey, Ifollis Oldfield
Frick, Arthur Henry
Fried, Harry Nathan
Frier, Jolin
Friesenecker, Emma Katharine
Frison, Theodore Henry
Frobish, Bert Edward
Froelilich, Hugo Ferdinand
Froehly, Arthur Cunstav
Frohardt, Elmer Philip
Frommann, Mildred
Frost, Walter Kilborn
Frykholm, Ellen Viola
Fuchs, Arthur Wolfram
Fulke, Frank Leonard
Fuller, Orville Melvin
Fullerton. Theron Bushnell
Fulrath, William Merle
Fulton, Edward Irving
Fulton, Guy Chandler
Fulton, Robert Elliott, Jr.
Fulton, William Jewett
Fung. Yu Nan
Funk, Marguerite Marie
Funk, Ruth Scovell
Furey, Warren W'illiam
Gaarder, Rolf Marold Josef
Gabel, IIelen Louise
Gabriel, Carson ling
Gabriel, Frances Amclia
Gaddis, Jessie Maria
Gaddis, Lillian Eunis
Cadsby, James Herbert
Gage, John Howard
Gaines, Mary Glendora
Gale, Minnie
Gallagher, Fred Barron
Gallaher, Harold
Gallimore, D. G.
Gallivan, Lyle Hugo
Gannaway, Lula
Gansbergen, Frederick
Gantert, Cylno Foote
Gants, Elwyn Tracy
Gantz, Grace Dorothy
Gantz, Howard Stanley
Garber, Alfred Emanuel
Gardner, Franc John
Gardner, McKinley
Garman, Horace Bryan
Garman, John Walter
Garman, Ray L.
Garner, James iradison
Garrett, Donald Benjamin
Garrett, Texie
Garrison Edith Grace
Garth, Casper Tyrrell
Gartner, Andrew Wolfgang
Garvey, Edward James
Garvin, Wiley Boyce

| Cons | 29 | Chicago |
| :---: | :---: | :---: |
| L.AS | 96 | Wyoming |
| LAS | 291 | Carthage, Missouri |
| SS |  | Pana |
| ChE |  | Springficld |
| SS |  | Champaign |
| CE | 62 | Lead, South Dakota |
| MnE | 75 | White Hall |
| L.AS | 118 | Мошеаяиа |
| SS |  | Paris |
| Agr |  | Paris |
| MSE | 109 | Champaign |
| Mcd | 221 | Champaign |
| Com |  | Stewardson |
| Agr | 65 | Clarence. |
| Agr |  | Champaign |
| EE | 40 | Lindsborg, Kansas |
| L.4S |  | Chicagof, Alaska |
| $L_{\text {L }}$ | 25 | East St. Louis |
| $C E$ | 56 | Champaign |
| $C E$ | 77 | Chicaso |
| Agr | 53 | Muskegon, Michigan |
| LAS |  | Urbana |
| ChE | 52 | New York City |
| ME | $61 \frac{1}{2}$ | Bloomington |
| $A g r$ | 33 | Champaign |
| Agr | 68 | Chicago |
| ME | 105 ${ }^{2}$ | St. Louis, Missouri |
| $S_{\text {S }} S_{4 S}$ | 31 | Galera |
| SS | 31 | Onarga |
| EE | 913 | St. Louis, Missouri |
| EE |  | St. Louts, Missouri |
| Agr | 50 | Granite City |
| LAS |  | Chicago |
| Com | 27 | Rockford |
| Com |  | Evanstille, Indiano |
| Agr | 551 | Beardstoz', |
| SS |  | Champaign |
| $C E$ |  | Mt. Carroll |
| SS |  | Anchorage, Kentucky |
| A | 128 | Warsaze |
| Com |  | Dixon |
| LAS |  | Keokuk, Iowa |
| ${ }_{\text {dgr }}(S S)$ | $46 \frac{1}{2}$ | Hunan, China |
| ${ }_{\text {LASAgr }}$ (SS) | 32 | Dancille |
| EE | 61 | Chicago |
| Com |  | Kristiania, Norzay |
| HSLAS | 66 | Belsidere |
| Med | 64 | Payson |
| LAS |  | Erianszille, Wisconsin |
| HSAgr | 112 | Champaign |
| LAS |  | Alton |
| LAS | $98 \frac{1}{1}$ | Terico Adams, Massachusctts |
| HSLAS | 32 | Broadhands |
| SS |  | Lincoln |
| MSE (SS) | 34 | Rockford |
| EE | 96 | Tiskilua |
| SS |  | Cambria |
| ${ }_{S}^{A}$ S | 33 | Champaign |
| SS |  | Gays |
| Agr |  | Chicago |
| ChE |  | Quincy |
| ME | 108 | Uf crona. |
| LAS |  | Champaizn |
| Agr (SS) | 67 | Champaigr |
| Agr (SS) | 78 | Gibson City |
| ${ }_{\text {ChE }}$ | 53 | Chicago |
| LAS | 37 | Auburn |
| Agrsp |  | Decatur |
| Agr |  | Bethany |
| Agr |  | Lanark |
| $L_{S S} A S$ |  | Rockford |
| SS |  | Dickson, West Virginia |
| Mus | 21 | Urbana |
| Com | 61 | Beaumont, Texas |
| Com |  | St. Charles |
| AE | 45 | Faribault, Minnesota |
| $A \mathrm{Ar}$ |  | Pistsfeld |


| Gary, Jesse Lehman | $C E$ | 38 | Carmi |
| :---: | :---: | :---: | :---: |
| de la Garza, Roman | $C E$ | 66 | Cabinas Hidalgo, Mexico |
| Gates, Silas Harvey | Agr |  | Watseka |
| Gauger, Joseph Frederick | Agr | 100 | Champaign |
| Gauger, Raymond Wallace | LAS | 85 | Champaign |
| Gaunt, Gail | LAS | 36 | Morind Cuty |
| Gaut, Rosa-Lee, A.B., 1914 | LAS |  | Champaign |
| Gay, Ernest Hubbard | $\mathrm{Agr} \mathrm{(SS)}$ | 75 | Ouincy |
| Gayle, Gilmore Jacob | Agr |  | Port Limon, Costa Rica |
| Gayle, Maurice Rowe, Jr. | $C E$ |  | St. Louis, Missouri |
| Gayle, Robert Edwin | Agr (SS) | 1033 | Lincoln |
| Gaylord, Francis Moses | Com |  | South Hadley', Massachusetts |
| Gehant, Evelyn Ella | HSAgr (SS) | 102 | Dixon |
| Geliant, George Modeste | Agr (SS) | 6912 | Dixon |
| Gehant, Rosalie Florence | HSAgr (SS) | 91 | Dixon |
| Gelilbach, Oscar Herman | LAS | 34 | Lincoln |
| Gehrig, Oscar Twiner | Com |  | Pekin |
| Geib, George Albert | $C E$ | 122 | St. Panl, Minnesota |
| Geiger, Lester Charles | Com | 35 | Mendota |
| Geiger, Walter Jacob | EE |  | Mt. Carmel |
| Geiler, Frank Herman | LAS | 49 | Mansfield |
| Geisendorfer, Karl Edward | Agr (SS) | 623 | Urbana |
| Gelbard, Oscar Cisis | Agr |  | Champaign |
| Gellert, Donald Nichol | $M E$ |  | Chicago |
| George, Harold Edgar | Agr | 125 | Whitticr, California |
| George, Leslie Godfrey | $L^{\text {L }}$ | 31 | Staunton |
| Gerke, Roscoe | Che |  | Greenville |
| Gerlach, Alma | HSLAS | 33 | Doniphan, Missouri |
| Gerling, Richard William Herman | CE | 34 | Bloomingion |
| Gernand, Oliver Perry | Agr | 66 | Rossille |
| Gernand, Paul | Agr | 25 | Urbana |
| Gernon, Gerald Deland | LAS |  | Kankake |
| Gerten, Nicholas | CE | 88 | Chicago |
| Geselbrachit, Howard Cyril | Agr | 68 | Chicago |
| Gethmann, Milton | CerE | 29 | Reinbeck, Iowa |
| Gettys, Ruth Hortense | LAS | 70 | Chicago |
| Gewalt, Carl Henry | A | 32 | Breckenridge, Minnesota |
| Geyer, Grace Mildred | LAS | 99 | Roswell, Nezu Mexico |
| Geyer, Helen Florence | LAS sp |  | Quincy |
| Ghasignian, Yalıram | EE |  | Constantinople, Turkey |
| Cherganoff, Penco | $C E$ | 34 | Lovetch, Bulgaria |
| Ghislin, Lloyd Havens | Com | 30 | Ouk Park |
| Gibbons, Maud Alberta | LAS | 64 | Metropolis |
| Gibls, Frederick Richardson | Conn |  | Oak. Park |
| Giblin, Mary Angela | SS |  | Springfield |
| Gibson Harry Wilson | Com | 42 | Mitskogee, Oklahoma |
| Gibson, Oscar Harry | LAS | 96 | Alexis |
| Gibson, Raleigh Augustus | Com | 60 | Decatur |
| Gibson, Sylvia Rose | $L A S$ | 67 | Chicago |
| Gibson, Thomas Robert | Com | 24 | Chicago |
| Giddings, Mate Lewis | LAS | 65 | Donville |
| Gideon, Alva Jennings | LAS | 33 | Ohlahoma City, Oklahoma |
| Gideon, Charles Russell | L.AS | 61 | Oklaloma City, Okiahoma |
| Giertz, Arthur Edward | CE | 70 | Elgin |
| Gifford, Ralph Egley | Com | 66 | Onarga |
| Gift, Lyle Henry | Agr | 69 | Peoria |
| Gilbert, James Harman |  | 56 | Mt. Verson |
| Gilbert, Minnie Ellen | LAS | 1021 | Dillon, Montana |
| Gildersleeve, Charles Turner | Agr |  | Hudson |
| Gilduer, Lowell Ellsworth | Com | 26 | Atlanta City, New Jersey |
| Giles, Lewis Wentworth | $A E$ | 28 | Washington, D. C. |
| Gilkey, Escbo Vern | A |  | Indianola |
| Gilley, John R. | SS |  | Hume |
| Gill, Clarence Scott | RCE | 32 | St. Louis, Missouri |
| Gill, Ivan C. | Agr | 32 | Albion |
| Gill, Smith William | Agr |  | East St. Louis |
| Gillette, William Henry | LAS |  | Lena |
| Gillham, Willard Clark | ME | 67 | Edwardsville |
| Gillison, James Herbert | LAS |  | Westrille |
| Gilmore, William Edward | LAS | 28 | Chicago |
| Gilpatrick, Gladys | HSAgr | 69 | Plano |
| Ginnings, Paul Meade | ChE |  | Macomb |
| Ginter, Clarence Marshall | EE (SS) | 28글 | Peotone |
| Girhard, George M. | SS |  | Nesston |
| Girhard, Harold Raymond | LAS | 35 | Newton |
| Gish, Owen Ellyson | RME |  | Topeka, Kansas |
| Gladish, Willis Linsay | SS |  | Dustdee |
| Glass, Ian | Agr |  | Park Ridge |
| Glass, Will | $E E$ |  | Rock Island |
| Glassco, Hazel | SS |  | Urbana |
| Glassco, Ruth Marie | HSAgr (SS) | 61 | Urbana |
| Glazier, William Lacy | AE |  | Newport, Keatucky |
| Gleason, Raymond Michael | ${ }_{S}^{E} 5$ | 38 | Chicago |
| Glessing, Barbara | ${ }_{5 S}$ |  | El Paso |
| Glick, Everett E. | ${ }_{\text {Agr }}$ | 112 | Urban, Kansas |

Glover, Clarence Washburn
Glover, Donald Mitchell
Glover, Vernon Leslie
Gluek, Arthur Louis
Goddard, James Douglas
Godehn, Reuel Ariel
Godfrey, Frank
Goebel, Irma Gretchen, A.B. 1915
Goelitz, Walter Adolph
Goelitz, William Henry
Goettler, Edna Agatha
Gogerty, Henry L.
Goldberg, Charlotte Deana
Goldberg, Joseph
Goldberger, Henry Joseph
Golden, Marie
Goldman, Frank Lyle
Goldschmidt, Erna Claire
Goldsmith, Frank French
Goldstein, Robert Sidney
Golinkin, Abrabam Lincoln
Goocls, DeWitt Robert
Gooch, Gretchen Louise
Goode, Eslanda Cardozo
Goodell, Addison
Goodell', Horace Holbrook
Gooding, Laura Lavonia
Goodman, Albert Nelson
Goodman, Byne Frances, M.S., 1913
Goodman, Edwin Rheinstrom
Goodmann, Beatrice Ida
Goodpasture, Gladys Marie
Goodrich, Robert James
Goodspeed, Willetta Myrtle
Goodwillie, Douglas Monroe
Goodwin, John Hanford
Gordon, Frank Allyn
Gordon, Kenneth Hickok
Gordon, Louis
Gordon, Marie Alma
Gore, Roy Cletis
Gorey, George Francis
Gorham, John William
Gormley, Vincent Lewis
Gossard, Ella
Gosser, 'Harold
Gossett, Leo Everett
Gotti, Harry Dominick
Gottschalk, Arthur Hubert
Goudy, Don Coleman
Gould, Anthony Ready
Gould, Clifford Burt
Gould, Frank Elmer
Gould, Maurice Augustus
Gould, Pbilip Newhall
Gouwens, Estey William
Goveia, Lawrence Theodore
Gowd, Rayadwig Nagan
Grabbe, Iohn Christian
Grabbe, Lowell Francis
Grace, Floyd Vivian
Graff, Albert Ambrose Ignatius
Graham, Elizabeth
Graham, Florence
Graham, Harland Brown
Graham, Walter Thompson
Graham, Wilmer Trumbull
Grant, Clarence Todd
Grant, Ruth Margaret
Grantz, Raymond Lecrimer
Graven, Anker Suerre
Graves, Frank Wilkinson
Graves, Ncllie Ruth
Graves, Paul
Gray, Сога Emmeline, M.S.
(Univ. of Chicago) 1909
Gray, Daniel De\Vitte
Gray, James Madison
Gray, Kline
Gray, Leslie Roy
Gray, Otto Benton
Gray, Ralph Edward
Gray, Russell Callam
Gray, Ruth
Gray, William Jasper

| $L$ | 28 | Ottaza |
| :---: | :---: | :---: |
| Med | 103 | Urbana |
| CE |  | Mattoon |
| $C E$ | 39 | Minneapolis, Minnesota |
| Med | 27 | Marion |
| $A E$ | 111 | Maline |
| Com | 32 | Staunton |
| Mus | 133 | Urbana |
| ${ }^{\text {Agr }}$ | 36 | Ravina |
| SS |  | Oak Park |
| HSLAS | 891 | Chicago |
| A | 123 | Zearing, Iowa |
| LAS | 69 | Chicago |
| Med |  | Chicago |
| $C E$ | 63 | Chicago |
| $L A S$ |  | Greenview |
|  | 573 | St. Lauis, Missouri |
| HSLAS | 64 | Davenpart, Iowa |
| ${ }^{\mathrm{Agr}}$ | 50 | Wataga |
| $R C E$ | 98 | Chicago |
| ME | 60 | Chicago |
| Agr | 211 | Bellfower |
| LAS | 99 | Bellflower |
| HSLAS | 49 | New York City |
| LAS | 5 | Loda |
| SS |  | Beardstown |
| LAS |  | Belleville |
| ${ }_{S}{ }_{S}$ | 37 | LaSalle |
| SS |  | Urbana |
| CerE | 62 | Terre Haute, Indiana |
| HSLAS |  | Champaign |
| Ch | 93 | Oberlin, Ohio |
| Agr |  | Urbana |
| Com |  | Chicago |
| Agr | 16 | Ritchey |
| Agr |  | Urbana |
| E $E$ | $26 \frac{1}{2}$ | Oquawka |
| CerE | 6 | Chicago |
| LAS | 48 | Urbana |
| LAS (SS) | 371 | Elmwood |
| MSE | 75 | Joliet |
| LAS |  | Mt. Union, Iowa |
| ${ }_{\text {Agr }}$ | 751 | Chicago |
| Com |  | Avalon, Pennsylvania |
| Com | 271 | Lincoln |
| Com |  | Libertywille |
| LAS |  | Springfield |
| $A g r$ | 68 | Fairfield |
| $\stackrel{A g r}{\text { Ce }}$ | 77 | Urbana Aurora |
| Com | 30 | Sterling |
| CE | 69 | New Sharon, Iowa |
| LAS |  | Evanston |
| Coin | 39 | South Holland |
| $A E$ |  | Jacksonville |
| Agr |  | Hospet, India |
| Agr | 100 | Urbana |
| Com $L A S$ |  | Urbana |
| EE sp | 108 | Cincinnati |
| SS |  | East Dubuque |
| LAS |  | Hyde Park |
| ${ }^{\text {Agr }}$ | 72 | Los Angeles, California |
| ChE | 60 | Morning Sun, Iowa |
| EE | 109 | Elgin |
| HSLAS | 96 | Urbana |
| L | 28 | Rackford |
| A | 91 | Menomonic, Wisconsin |
| Agr | 64 | Silver Creek, New York |
| $\stackrel{M u s}{S S}$ | 37 | Decatur |
|  |  |  |
| Mus sp |  | W. Palm Beach, Florida |
| $E E$ | 14 | Chicago |
| Com | 34 | Decatur |
| EE | 72 | Odell |
| Agr | 29 | Maroa |
| CerE | 68 | Arcola |
| ${ }^{\text {Agr }}$ HS (SS) |  | Chickasha, Oklahoma |
| $\underset{L A S L}{\text { HS }}$ (SS) | 98 | Des Moines, Lowa |
| LAS |  | Lovington |


| Grayhack, John Edward, Jr. | $C E$ | 110 | Joliet |
| :---: | :---: | :---: | :---: |
| Green, Esther Cranston | HSLAS | 31 | Urbana |
| Green, Gladys | HSLAS | 67 | Oakwood |
| Greene, Bert Daniel | LAS | 131 | Byron |
| Greene, George | SS |  | De Kalb |
| Greene, Joel Waring | Agr | 33 | Urbana |
| Greene, Scott Corwith | LAS |  | Wilmette |
| Greener, Walter Henry | LAS |  | Streator |
| Greenfield, Richard Fletcher, Jr. | ME | 24 | Chicago Heights |
| Greengard, Louis Jacoh | Agr | 113 | Chicago |
| Greenhill, Harold | ME | 74 | Chicago |
| Greenwell, Earl Eugene | LAS | 65 | Harvey |
| Greer, Donald Malcome | LAS |  | Anderson, Indiana |
| Gregg, Marion Elsie | HSLAS | 63 | Chicago |
| Gregory, Allene, Ph.D. <br> (Radcliffe Coll.) 1913 | Mus sp |  | Urbana |
| Gregory, John Milton | Com | 33 | Kansas City, Missouri |
| Gregory, Juljus Elmer | Cons |  | Olney |
| Gregory, Richard Earle | ME | 38 | Mowcaqua |
| Greison, Hans Peter | Com | 92 | Saz'ana |
| Grewe, Charles Henry | Agr | $68 \frac{1}{2}$ | Lawrence, Michigan |
| Grey, Newton Fox | Agr | 931 | Evanston |
| Gridley, John Newton | Agr | 78 | Biggsville |
| Gridley, William Whiting | Conn | 105 | Amboy |
| Gries, Albin George | $A E$ |  | Chicago |
| Grieser, Leroy Oliver | Agr | 100 | Quincy |
| Grieser, Robert Wallor | Com |  | Quincy |
| Griffin, Glenn Frank | $L A S$ | 59 | Traverse City |
| Griffith, Francis Dickerson | Agr | 104 | Chicago |
| Griffith, Kathryn | HSAgr |  | McNabb |
| Griffith, Stanwood John | Agr | 33 | Ashton |
| Griffith, Vernon Sumner | Agr | 34 | Clinton |
| Griffiths, Claude | SS |  | Roodhouse |
| Griffiths, David Wood | CE | 37 | Oak Park |
| Grigg, Jerome Bruner | MnE (SS) | 15 | Joplin, Missouri |
| Grigsby, Hugh | Agr | 103 | Medina, Mexico |
| Grigsby, Melborn Redmon | SS |  | Seneca |
| Grimes, Earl Jerome | Agrsp |  | Russellville, Indiana |
| Grimm, Boyd Allen | Com |  | Canton |
| Gripp, Elmore Albert | Com | 37 | Moline |
| Griswold, Jay Samuel | Agr |  | Camp Point |
| Grommon, Helen Wightman | HSLAS | 23 | Plainfield |
| Gronlun, Herbert Kenyon. | $A E$ | 55 | Elgin |
| Gronnerud, Herbert Melvin | $C E$ |  | Chicago |
| Grosche, Alfred G. | Agr |  | Matteson |
| Gross, Charles Raymond | $L A S$ (SS) | 57 | Chicago |
| Gross, Christian | Agr | 65 | Chicogo |
| Grossberg, Victor Herbert | $L$ | 32 | Chicago |
| Grossman, Donald Ashway | $L$ | 58 | Champaign |
| Grossman, Ralph Emery | $A E$ | 100 | Champaign |
| Grossman, William Abraham | Com | 37 | Pcoria |
| Grot, Ernest Christian | $M E$ | 48 | Ottawa |
| Grotevant, Nina | HSLAS | 27 | Pekin |
| Grotts, Fred | SS |  | Raymond |
| Groves, Charles Harold | LAS |  | Champaign |
| Gruhl, Clarence James | AE | 99 | Milwaukee, Wisconsin |
| Grundman, Paul Albert | Cons |  | Chicago |
| Gruner, Elmer John | $E E$ | 104 | Speer |
| Gruner, Raymond William | EE | 100 | Speer |
| Grunewald, Carl Frederick | LAS | 5 | Chicago. |
| Grunewald, Herman C. | $C E$ | 1108 | St. Loutis, Missouri |
| Gruny, George Rohert | Agr | 30 | Camp Point |
| Gruver, Harold Dugdale | Agr |  | Chicago |
| Guernsey, Ernest William | ChE | 25 | Vincennes |
| Guild, Mrs. Lois | Agr | 79 | Urbana |
| Guilliams, Gordon Baudouine | Agr | $21 \frac{1}{2}$ | Evanston |
| Guimaraes, Aryde Sagadas | REE (SS) | 78 | Rio de Joneiro, Brazil |
| Gulley, Henry Alexander | CE |  | Urbana |
| Gulley, Sanford Joseph | ME | 471 | Urbana |
| Gum, Harry Allen | $M E$ | 102 | Marseilles |
| Gumm, Lestie Monroe | EE | 107 | Marseilles |
| Gunderson, Miles Campbell | Com |  | Chicago |
| Gunkel, Woodward William | Com | 98 | Sheffield |
| Gunning, Lillian Elizabeth | Mus sp |  | Tolono |
| Gunning, Nadine Elsie | HSLAS |  | Wilmington |
| Gunther, Felix Arno | REE | 72 | Quincy |
| Gurda, Francis Stanislaus Roman | A |  | Miluaukec, Wisconsin |
| Gustafson, Carl Alhert | $A E$ | 73 | West Fort Dodge, Iowa |
| Gustafson, George Philip | Com | 102 | Sycamore |
| Gustafson, Herman | ME |  | Ogena, Wisconsin |
| Guthrie, Helen Mae | LAS |  | Mattoon |
| Guynn, Jesse Frederick | Agr | 34 | Dewey |
| Gwinn, Lawrence Duff | $M E$ |  | Terre Haute, Ind. |
| Haake, Harry George | $C E$ | 5 | Chicago |
| Haaker, Harold Henry | A | 47 | Omaka, Nebraska |

Haas, Orville Francis
Haas, Raymond Christian
Haase, Elizabeth Elsa
Haase, Harold Raymond
Hackley, Elizabetl? Pursel
Hackley, John Hale
Hada, Katsuki
Hadden, Chester Gilbert
Hadelman, Louis
Hagan, Bernard Anthony
Hagan, Thomas Angus
Hager, Frank Stafford
Hager, Henry Merritt
Halin, Archie
Hahn, Fred Charles
Hahn, Grace Louise
Haines, Forrest Livingston
Hair, Arthur J.
Haish, Theodore Adam
Hakanson, Arthur Ferdinand
Hake, Mrs. Minnie Thomas
Halas, George Stanley
Halas, Walter Henry
Halbruge, Charles Morgan
Haldeman, Glenn Merlin
Hall, Allcn Howell
Hall, Cecil James
Hall, Edward Knight
Hall, Emory George
Liall, Helen Evalyn
Hall, Toseph Lowe
Hall, Karl William
Mall, Kenneth Canright
Ilalliday, Mabel
Halligan, John Edison
Halliwell, Ashleigh Drake
Halliwell, Pauline
Halstrom, Bernlaard Christian
Hamann, Christian
Hamill, Eugene Carl
Hamilton, Chauncey Geyer
Hamilton, Don Herman
Hamilton, Donald Alan
Hamilton, Ray Leonidas
Hamilton, Tom Sherman
Mamilton, William Jacob
Hamm, Orville Pearson
Hammer, William Palmer
Hammet, Glenn Edward
JIammon, Clarence Trumbul
Hammond, Asaph Chandler
Hammond, Leonard Aaron
Hammond, Ratls Edith, A.B.
(Drury Coll.) 1914
Hampson, Herbert
Hampton, Ruth Margaret
Hanaford, Earl Jose
Hanawalt, William Gilbert
Hance, George Martin
Hancock, Miriam
Hancock, Myron Scott
Hancock, Walden Wcod
Hand, Ella Marie
Hanes, Ernest F.
Hanger, Paul Newton
Hanley, Chester Thomas
Hanmore. John Leon
Ilanna, Morton
Hannush, Paul
IIanschman, Fred Robert
Ilansen, Andrea
Hansen, Anker Fred
Flansen, Clarence Magnus
Hansen, Stanley
IIanson, Jennings William
Itao Tso Chang
Harhricht, Harlan Carl
Hardesty, Albert Vergil
Hardesty, Gladys Mabel
Fardiman, Leo Bernard
Hardin, Daniel Lawrence
Hardin, William Atwater
Harding, Frank Black


El Paso
Evansville, Indiana
Oak Park
Oak Park
$65 \frac{1}{2}$ Urbana
$28^{*}$ Marengo
91 Sacramento, California
Chicago
Warkegan
Champaign
103 Champaign
St. Louis, Missouri
Dwight
Walla Walla, Washington
105 Springficld
24 West Chicago
102 Urbana
35: Greenville
Hinchley
Chicago
St. Louis, Missouri
41 Chicago
131 Chicago
96 Rockport, Indiana
401 Ponca City, Oklahoma
New Germantown,
New Jersey
Urbana
Ladybrand, South Africa
64 Rockford
29 Attica, Indiana
33ł Sullioan
Cherokec, Lowa
31 Chicago
Clio, Michigan
Quincy
113 Chicago
53 Chicago
135 Bloomington
69 Colfa.
62 Paris
52 Spokane, Washington
La Salle
68 Paris
55 Latham
Ludlow
$26 \frac{1}{3}$ Cooperstown, North Dakota
Clarcnce, Missouri
Urbana
23 Warsaw
32 Warsaw
Stringfield, Missouri
Mattoon
Cartcruille
Elgin
3 Galva
Marcngo
Chicago
72 Beecher City
36 Cascy
Champaign
Mt. Morris
65 Urbana
Jerseyville
33 Urbana
Shelbyville, Kentucky
117 Paterson, New Jersey
34 Dolton
Chicago
32 Oshkosh, Wisconsin
22六 Racine, Wisconsin
113 Chicaza
Chicago
128 Wuchinghsien, China
37 Hannibal, Missauri
30 Homer
70 Los Angeles, California
Kansas City, Missouri
201 Keithsburg
Chicago

Hardison, Carl Maxwell Hardy, Clifton Stanley Hardy, Howard Henry
Harland, Marion Boyer
Harn, Jerry Anson
Harnack, Vernon Leslie
Harner, Horace Hugo
Harnish, Wilber Eugene
Harper, Bertha
Harper, Charles A.
Harper, Homer Munda
Harper, Lester Blaine
Harper, Owen Edward
Harrah, Chester Philip
Harrington, Bernard Wilfred
Harris, Abram Harry
Harris, A. Ross
Harris, Charles Leland
Harris, Elizabeth Payne
Harris, Elodia Ferne
Harris, Hannalı Hahn
Harris, Herbert Henry
Harris, Leo Gabriel
Harris, Pauline Ciora
Harris, Robert Bruce
Harris, William Rutledge
Harrison, Benjamin Samuel
Hart, Marion Murphy
Hart, Richard Nelson
Hart, William Ward
Hartigan, Frank J.
Hartley, J. Christine
Hartley, Onict
Hartman, Ervin Christian
Hartman, Laura Ellen
Hartmann, William Monroe
Hartwell, Godfrey
Harvey, Addison Adele
Harvey, Mrs. Esther Finlay
Harvey, Eugene Iames
Harvey, Ralph Frame
Harvey, Robert Allen
Harwood, Frank D.
Harwood, Sylvan Dix
Harz, Albert William
Hasbrook, Robert Locke
Hatch, Richard James
Hathaway, Warren Kennedy
Hathorne, Wade Sherman
Hattenhauer, Robert Clinton
Haupt, Dorothy
Hawes, Henry Clifford
Hawkins, Emin Witherspoo'1
Hawkins, Ma:jorie D.
Hawkinson, Carl Otto
Hawley, Jessie M.
Haworth, Claiborne Charles
Haxton, R. K.
Hayes, Clarence McCleskey
Hayes, Columbus Ferrel
Hayes, Earle Melville,
Hayes, Edward Bean
Hayes, Frank Ker:
Hayes, Oliver
Hayne, Walter Elliott
Hays, Frank
Hazen, Cecil Reeder
Hazen, Gladys May
Head, Glenn Lloyd
Headley, Frencis Leo
Heald, Rokert Penfield
Healy, William Carleton
Heard, John Thomas Harris
Heard, Lucy Evans
Heath, Dwight Frederick
Heath, Monroe
Heaton, Ifenry
Hecker, Charles
Hecketsweiler, Roy Thomas
Heckler, Leo Chrysostom
Heckmann, Louis Frederick Jr.
Hedgcock, John Franklin
Hedgcock, Martha Elizabeth
Hedgcock, Nellie May
Hedges, Bertram A.
Hedrick, Edna May

| SS <br> LAS |  | Columbia, Tennessee Washington, $D . C$. |
| :---: | :---: | :---: |
| Agr |  | Watscka |
| Agr | 32 | Washington, Iowa |
| $\stackrel{L}{\text { L }}$ h |  | Lewistorn |
| A | 143 | Fulton, Missouri |
| SS |  | Mechanicsburg, Pennsyliania |
| SS |  | Urbana |
|  |  | Aina |
| Agr (SS) | 503 | East St. Louis |
| $L$ |  | Pasadena, California |
| $5 S$ |  | East St. Louis |
| Com |  | Bloomtield, Indiana |
| LAS |  | Champaign |
| $\stackrel{A}{S}$ |  | Chicago |
| EE | 13 | Washington, Indiana |
| LAS | 61 | Champaign |
| HSLAS | 104 | Mcrion |
| LAS | 70 | Champaign |
| Com |  | Cairo |
| Com $H S L A S$ | 107 | Wilton Junction, Iowa |
| HSLAS |  | Arcola |
| ${ }_{\text {A }}$ | 263 | Gilman |
| ${ }_{L}^{\text {L }}$ AS | 28 | Macamb |
| ${ }_{L}^{\text {LAS }}$ AS | 40 | Villa Groz'c |
| LAS | 33 | Bentor |
| Agr | 90 | Brigliton |
| ${ }_{\text {L }}$ | 56 | Beliton |
| Com | $32 \frac{1}{2}$ | Cricago |
| Agr |  | Paris |
| Agr | 28 | Weterioo |
| LAS | 112 | Milford |
| Ch | 5 | Chacago |
| $A E$ | 37 | La Porte, Indiana |
| SS |  | Chicago |
| EE | 54 | Neur Orleans, Loutstana |
| Agr (SS) | $103 \frac{1}{2}$ | Indianapolis, Indiana |
| EE | $35^{\circ}$ | Fairfeld |
| SS |  | Johnston City |
| LAS | 105 | Carroliton |
| Agr | 73 | Champaigin |
| Com |  | Chicago |
| CerE |  | Chicogo |
| Ch | 24 | Waukegan |
| LAS | 94 | Peru |
| LAS |  | Chicago |
| Com | 78 | Atlonta |
| ${ }_{\text {Agr }}$ | 97 | Faimount |
| AE | 1088 | Marquette, Kansas |
| SS |  | Dowlers 'Groz'c |
| Com |  | St. Joseph |
| SS |  | Greenzille, Mississipli |
| Agr |  | Washington, Indiana |
| Com | 3 | New London, Iowa |
| Agr | 61 | Kings |
| LAS | 34 | Urbana |
| Agr |  | Chicago |
| Agr | 33 | Pleasant Plains |
| CE |  | Chicago |
| Agr | 29 | Champaign |
| HSAgr |  | Rockford |
| LAS (SS) | 72 | Sciota |
| Agr (SS) | 114 | Paris |
| ${ }^{\text {Com }}$ | 36 | ${ }_{\text {Peoria }}^{\text {Glenburn, North Dakota }}$ |
| Agr sp |  | St. Louis, Missouri |
| SSAS | 102 | West Point, Mississipp: |
| LAS | 765 | Chicago |
| ChE |  | Rosedale, Indiana |
| Mfus |  | Cincinnati, Ohio |
| LAS (SS) | 99 | Area |
| EE (SS) | 70 | Harcey |
| ${ }^{\text {Agr }}$ |  | New Harmony, Indiana |
| Agr $H S L A S$ | 131 32 | Plymouth Plymonth |
| HSLAS | 102 | Plymouth |
| LAS | 937 | Downing, Missouri |
| L.AS | 105 | LeRoy |

Columbia, Tennessee
Washington, D. C.
Watscka
angron, Iowa

Urbana
Fulton, Missouri
Urbana
Aina
Pasadena, California
East St. Louis
Bloomatield, Indiana
Chicago
Urbana
Washington, Indiana
Marion
Champaign
Wilton Junction, Iowa
Arcola
Blacamb
illa Groz'C
Benton
Benton
Cricago
Paris
Mattoon

- cterioo

Chacago
Chicago
Ncu Orleans, Louisiana
Chicago
is, Indiana
Johnston City
Champaign
Chicago
Chicago
Waukegan
Peru
Clicago
Fairmonnt
Chicago
Downers Grazic
St. Joseph
Greenzille, Mississipti
Aron, Indiana
Kings
Urbana
Pleasant Plains
Chicago
Champaign
Rockiord
Sciota
Peoria
Glenburn, North Dakota
West Point, Mississisp:
Chicago
Rosedale, Indiana
Cininnati, Ofito
Area
New Harmony, Indiana
Plymonth
Plymonth
Downing, Missouri
LeRoy:

Hedrick, George Samuel
Heffron, Norman
Hegener, Archie Leo
Hegner, John Robert
Hegsted, Martin Anton
Hein, Mary Rachael
Hein, Mason August
Heindel, John Harold
Heindel, Spencer Rebbock
Heinicke, Herbert Martin Edward
Heinz, Katherine L
Heise, Walter Otto
Helgren, Fred Joseph
Heller, Henry Frederick
Helm, Ethel Margaret
Helm, Harry Gray
Helm, Herbert Clarence
Helmreich, Agnes Johanna
Helper, Kenneth Louis
Hemb, Harold B.
Hemenway, Margaret
Henmings, Nellie M.
Henderson, Alexander Swift
Henderson, Frank Spoor
Henderson, James Bruce
Henderson, John Cbarles
Henderson, Melvin
Henderson, William, Jr.
Henley, Thomas Edward
Henn, Hildagard Anna Sarah
Henning, Caspar Ferdinand
Hennings, Elfreda Viola
Henry, Elton Barbara
Henry, Helen
Henry, Jennie Vieve
Henry, Victor Max
Hensold, Harold Hartman
Henson, Margaret Emily Virginia
Henson, Ray David
Hepburn, Nelson W., M.S., 1910
Herdman, Frank Victor
Hermanson, Frank Alfred
Herr, Charles Osmer
Herriott, Opal Vida
Herron, Ernest R.
Hershman, Okla Harold
Hess, Lester S.
Hess, Paul David
Hesser, George Batchelder
Hester, Elizabeth
Hexter, Avronie Nathan
Heyduck, Lawrence
Hickey, Daniel Webster, Jr.
Hickey, John Raymond
Hicks, George
Hicks, Victor LaNaier
Hiebel, Leonard B.
Hieronymus, Pendleton Elbert
Hiett, Mable
Hiett, Robert C.
Higgins, Irma May
Higgins, Margaret Elizabeth
Higgins, Mary Marguerite
Higgins, Nash
Highberger, John Foster
Hilbert, John
Hildebolt, Harry Clifford
Hildreth, Leslie Marquis
Hill, Bernard Eli
Hill, Fred James
Hill, Gertrude
Hiill, Grant Logan
Hill, Isaac Newton
Hill, James Edward
Hill, Katharine K., B.S., 1915
Hill, Lawrence Elias
Hill, Loren Clifford
Hill, Lucy Belle
Hill, Rohert Earl
Hill, Roger Edward
Hill, Warren Elliott
Hilliard, Lyndal
Hills, Airy
Hills, David Avery
Hilpert, Martha

| Agr | 100 | LeRoy |
| :---: | :---: | :---: |
| Com |  | Chicago |
| LAS | 69 | Bluff Springs |
| EE | 74 | Stuttgart, Arkansas |
| AE | 31 | Chicago. |
| HSAgr | 791 | Champaign |
| Agr | 66 | Champaign |
| $A E$ | 109 | Elgin |
| $C E$ | 73 | Stockton |
| $L$ | 28 | Streator. |
| ChE |  | St Louis, Missouri |
| Agr | 31 | Neponset |
| LAS | 24 | Florence, Wisconsin |
| LAS | 31 | Des Plaines |
| SS |  | La Junta, Colorado |
| ${ }_{L}^{L A S}$ | 25 | Grayville |
| LAS (SS) | 75 | Crescent City |
| Agr | 62 | Henry |
| ME |  | Dundee |
| LAS | 13 | Evanston |
| SS (SS) |  | Pittsburg, Pennsylvania |
| $L_{E E} A S$ (SS) | 100 | Chicago Colut |
| ${ }_{L A}^{E E}$ | 1271 | Sterling, Colorado Millers Ferry Alabama |
| $\mathrm{Ch}_{4}$ | 393: | Champaign ${ }^{\text {a }}$ |
| Agr |  | Leland |
| $A g r$ | 5 | Millers Ferry, Alabama |
| Agr |  | Mattoon |
| HSAgr | 61 | Toluca |
| MSE |  | Mendota |
| HSLAS | 94 | Elgin |
| SS |  | Fairbury |
| SS |  | Peoria |
| HSLAS |  | Alton |
| Agr |  | Champaign |
| Agr | 71 | Tonica |
| Agr | 31 | Urbana |
| $L$ | 55 | Johnston City |
| Agr |  | Urbana |
| ${ }_{\text {Com }}^{\text {Cor }}$ (SS) | 93 | Winnetka |
| Agr |  | Quincy |
| SS |  | Seymour |
| SS |  | Lima, Ohio |
| ME |  | Tipton, Indiara |
| $S S$ |  | Capron |
| $M n E$ |  | Pittsburg, Kansas |
| $\stackrel{\text { Agr }}{ }$ |  | Urbana |
| A |  | Memphis, Tennessee |
| ME |  | Centralia |
| EE | 37 | Aurara, Missouri |
| $C E$ |  | St. Louis, Missowri |
| Agr |  | Chadsuick |
| Agr |  | Urbana |
| Agr | 107 | Waterloo, Wisconsin |
| ${ }_{\text {Agr }}$ |  | Atlanta ${ }^{\text {Keithsburg }}$ |
| SS |  | Keithsburg |
| HSLAS (SS) | 93 | Chalmers |
| LAS | 33 | Champaign |
| SS |  | Joliet |
| SS |  | Joliet |
| ${ }_{\text {ASr }}$ | 81 | St. Panl, Minnesota |
| Agr | 801 | Eaton, Ohio |
| $L$ |  | Broadlands |
| CE | 67 | Chicago |
| ${ }_{\text {Cer }}$ S | 128 | Harvard |
| Com |  | Sullivar |
| SS |  | Crawfordsvilie, Indiana |
| Agr | 126 | Mattoon |
| LAS sp |  | Carthage |
| $M n E$ | ${ }^{32}$ | Chicago |
| ${ }_{\text {Agr }}$ (SS) | 117 | Mt. Carnel |
| Mus (SS) | 114 | Urbana |
| ${ }_{L}^{L} A S$ | 28 | Flora |
| Agr | 116 | East St. Louis |
| LAS | 16 | Fairfield |
| ${ }_{E E}{ }^{\text {L }}$ S | 791 | Pekin |
| HSAgr | 633 | St. Louis, Missouri |


| Hilsabeck, Mildred Eugenia | Mus | 17 | Windsor |
| :---: | :---: | :---: | :---: |
| Hilton, Ivan Jay | LAS |  | Springfield |
| Himmelreicher, Walter August | $C E$ | 74 | Chicago |
| Himstedt, Ralph Ebner | $L$ |  | Boody |
| Hines, Lyle Wilbur | Com | 50 | Peoria |
| Hinman, Walker McConnel | LAS | 35 | Dundee |
| Hinrichs, Herbert Stassen | Agr | 64 | Joliet |
| Hinsbaw, Joseph Howard | $L$ | 51 | Harristurg |
| Hinton, Stanley Winfield | Agr | 52 | Foosland |
| Hipple, Roy Everett | Agr | 66 | Waterman |
| Hirstein, John A. | $A g r$ | 691 | Summerfield |
| Hirt, Edward George |  | 108 | St. Cloud, Minnesota |
| Hirth, Laura Edna | $\mathrm{HSAgr}^{\text {r }}$ | 108 | Ouincy |
| Hite, Lucretia R. | SS |  | East St. Louis |
| Hitt, Mabel | LAS | 1021 | Herrick |
| Hixon, Hope Ada | LAS |  | Urbana |
| Hodge, Clarence Richard | LAS | 11 | Oregon |
| Hodge, John Reed | $A E$ | 37 | Carbondale |
| Hoefer, Emil | Agr |  | Freeport |
| Hoehn, Fremont John August | CerE | 102 | Carlinville |
| Hoehnke, Herbert William | $A E$ | 37 | Sheboygan, Wisconsin |
| Hofacker, Olga Vera | SS |  | Peoria |
| Hoffman, Aaron Andrew | Cam | 71 | Dwight |
| Hoffman, Gaylord Frederick | Agr |  | Pesotum |
| Hoffman, Harold | Com |  | Dwight |
| Hoffman, Louis Arthur | LAS | 66 | Harvey |
| Hoffman, Max Robert | ME | 32 | De Pue |
| Hoffmann, Mary Margaret | LAS |  | Pesotum |
| Hofreiter, Jessie Belle | LAS |  | Green Valley |
| Hogan, Harold Eugene | ChE | 72 | Lanark |
| Hogarth, Frank William | SS |  | Oconomawoc, Wisconsin |
| Hohm, Harley Daniel | $\mathrm{Agr}^{(S S)}$ | 23 | Sycamore |
| Hohman, Elmo Paul | LAS | 104 | Nashville |
| Hoke, James Ray | $\mathrm{Agr}^{\prime}$ |  | Camp Point |
| Hoke, P. M. | SS |  | Colfax |
| Holaday, Kenneth Marion | ChE | 33 | Mattoan |
| Holbert, Howard Valmore | LAS |  | Chicago |
| Holecek, Albert Bernard | $L$ | 32 | Chicago |
| Holinger, Arnold Carl | $A E$ | 116 | Chicago |
| Hollandsworth, Blanche Louise | LAS | 114 | Canton |
| Hollandsworth, Helen Margaret | LAS | 65 | Caiton |
| Hollingsworth, Chauncey Raymond | EE |  | Stronghurst |
| Hollis, D. P. | SS |  | Pittsficld |
| Hollister, Noble, Parker, B.S., 1915 | Agr | 160 | Champaign |
| Holloway, Doris Jean | HSLAS | 99 | Detroit, Michigan |
| Holman, Clarence Ladd | Com |  | Ellis, Kansas |
| Holmes, Albert A. | SS |  | Bowen |
| Holmes, Charles Vernon | LAS | 101 | Manteno |
| Holmes, Floyd Royal | Agr | 64 | Baylis |
| Holmes, Laura Clark | HSAgr | 65 | Chicago |
| Holmes, Oliver Wendell | ${ }^{\text {Agr }}$ | 56 | Greenficld |
| Holsinger, Charles Roy | SS |  | Sterling |
| Holt, Frank Maurice | Com |  | Milwarkee, Wisconsin |
| Holt, Herbert Edward | Agr |  | Wheaton |
| Holten, Joseph Thomas | LAS sp |  | East St. Lauis |
| Holton, Gladys Elizabeth | LAS | 103 | Chicago |
| Holtze, Harry Stevens | $A E$ | 111 | Siou.t City, Iowa |
| Holtzman, Harold Hoover | ${ }^{\text {Agr }}$ |  | Chicago |
| Honaker, Lombe Scott |  |  | Wytheville, Virginia |
| Honey, Myrtle Eveline | HSAgr (SS) | 38 | Dixan |
| Honnold, Loie | Agr | 33 | Kansas |
| Hoo, Te-Chum | SS |  | Hunshan Hanan, China |
| Hoots, Paul Frost | Ch |  | Mattoon |
| Hopkins, Eugcne Canfield | Agr | 63 | Yorkeille |
| Hopkins, Gold Samuel | Com | 1073 | Champaign |
| Hopkins, Guy Beatty | $E E$ | 82 | Newi Canton |
| Hopkins, Samuel Curtis | Com (SS) | 70 | Urbana |
| Hopson, Emet | Agr | 60 | Girard |
| Horblit, Joseph | LAS | 30 | Moline |
| Horen, Louis | $C E$ | 16 | Venice |
| Horimura, Hirosl | EE | 68 | Ohita, Japan |
| Hormel, Dorothy Stewart | L.AS | 107 | Wichita, Kansas |
| Hormel, Olive Deane | LAS | 1083 | Wichita, Kansas |
| Horney, Reid Bunn | LAS | 60 | Colfar |
| Horney, Warren Rees | Agr | 68 | Colfa. |
| Horning, Mary | SS |  | Harrisburg |
| Hornkohl, Siegfried Irving William | SS |  | St. Joseph, Missouri |
| Horwich, David ${ }^{\text {Hosford, }}$ Susan Funice | AE | 137 | Chicago |
| Hosford, Susan Eunice | HSL.AS | 105 | Geneseo |
| Hoskins, Leonard Cunningham | ME |  | E. Las Vegas. Now Mexico |
| Hoskins, Robert Keith | Com | 16 | Terre Haute, Indiana |
| Hoskinson, Bruce | SS |  | West York |
| Hosman, Parl DeWitt | $A E$ | 11 | Norfolk, Nebraska |
| Hostetler, Lloyd Earl | EE |  | Chicago |
| Hostettler, William Benton | Com | 32 | Decatur |

Hottes, Flora Emily Hottinger, Ethel Marian
Hotz, Wilfred Henry
Houchens, Jessie Batcheller
Houg, Orville Adlai
Hough, Charles Francis
Hough, Waldern Henry
Hougliton, Dale Neely
Hoult, Charles Howard
Housel, Charles Edward
Houser, lrma L.
Houston, Margaret
Houston, Alarion Earl
Hoven, Harold Arthur
Hovey, Howard Weston
Howard, Carl Gooch
Howard, Charles Gerard
Howard, Mabelle Lorraine
Howard, May Beatrice
Howard, Paul Wesley
Howe, Charles Ralph
Howe, Clifford
Howe, Edna Mae
Howe, Josephine
Howe, Roger Faxon
Howe, Wiliam Thomas
Howell, Edward Tillson
Howell, Grace
Howell, Paul J
Howells, Mary Georgia
Howells, Ruth Cound
Howes, Edward Blasier
Howk, Charles Dean
Howk,' Thomas Clark
Howland, Ione F.
Hsieh, Zen
Hsun, Ching Le
Hsun, Jin Jee
Huaco, Daniel Octavio
Huaco. Sergio Arturo
Hubbard, Aden Elden
Hubbard, Willis Wilkinson
Hubbell, Edward Lawrence
Huber, Andrew Joseph
Huler, Marie
Huber, William Henry Perry
Huch, Emma Margaret Edna
Hudler, Charla
Hudson, Edith Elizabeth
Hudson, Hersel Windell
Huff, Byron Robert
Huffi, Marguerite Lydia
Hufford, Charles Thurman
Huggler, Lillian Frieda
Hughes, Martin Collins
Hughitt, Anna Sue
Muisken, Harry Arnold
Hulburd, ILazel Emily
Hull, Trustum Harold
Mulson, John William
Hultman, lvar Nimes
Hummeland, Ralph Wendel
Humphrey, Kenneth Blaine
Humplireys, Gertrude
Humphreys, Robert Hatch
Humrichouse, Katic Lydia Edna
Hungerford, Charles Everett
Hungerford, Harold Norton
Hunsley, Alicc Lillian
Hunt, Dorothy Harriet
Hunt, Frank Summer
Erunt, Leslie Lyman
Hunt, Marsden Healey
Hunt, Milton Tilmore, fr .
Hunter, Adella Aileen
Hunter, Lloyd Hiram
Hunter, Margaret
Fiuntington, IIomer Irving
Hurdle, Ennis Carrol
Hurlbust, Helen Elizabeth
Hurley, Frank Iohn
Hurley, Luther Thomas
Husson, Harry Lee
Husted, Guy Harold
Husted, Merle Raymond

| $L A S$ (SS) | 341 | Urbana |
| :---: | :---: | :---: |
| LAS |  | Chicago |
| Com |  | Edwardsville |
| SS |  | Urbana |
| Com | 72 | Dows, Iowa |
| L | 56 | Danvers |
| AE | 111 | Oak Park |
| Com |  | What Cheer, Iowa |
| LAS | 29 | Chrisman |
| EE |  | DeKalb |
| LAS | 107 | Farnier City |
| HSAgr | 77 | Chicago |
| LAS |  | Beardstown |
| Agr |  | Chicago |
| A (SS) | 35 | Kansas City, Kansas |
| Agr ${ }^{\text {r }}$ | 69 | Benton |
| LAS (SS) | $39 \frac{1}{2}$ | Oakreood |
| HSAgr | 16 | L.e Roy |
| HSAgr |  | Chicago |
| Com |  | St Joseph |
| Agr | 1151 | Chantaign |
| Com |  | Miles City, Montama |
| LAS |  | Rantoul |
| LAS | 38 | Mansfield |
| Agr | 34 | Chicago |
| 4 Ar | 112 | Champaign |
| $M E$ |  | Dison |
| SS |  | Lezeiston |
| Cont | 35 | Beloit, Wisconsin |
| HSAgr | 31 | Staunton |
| L.AS | 31 | Staunton |
| ME | 6 | Chicago |
| SS |  | Momence |
| LAS |  | Momence |
| LAS |  | Harvey |
| EE | 1201 | Urbana |
| $\ldots .4 S$ | 64 | Nan Chang, China |
| LAS | 65 | Nan Chang, China |
| Con |  | Areguipa, Peru |
| SS |  | Areguipa, Peru |
| SS |  | Avon |
| A | 1117 | Beloit, Kansas |
| $A E$ | 4 | Daventort, Iowa |
| REE | 75 | Perrywille, Missouri |
| LAS |  | La Salte |
| SS |  | Lafayette, Ohio |
| LAS |  | Chicago |
| HSLAS |  | St. Louls, Missouri |
| LAS | 68 | Chicaso |
| Agr |  | St. Joseph |
| Com | 26 | Crbana |
| L.AS | 56 | Urbana |
| Agr | $99 \frac{1}{2}$ | Carmi |
| HSLAS | 32 | East St. Louis |
| EE | 101 | Berayn |
| L.AS | 23 | Escanaba, Michigan |
| CerE | 37 | Chicago |
| HSLAS | 59 | Cleceland, Ohio |
| Com |  | Clinion |
| RME |  | Keokuk, Iowa |
| $C_{H E}(S S)$ | 82 | Chicago |
| Core | 32 | Melrose Park. |
| EE | 114 | Waterloo, Wisconsin |
| HSLAS |  | Organ Cave, W. Virginia |
| Agr | $50 \frac{1}{2}$ | Athinson |
| Com |  | St. Joseph |
| MSE | 131 | Loda |
| Agr |  | Jolict |
| HSLAS | 32 | Champaign |
| HSAgr |  | Cambridge |
| CerE (SS) | 105 | North Brookfield, Mass. |
| Agr (SS) | 93年 | Sparland |
| CerE |  | Urbana |
| LAS |  | Findlay |
| Com | 5 | Heury |
| HSLAS | 32 | Chillicothe |
| Agr | 103 | Chicago |
| EE | 35 | Mt. Sterling |
| HSLAS | 26 | La Mesa, California |
| Con |  | Chicago |
| Com |  | Liberty Mills, Indiana |
| EE | 72 | Auburn |
| ${ }_{\text {Sgr }}$ | 33 | Roodhouse |

Hutchinson, Henry L
Hutchinson, Oliver Cromweil
Hutchison, Josephine I.
Hutton, Clifford
Huxtable, Winnie
Hwang, Lin
Hyde, Harvey Woolsey
Hyde, Russell Choate Miller
Hylen, Harry Andrew
Hyndman, Robert Jr.
Hypes, Mrs. Cora
Hypes, George William
Hypes, James Lowell
Ide, Hiram Russell
Ide, Robert Armington
Illick, Warren C.
Imes, Oliver Stapp
Imes, Ralph
Ingalls, Horace Banon
Ingels, Sherman
Ingram, Ralph Lindsay
Ingwers, Alfred Henry
Ingwersen, Henry Newton
Inman, Cordelia Birch
Inman, Dean Miaxwell
Ireland, Matilda Isabel
Irick, Carl Cuthbert
Irvine, Robert Patterson
Irwin, George Purvines
Isaacson, Oliver Theodor
Ivanoff, Tsuetan
Iwig, Howard Philip
Jaccard, Elizabeth Sarah
Jackman, Charies Harold
Jackson, Anna Elizabeth
Jackson, Ernest Theodore
Jackson, Mabel, A.B., 1915
Jackson, Manley Seymour
Jackson, Martha Elizabeth
Jackson, Thomas Henry
Jacobi, Herbert Jacob
Jacobson, Bernard Edwin
Jacobson, Henry George
Jahr, Myra Bertla
Jakubowski, Stanley Anton
James, Harriet Lillian
James, Helen Ida
James, Lenton Willis, B.S., 1915
James, Lois Everett
James, Russell Broadway
Jamison, Mrs. Edith Virginia
Janes, Nellie
Janssen, Elmer Theodore
Jarmulusky, Louis
Jarnagin, Robert
Jarvis, Rowling
Jasper, Edward Miron, B.S., 1911
Jasper, Lucinda Emmeline
Jay, Edith Lillian
Jeffers, Leslic Pickering
Jefferson, John Eenjamin
Jenkins, Lydia Geneva
Jenkinson, Robert Edwin
Jenks, Philip Dorsey
Jenner, Lawrence Tenney
Jennett, Harold Patrick
Jennings, Alma Irene
Jenrings. Carson Gary
Jensen, Jorgen Edward
Jervis, Florence May
Jessen, Hubert, B.S., 1915
Jewett, Eleanor Rountree
Jez, Leo Charles
Jibben, Raleigh J
Jobst, Herman Robert
Jockisch, Anna Zelma Elizabeth
Tohns, Donald Charles
Johns, Evelyn Crordon
Johns, Marion Elizabeth
Johnson, Carl Wilhelm.
Johnson, Claude Francis
Johnson, Edna Louise
Johnson, Elfreth George
Johnson, Everett Louic

| Agr | 37 | Burnhope, England |
| :---: | :---: | :---: |
| ME | 125 | Menaminee, Michigan |
| LAS |  | Mineral Paint, Wisconsin |
| $\stackrel{A}{S}$ |  | Waterlao Iowa |
| SS |  | Kansas City, Missouri |
| LAS |  | Tsao Dian, NanChao, Honas, Chima |
| ChE |  | Chicago |
| LAS |  | Rantoul |
| A |  | Chicaga |
| EE |  | Cincinnati, Ohio |
| $L_{S S} A S$ (SS) | 120木 | Ronceverte, West wirginia |
| ${ }_{S S} S^{\text {S }}$ |  | Roe, West Virginia |
| SS |  | Urbana |
| Agr | 31 | Washington, D. C. |
| Com |  | Washington, D. C. |
| Agr ${ }^{\text {c }}$ | 60 | Burlington, Iowa |
| EE (SS) | $104 \frac{13}{2}$ | Champaign |
| Agr | 100 | Urbana |
| Agr | 101 | La Fajettc |
| $A g r$ | 39 | Chicago |
| A | 36 | Moline |
| Agr |  | Chicaga |
| SS | 23 | Bellfiower |
| SS |  | Bellfower |
| LAS | 22 | Waslburn |
| Med | 27 | Pittsficld |
| Agr |  | Wilnette |
| Agr |  | Pleasant Plains |
| $M E$ | 20 | Lamberton, Minnesota |
| Agr |  | Kouatchitia Low, Bulgaria |
| Con | 27 | Pearia |
| HSLAS | $4{ }^{\text {a }}$ | Webb City, Missouri |
| ME | 108 | Elgin |
| LAS | 23 | Champaign |
| $S S$ | $36 \frac{1}{2}$ | Odin |
| AE | 99 | Pine River, Minnesota |
| HSAgr |  | Urbana |
| Agr (SS) | 34 | Champaign |
|  |  | Milwaukee, Wisconsin |
| Agr | $36 \frac{1}{1}$ | Chicago |
| Agr | 34 | Chicaga |
| HSLAS | 27 | Neillsville, Wisconsin |
|  |  | Chicago |
| HSLAS | 71 | Anvay |
| ${ }_{S S}$ |  | Whitzuater, Wisconsin |
| HSAgr |  | Fairbury |
| LAS |  | East St. Louis |
| SS | 3 | Urbana |
| LAS | 35 | Kewanee |
| Com | 51 | Sterling |
| EE | 57 | Maywood |
| $L$ | 57 | Shelbvarile |
| $E E$ | 122 | Hinsdale |
| SS ${ }_{\text {HSL }}$ |  | Newton |
| HSLAS |  | Liskeard, England |
| Agr sp |  | Florence, Colorada |
| ME | 1423 | Chicago |
| LAS | 24 | Clark's Hill Indiana |
| LAS | 36 | Arlin:gton Hcights |
| ChE | 29 | Indianapolis, Indiana |
| Conn | 35 | Evanszille, Indliana |
| HSLAS |  | Streator. |
| ${ }_{C E}^{H S L A S}$ | 60 | Chompaign |
| CE | 110 | Carlinville <br> Chicago |
| Mus | 107 | Champaign |
| SS |  | Alto Pass |
| Agr | 21 | Chicago |
| Agr | 15112 | Chicago |
| Agr |  | Green Vallcy |
| A (SS) | 69 | Omaha, Nebraska |
| HSLAS | 61 | Bcardstozun |
| MnE ( -5 ) | 102 | Danville |
| LAS | 60 | Danville |
| LAS | 30 | Rockford |
| Com |  | Batavial |
| MES $L A S$ |  | South Hazen, Michigan |
| Agr (SS) | 85 | Medora |
| $A \mathrm{Er}$ | 32 | St. Charles |


| Johnson, Floyd Henning | Com | 34 | St. Charles |
| :---: | :---: | :---: | :---: |
| Johnson, Harry Julius | Agr | 67 | Gerlaw |
| Johnson, Hortense | LAS |  | Princeton |
| Johnson, John Robert | LAS |  | Decatur |
| Johnson, John Walter | Mcd | 33 | Chicago |
| Johnson, Joseph Benjamin | Agr | 17 | Harrisburg |
| Johnson, Julius Nicholai | Com | 70 | Elgin |
| Iohnson, Marcus Leonard | $C E$ | 104 | Park Ridge |
| Johnson, Mary Fern | LAS | 100 | Urbana |
| Johnson, Maurice Carl | $M E$ | 108 | Omaha, Nebraska |
| Johnson, Maynard Wayne | Com | 112 | Casey |
| Johnson, Mildred, A.B. <br> (Western Reserve Univ.) 1915 | Lb |  | Franklin: Grove |
| Johnson, Porter Leo | Agr |  | Stockton |
| Tohnson, Radford Murray | $A g r$ | 53 | Crossitille |
| Iohnson, Ralph N. | Agr |  | Knoxville |
| Jolnnson, Richard Henderson | LAS (SS) |  | Danville |
| Johnson, Robert Eugene | EE | 90 | Lawrenceburg, Kentucky |
| Johnson, Roy Ruyle | Agr |  | Paris |
| Johnston, Douglas Gentry | Agr |  | Alton |
| Johnston, Dwight Irwin | Comt (SS) | 1041 | Sycanore |
| Johnston, Harold Boomer | LAS |  | Champaign |
| Johnston, James Arthur | SS | 8 | Hamilton |
| Johnston, James Martin | LAS |  | Chapel Hill, North Carolina |
| Johnston, Lillian Ruth | HSLAS | 33 | Champaign |
| Johnston, Mabel | HSLAS | 32 | Carlyle |
| Johnston, Mary Grace, A.B. <br> (Mount Union Coll.) 1914 | Lb |  | Canficld |
| Johnston, Paul Evans | Agr | 67 | Milton |
| Johnston, Pauline | LAS |  | Alton |
| Johnston, Wayne Andrew | Com |  | Champaign |
| Jones, David Robert | $C E$ | 110 | Streator |
| Jones, Dudley Emerson | A | 69 | Little Rock, Arkansas |
| Jones, Elizabeth Sophia | HS.Agr sp |  | Raymond |
| Jones, Frances Beulah | HSAgr | 65 | Champaign |
| Jones, Frank William | Agr | 70 | Bloomington |
| Jones, George Wilson | LAS | 24 | Jolict |
| Jones, Howard Kenworthy | ME | 72 | Chicago |
| Jones, J. Russell | Com | 98 | Springfield |
| Jones, Mack Marquis | EE | 40 | Tonka*a, Oklahoma |
| Jones, Marian Lucile | HSAgr | 52 | Ft. Smith, Arkansas |
| Jones, Marvel A . | LAS | 27 | Urbana |
| Jones, Milton D., B.S., 1915 | SS |  | Rajmond |
| Jones, Paul Clifford | EE | 102 | Henry |
| Jones. Paul Van Brunt |  |  |  |
| Ph.D. (Uniz. of Pennsyliania) 1912 | Mus sp |  | Champaign |
| Jones, Orion Cliester | SS | 110 | Rcdnon |
| Jones, Robert Taylor | Mus | 148 | Vincennes |
| Jones, Trevor Leslie | Agr |  | Chenoa |
| Jones, Walter Ortis | Com | 681 | Champaign |
| Jones, Warren Paul | Agr | 37 | Chicago |
| Jones, William Joseph | $\mathrm{Com}^{\text {On }}$ |  | Elgin |
| Tones, William Robert | SS | 63 | Kirkland |
| Jordan, Roy Yail | SS | 43 | Herrin |
| Joseph, Effie Catherine | LAS | 22 | Hayden, Indiana |
| Joyner, Mildred | LAS | 111 | Harrisburg |
| Judd, Elizabeth Gladys | LAS | 27 | Chompaign |
| ludd, Mildred Maric | Mils | 54 | Champaign |
| Judkins, Roy Lamont | $S_{S} S^{\text {S }}$ |  | Grand Island, Nebraska |
| Judkins, Walter William | SS |  | Grand Island, Nebraska |
| Judson, Frank Monteath | Com (SS) | 787 | Chicago |
| Julian, Scott Millholland | Agr | 34 | Little Rock, Arkansas |
| Jungkunz, Louis Frederic | Com | 101 | Frectort |
| Justice, James Clymer | Agr |  | Logansport, Indiana |
| Kadinsky, Max Joseph | RCE | 113 | Chicaga |
| Kadyk, David James | LAS |  | Fution |
| Kahlert, Thomas Debenham | Agr | 100편 | Carlyle |
| Kaiser, Karl John | Med | 40 | Aurora |
| Kalb, Frvin Frederick | SS | 6 | Houston, Texas |
| Kalthoff, Frederick Caspar | $A E(S S)$ | 39 | Chicago |
| Kamenof, Alexander | LAS |  | Bulgaria |
| Kamm, Rufus Maurice | Ch | 103 | Highland |
| Kamm, Wilbur Fred | LAS (SS) | 101 | Highland |
| Kamp. Henry Vilbur | L.AS | 68 | Watscka |
| Kane, Robert Clair | $E E$ | 107 | Warren |
| Kane, William Harold | CerE | 50 | Champoign |
| Kang, Wai | ME (SS) | 66 | Canton, China |
| Kanne, Herbert | Agr |  | Peoria |
| Kaune, Raymond Aloysius | Agr |  | Pcoria |
| Kantor, James | EE | 114 | Chicago |
| Kany, Jums Mranz | $S S$ | 5 | Dolgeaille, New York |
| Karkow, Conrad Hansen | LAS | 33 | Chicago |
| Karr, William Mabry | Con | 17 | Flora |
| Karraker, Alva Hugo | Agr | 1153. | Donsola |
| Kasten, William IIenry | Agr | 933 | Schercctady, New York |

Katar, Lillian
Katlinsky, Francis
Katz, William Maurice
Kaufman, David Louis
Kaufman, Willard Seaton
Kaufmann, Adolph Henry
Kaup, George Albert
Kawin, Louis
Kayser, Alfred Charles
Kayser, Clarence Samuel
Kayser, Lawrence Maurice
Keach, Walter Moore
Keagy, Abraham Reuel
Keck, Charles Everett
Keck, George Fred
Keefe, James
Keefer, Caroline
Keener, Ora Sylvester
Keepers, Floyd Willard
Keepers, Lloyd William
Keese, Homer Goldsmith
Keeslar, Nellie
Keiffer, Lawrence Raymond
Keith, Genevieve Emma
Keitoku, Sakai
Kell, Sherman Little
Keller, Arthur Raymond
Kelley, Edith Maurine
Kelley, Francis Hugh
Kelley, Henry Phillips
Kelley, Iva
Kclley, Leo Harper
Kellogg, Samuel Adams
Kelly, Fred Hanford
Kelly, Henry Eli
Kelly, Jessie Maurene
Kelly, John Thomas
Kelly, Luke Leo
Kelly, Margaret Agnes
Kelly, Philip John
Kemp, Arnold Raman
Kemp, Anna B.
Kemp, Charles Delbert
Kemp, Hyman
Kennedy, Florence Atchison
Kennedy, James Walsh
Kennedy, Kaywin
Kennelley, Griffith Sidney
Kenner, Byron Florence
Kenny, Marion Katheryne
Kenshalo, Ralph
Kent, Everett Frank
Kent, Horace Ellsworth
Kent, Paul Fraser
Kcr, Lorraine Margaret
Kern, Florence Ellen
Kern, Vernon Harlow
Kerner, Julius Caesar
Kerr, Grayson Alexander
Kerr, Lyda Kathryn
Kerr, Ralph
Kerr, Virgil Edwin
Kesl, Joseph, Jr.
Kessler, James
Ketch, James Moss
Ketelhut, William Hermann
Kcusink, Helen Bertha
Keyes, Fanshawe Martin
Keyes, Hubert Ashington
Keyes, Otis Walton
Khan, Obaidulla
Khan, Rahmat Ali
Kidd, George Wilson
Kidd, Lilace Mazoe
Kidston, Roy Palmer
Kiessig, Paul Peter
Kilbride, Edward Robert
Kile, Billye
Kile, Laura LaRhue
Kimball, Frank Sherman
Kimman, John William
Kimmel, Clarence Eugenc
Kimmell, Levett
Kincaid, Ruth Moore

| SS | 8 | Galcsburg |
| :---: | :---: | :---: |
| CerE | 31 | Chicago |
| Com |  | Chicago |
| Com |  | Bellefontaine, Ohio |
| $A$ | 27 | Richmond, Indiana |
| ChE | 74 | Chicogo |
| Agr | 51 | Chicago |
| LAS |  | White Hall |
| $C E$ | 27 | Des Plaines |
| $A E$ | 25 | Decatur |
| $A E$ | 35 | Decatur |
| Agr | 102 | Crothersville, Indiana |
| ME | 63 | Hot Springs, Arkansas |
| LAS |  | Champaign |
| AE | 43 | Watertown, Wisconsin |
| EE |  | Sterling |
| HSAgr |  | Amboy |
|  | 113 | Macomb |
| Agr |  | Mazon |
| Agr |  | Mazon |
| Ccre | 68 | Litchficld |
| ${ }_{\text {L }}$ AS |  | Danville |
| EE $A S$ | 35 | Rouninson |
| LAS (SS) | 93 | Fukushima, Japan |
| SS | 1213 | Benton |
| CE | 1137 | Mit. Carmel |
| LAS |  | Camp Point |
| Agr | 119 | Urbana |
| Agr | 93 | Champaign |
| LAS | 31 | Urbana |
| Com |  | Shelbyerille |
| Agr | 140 | Wheaton |
| $L$ | 61 | Mattoon |
| CE | 33 | Charleston |
| HSLAS | 28 | Atlanta |
| ME | 39 | Oak Park |
| SS |  | Boston, Massachusetts |
| SS | 8 | Vandalia |
| Com |  | Chicago |
| ${ }^{\text {Agr }}$ | 643 | Waynetown, Indiana |
| SS | 531 | Normal |
| Agr |  | Waynctown, Indiana |
| $\stackrel{R C E}{\text { S }}$ |  | Chicago S |
| SS Com |  | Bcaufort, South Carolina |
| LAS (SS) | 64 | Minonk |
| CerE |  | Jolict |
| ME | $126 \frac{1}{2}$ | Pasadena, California |
| HSAgr |  | Champaign |
| $L$ | 60 | Fairfield |
| Agr | 78 | Gridlcy |
| $C E$ | 32 | Urbana |
| $A E$ | 283 | Gridley |
| LAS | 31 | Chicago |
| HSAgr | 63 | Champaign |
| Agr | 1154 | Gays |
| ME | 70 | Cicero |
| Agr | 32 | Venice |
| LAS | 30 | Urbana |
| Agr | 161 | Urbana |
| L.AS |  | Mctropolis. |
| AE | 21 | Edzuardsville |
| Mus sp |  | Urbana |
| $E E$ | 42 | Decatur |
| EE ${ }_{\text {HSAgr }}$ |  | South Haven, Michigan |
| HSASgr | 58 | Champaign |
| LAS | 21 | Chicago |
| SS | 3 | Rantoul |
| Med |  | Jullundur City, India |
| LAS |  | Khanaura, India |
| CE | 98 | Chicago |
| LAS | 603 | Astoria |
| Agr |  | Chicago |
| $A g r$ | 84 | Berkeley, California |
| Agr |  | Springficld |
| Com |  | Rockford |
| LAS (SS) | ${ }_{13}^{113}$ | Rockford |
| LAS | 13 | Rockford |
| Agr |  | Chicago |
| ${ }_{\text {Agr }}$ | ${ }_{96}^{19}$ | DuQuoin |
| HSLAS | $67^{2}$ | Farner City |

Kiner, Howard Dickens
King, Burton Eldred
King, DeWitt Leonard
King, Edvard Herschel
King, Esther
King, James Carroll
King, James Xenophon
King, Vincent Paul
King, Vivian
Kingsley, Donald Henry
Kingsley, Wendell Lathrop
Kinnear, Leckey McCown
Kinney, Carlotta
Kinney, Percy LeRoy
Kinsey, Alfred Richardson
Kinsey, Jack
Kipp, John George Estill
Kirby, Harry Anton
Kircher, Armin Martin
Kirchhofer, Emma Esther
Kirk, Bertha May
Kirk, Heagle James
Kirkpatrick, Harry Louis
Kirkpatrick, Helen Marie
Kirkpatrick, Mildred
Kirkpatrick, Sidncy Dale
Kirner, Walter Raymond
Kirwan, Nora
Kiser, Helen Mynette
Kitteringham, George William
Kixmiller, Karl William
Klamt, Robert Herman
Klank, Frances Grace
klein, Carroll Aaron
Klein, George Minnie, A.B., 1914
Klein, Gordon
Klein, John Leo
Klein, Joseph Mathais
Klein, Nancie
Kleinan, Einma Adele
Kleinbeck, Augustus Gustave
Klemmedson, Arthur Erick
Klemmedson, Gunnar Sigesmund
Klenk, Frederick
Klindworth, Mildred Louise
Kline, Alice Harper
Kline, Arthur LaVerne
Kling, Carl Lawrence
Klingler. Roland John
Klink, William Lee
Klopp, Charles Gorr
Kloppenberg, George Joseph
Klotzsche, Bayard Taylor
Klotzsclie, Bessie May
Klotzsche, Esther Eunice
Klutts, George Madison
Knappenberger, Farry Farrar
Knaponberger, John Meridith
Kneberg, Goldie Minnic, A.B., 1910
Kneeshaw, Mary Jane
Knight, Ewart Broughton
Knight, Francis Putnam
Knight, Galen Victor
Knight, Herbert Alfred
Knight, Mrs. Nellie Dryden
Knight, Paul Kenneth
Knight, Leonard Leo
Knobelock, Thomas Adolph
Knoche, John Christian
Knodle, Cary Lee
Knop, Robert Oscar
Knox, Harry Gaylord
Kinudsen, Niels Alfred
Kinudson, Harold Epler
Kobayashi, Kenichiro
Kober, Edgar Irving
Koch, Eloise
Koebele, Cornelius Walter
Koepke, Frank Henry Paul
Koenke, Herman Frank
Kohl, Justin Ferdinand
Kohl, Rowena Agnes
Kohler, Gerald Eimer

## $L$ $A$ $M$ $C$ $L$

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Geneseo
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Lincoln
Lake Forest
Rockford
Richmond, Indiana
Indianapolis, Indiana
Richmond, Indiana
Alden
57 Chicago
61 Lexington, Virginia
Galesburg
Galesburg
63 Centralia
56 $\frac{1}{2}$ Mackinaw
76 St. Louis, Missouri
69 Indianapolis, Indiana
110 Chicago
Kansas City, Missouri
Des Moines, Iowa
Urbana
Pana
Urbana
Chicago
Champaigus
66 Champaign
6 Rackford
Freelandville, Indiana
Chicago
Davenpart, Iawa
Urbana
39 Urbana
35 Omaha, Nebraska
28 Pana
$51 \frac{1}{2}$ Urbana
$107 \frac{1}{2}$ Bloamington
Litchifeld
Colorado Springs, Colorado
Colorado Springs, Colorado
Philadelphia, Pennsylvania
Phila
Huntington, Indiana
Chicago
Dixan
Lead, South Dakata
Cerro Gordo
108 Streator
26 Springield
24I Urbana
33 Urbana
$23 \pm$ Childress, Texas
165 Macomb
62플 Kansas City, Missouri Moline
Niles, Michigan
34 Chicago
22 Oklahoma City, Oklahama
Champaign
25 Oak Park
Wichita: Kansas
92 Champrign
43 Port Arthur, Texas
31 Belleville
128 Onarg
Elgin
Chicago
67 West LaFayette, Indiana
77 Urbana
Farmingdale
Niigata, Japan
35 Watcrloo, Iowa
71 St. Louis, Missouri
110 Chicago Heights
Chicago
39 Chicago
58 Centralia
26 Centralia
Chatsworth

Kohmann, Edward Frederick, Ph.D.
(Yale Univ.) 1915
Kohn, John Louis
Kolar, George Franklin
Koll, Henry Michael
Kolmer, Albert Conrad
Kolmer, Otto Peter
Koo, Shun
Kopelman, Leo Theodore
Kopf, Frank Alexander
Koptik, Bohumil James
Koptik, Rose
Korth, Fricda Elizabeth
Koupal, Agnes Rose
Koupal, Walter George
Kouyoumjian, Garabet Hovaness
Kraeckmann, Arthur Endress
Kraeckmann, Walter Ernest Louis
Kraeger, Bertha Elizabeth
Kraft, Adolph
Kraft, August.
Kraft, Reynold Rudolph
Kral, Albert Alva, Jr.
Kramethauer, Irria Theresa
Krannert, Victor Louis
Krase, Herbert John
Kratz, Elwin Valentine, B.S., 1912, M.S., 1913

Kratz, Ethel Gyola, A.B., 1910
Kratzenberg, Edwin John
Krauel, Philip Leone
Kraus, Harry
Krausse, Leo Tohn
B.S. (Knox-Coll.) 1915

Krebs, Wilbur Edward
Kreider, Paul Gates
Kreidler, Chester Jamison
Kreigh, Elie Spencer
Kreiling, Robert Graham
Krieg, Amelia
Krieger, William Enoch
Kriegl, Otto
Kriewitz, John Gustav
Krishna, K
Kritzer, Richard Walker
Kroeschell, Roy Sittig
Kroner, Frederick Lewis
Krucger, Kurt Carl
Krug, Louis Gustave
Krull, Donald Carl
Krumm, Gretehen Emma
Krumstick, Walter Wesley
Kueschlor, Ernest Charles
Kuehn, George Walter
Kugler, Martin Billmire
Kuhlman, Lloyd
Kull, Karl Robert
Kupper, Walter Jacob
Kurt, Leo Peter, Jr.
Kurt, Mary Annetta
Kurtzrock, Edward Valentine
Kyger, Roy Jay
Lacey, John James
Lachman, Josiah Keeler
Lackey, Kate
Lacy, Ralph Wilson
Ladd, William Stanton
Ladehoff, Arthur Detlef Henry
Lafferty, George Gustavus
Lagergren, Gustaf Petrus
Laible, Russell James
Laing, Walter A.
Lalor, Foster Mitchell
Lamb, Hallie Eunice
Lamb, Helen Marian
Lamb, Howard Earl
Lamb, John, Jr.
Lambert, Dana Carlin
Lambroff, Gregory Vessileff
Lamkins, Lloyd F.
Lamont, James Walter
Lampert, Florian, Jr.
La Motte, Norman Girdwood
Lanan, Guy
Lancaster, Allen H.
Lancaster, Rulh Ellen

| Mus sp |  | Dillon, Kansas |
| :---: | :---: | :---: |
| Com | 64 | Elgin |
| MSE | 37 | Chicaga |
| EE | 128 | Chicaso |
| Agr |  | Waterloo |
| Agr | 58 | Waterlon |
| RCE (SS) | 8 | Kiang Si, China |
| Com | 34 | Magzoketa, Lowa |
| LAS (SS) | 97 | Champaign |
| Agr | 69 | Cicero |
| HSLAS |  | Cicero |
| LAS (SS) | 111 | Trivoli |
| HSLAS (SS) | 98 | Crown Point, Indiana |
| CliE |  | Crown Point, Indiana |
| EE | 110 | Evares, Armenia |
| Agr | 103 | Chicago |
| Agr |  | Chicago |
| SS | 712 | Pekin |
| LAS |  | Gilman |
| LAS |  | Gilman |
| MnE (SS) | 40 | Oak Park |
| EE |  | Chicago |
| $L A S$ |  | Chicago |
| Com |  | Chicago |
| ChE | 72 | Chicago |
| AE |  | Champaiga |
| L. $b$ |  | Champaign |
| EE | 35 | Chicago |
| ME (SS) | 47 | Champaign |
| LAS |  | Chicago |
| LAS |  | Clampaign |
| L. | 58 | Belle |
| L.AS | 34 | Springficld |
| LAS | 36 | Oak Park |
| ME | 108 | Springfield |
| Che | 68 | Chicago |
| LAS | 54 | Chicago |
| Coin | 34 | Peoria |
| $M E$ | $30 \frac{1}{2}$ | Innsbruck, Austria |
| Agr | 66 | Chicago |
| I.AS sp |  | Madras, India |
| Com | 103 | Chicago |
| ME | 49 | Winctka |
| LAS |  | Mahonzet |
| LAS | 31 | LaSalle |
| ChE (SS) | 90 | Chicogo |
| LAS |  | Indianapolis, Indiana |
| I.AS |  | Chicago |
| SS |  | Nashville |
| Agr |  | St. Elmo |
| $M E$ | 72 | Chicago |
| $A g r$ | 75 | Yorkville |
| $A g r$ | 25 | Beardstozun |
| Agr |  | Shelbyville |
| $A g r$ | 59 | Peoria |
| ME | 112 | Champaign |
| HSLAS |  | Champaign |
| LAS | 30 | Dixon |
| SS | 93 | Danville |
| Agr | 64 | Elucood |
| SS |  | St. Louis, Missouri |
| SS | - 127 | Lazerenceville |
| Com | 14 | Knorville |
| Agr (SS) | 99 | Taylorville |
| AE | 37 | Clinton |
| SS | 441 | Knoxville |
| $A_{A g r}$ | 146 | Morgon Park |
| ${ }_{\text {Agr }}$ |  | Frecport |
| ${ }_{\text {Agr }}$ | 63 | River Forest |
| ${ }_{L A S}^{\text {LAS }}$ (SS) |  | Franklin Park |
| ${ }_{L}^{L A S}$ (SS) | $69 \frac{1}{2}$ | Champaign |
| LAS | 60 | Hillsdale, Míchigan |
| Agr | 321 $\frac{1}{2}$ | Worden |
| Agr |  | Coatsburg |
| EE | 46 | Madison |
| Agr (SS) | 102 | Urbana |
| $M E$ |  | Rockford |
| $A E$ | 37 | Oshlosh, Wisconsign |
| Agr | 81 | Kingston, South Carohna |
| SS | 63 | Ridgefarm |
| LAS | $10.3{ }^{1}$ | Majamand |


| Landon, George | LAS | 32 | Chicago |
| :---: | :---: | :---: | :---: |
| Landstrom, Adolph Walter | ChE | 731 | Chicago |
| Landstrom, Roy William | Agr |  | Chicago |
| Landt, Gustav Ernest | Agr |  | Chicago |
| Lang, Leonard Alyin | Agr |  | Urbana |
| Lang, LeRoy, M.S., 1911 | Com |  | Urbana |
| Langwill, Bertha | SS | 8 | Rockford |
| Langwith, Warren LeRoy | ChE |  | Davenport, Iowa |
| Lansche, Oral Albert | $E E$ | 111 | Brighton |
| Largent, Jess Charles | $A E$ | 114 | Champaign |
| Larkin, Willard Ford | ME |  | Rock Island |
| Larsen, David Thorsten | L.AS | 72 | Elgin |
| Larson, Carl Clarence | ChE | 32 | Mazon |
| Larson, Irving Nicholas | A | 112 | LaPorte, Indiana |
| Larson, John Carl | Com | 25 | Princeton |
| Larson, Karl Gottfried | SS | 8 | Rockford |
| L.arson, Raymond Victor | Agr | 97 | Henderson, Minnesota |
| Larson, Walter Nels | MSE | 28 | Paxton |
| L.ascelles, Robert John | Com | 60 | Capron |
| Lassmann, Meta Irma | SS | 13 | Magnolia |
| LaTeer, Angie | HSLAS | 11 | Parton |
| Lathrop, Charlton Page | Agr | 107 | Chicago |
| Lathrop, John Sherman | Agr |  | Chicago |
| Lathrop, William Grant | LAS (SS) | 431 | Urbana |
| Lattner, Ulysses Simpson | ME |  | Rock Island |
| Laubinger, Roy Norman | Med | 22 | Chicago |
| Lauphit, Tse | Agr (SS) | $36 \frac{1}{2}$ | Shanghai, China |
| Lauritzen, Marion Marie | LAS | 31 | Chicago Heights |
| Lavery, Ruth | Mus sp |  | Decatur |
| Lawler, Thomas Joseph | Com | 37 | Greenficld |
| Lawless, Mary Jane | LAS | $98 \frac{1}{2}$ | Carthage |
| Lawnin, Nelson | ME | 108 | Edwardsville |
| Lawrance, Roy E. | LAS | 33. | Urbana |
| Lawrence, Charles Henry | Agr | 35 | Woodstock |
| Lawrence, Edgar Alfred | CE (SS) | 106 | Chicago. |
| Lawrence, Leland Lamont | LAS |  | Champaign |
| Lawrence, Ralph E. | A (SS) | 79 | Ripon, Wisconsin |
| Lawrence, Roland Hall | ME | 75 | Chicago |
| Laws, Joel William | Agr | 95 | Donnellson |
| Lawson, Everett Eugene | Agr | 142 | Barry |
| Lawton, Chauncey Wenzlaff | LAS |  | Yankton, South Dakota |
| Lawyer, Joseph Dalc | $L$ | 56 | Tennessce |
| Lax, Lourise Catharine | SS | 41 | Springfield |
| Layton, Samuel Everett | Com |  | Rossville |
| Leach, Gladys Hodson | Mus |  | Urbana |
| Leach, Mac E. | LAS | 98 | Urbana |
| Leach, Margaret Fanny | LAS | 134 | Chicago |
| Leach, Paul Jackson | Agr | 1203 | Macomb |
| Leach, Robert Lincolv | Agr |  | Rockford |
| Leander, Elmer Isider | $C E$ | 72 | Chesterton, Indiana |
| Leas, John Andrew | Agr |  | Decatur |
| Lease, Alice Clare | SS | $6 \frac{1}{2}$ | Plainville |
| Leatherman, Marian, A.B. (Corncll Unir.) 1907 | Lb | 55 | Pittsburgh, Pennsylvania |
| Ledgerwood, Leroy William | $A E$ | 1152 | Springficld, Missouri |
| Lee, Alfred Chang | $C E$ | $86^{\circ}$ | Hunan, China |
| Lee, Arthur | A | 36 | Hudson, Wisconsin |
| Lee, Carric Alice | Mus | 50 | Champaign |
| Lee, Ellena | HSAgr | 114 | Reynolds |
| Lee, Fannie | HSLAS |  | Reynolds |
| Lee, Ping-Fun | ME |  | Canton, China |
| Lee, Tao Nan | Com | 351 ${ }^{\frac{1}{2}}$ | Nanking, China |
| Lec, Tsz-Sien | RCE | 23 | Hoyon, China |
| Lec, Wilkie Alhert | Agr |  | Earlville. |
| Leedle, Jossic Miriam | LAS |  | West Chicago |
| Leetning, Torn | $L A S$ | 29 | Chicago |
| Leete, Lorraine | LAS | 22 | Chicago |
| Leete, Marion Elaine | LAS | 6 | Chicago |
| Lee-Toma, Esther En Moi | LAS | 24 | Honolulu, Hazaii |
| Lee-Toma, En Fon | LAS |  | Honolulu, Hawaii |
| Leggett, Charles Martin | Com |  | Chicago Heights |
| Leggett, Wilkie Wright | HSLAS |  | McComb, Mississippi |
| leggitt, Frank | Agr (SS) | 82 | Urbana |
| Leggitt, Fred William | Agr | 63 | Urbana |
| Legner, Roger Hopkins | Com |  | Chicago |
| Lehman, Lewis Harry | $C E$ | 76 | Maitoon |
| Lehmann, Ellery Edmund | Agr | 29 | Altamont |
| Leibsle, Roy Walter | A | 107 | Des Moines. Iowa |
| Lejchsenring, Jane Marie | HSLAS |  | Winnctka |
| Leighty, Wayne Snyder | Agr | 103 | Billett |
| Leist, Claure, Everett Robertson | LAS | 24 | Paris |
| Leisure, Everett Robertson | L. 4 S | 22 | Berkelcy, California |
| LeKander, Roy Edward | CE |  | West Chicago |
| Lemmon, Edgar Guy | SS | 96 | Roodhouse |
| Lemp, John Frederick | Che | 83 | Alton |


| Lendman, Alfred Nohe | $E E$ | 72 | Sterling |
| :---: | :---: | :---: | :---: |
| Lenhart, Norman Joseph | Com | 100 | Mattoon |
| Lenton, Rohert Edgar | LAS |  | Gloucester, New Jorscy |
| Lentz, Clarence Alonzo | LAS | 971 | Anna |
| Lenz, Andrew Henry | EE | 107 | Quincy |
| Lenz, Charles Albert | LAS | 26 | Gilman |
| Lenzen, Aloysius Francis | LAS | 69 | Peru |
| Lenzing, Chester William | LAS | 105 | Chicago |
| Leonard, Frank Bonner, Jr. | $L$ | 44 | Metropolis |
| Lerch, Edward | $A E$ | $72 \frac{1}{2}$ | Rock Island |
| Leslie, Madge Campbell | LAS | 62 | Pittsfield |
| Leslie, Myra Frances | Mus | 57 | Urbana |
| Lett, Hamlet Harrison | Agr | 33 | Washington, Indioma |
| Leuch, Mrs. Francis | Mus sp |  | Chanpaign |
| Levey, Harold Alvin, B.E. | SS |  | New Orleans, Lowisiana |
| Levinson, Martin | AE | 68 | Chicago |
| Levy, Beatrice Esther | LAS |  | Streator |
| Lewin, Fenton | Agr sp |  | Kankakee |
| Lewis, Arthur Warfield | Agr | 31 | Harrisburg |
| Lewis, John Taylor | $A E$ | 73 | Rockford |
| Lewis, Louise Madolin | SS | 29 | Champaign |
| Lewis, William Henry | SS | 48 | Granite City |
| Lewitan, Leo | $M E$ |  | Chicago |
| Li, Szu Kuang | Com (SS) | 623 | Anking, China |
| Libman, Anna | L.AS | 35 | Chicago |
| Libman, Earl Emanucl | CerE | 107 | Chicago |
| Libman, Rose Eunice | LAS |  | Chicago |
| Lichtenberger, Ralcigh | SS |  | Decatur |
| Liedel, Russell Brooke | $L$ | 28 | Springfield |
| Liggett, Irene Lillian | LAS | 98 | Camp Point |
| Liggett, Ruth Elizabeth | LAS |  | Camp Point |
| Lightbody, Howard D. | SS | 123 | Glasford |
| Lighter, Eugene | SS |  | Rolfe, Lowa |
| Lightner, Levi Luther | Agr |  | McClure |
| Like, Ralph Martin | $M E$ | 4 | Davenport, Iow'a |
| de Lima, Marcello Francesco | $C E$ (SS) | 122 | S. Paulo, Brazil |
| Lin, Thian-Kitt | Com (SS) | 723 | Canton, China |
| Lindahl, Florence Elnora | LAS |  | Wayne |
| Lindberg, Albin Ednar | ME |  | Princeton, Michigan |
| Lindeberg, George Leonard | A | 67 | Chicago |
| Linder, Gracc | SS |  | Charleston |
| Linder, Isham Doyle | Med |  | Carrollton |
| Linder, Leila | SS | 4 | Patterson |
| Linder, Mary Sefton | LAS | 493 | Charlcston |
| Linder, Sven Cyril | CerE | 97 | Chicago |
| Linderoth, Samuel Joseph | ${ }_{S}{ }_{S}$ | $72 \frac{1}{2}$ | Chicago |
| Lindholm, Ida Helen | SS | 7 | Elsin |
| Lindholm, Karin Josephine | LAS (SS) |  | Elgin |
| Lindsay, Horace Willard | $E E$ | 101 | Rockford |
| Lindsey, Adrian Herve | ${ }^{\text {Agr }}$ |  | Bryan, Ohio |
| Lindsey, Beatrice | LAS | 89 | Emporia, Kansas |
| Lindsey, John Roger | Agr | 68 | Urbana |
| Lindsey, Leon Mason | $M E$ | 69 | Onarga |
| Lindsey, Ralph Elder | $A E$ | 59 年 | Bryan, Ohio |
| Lindstrom, Stanley Edwin | A | 80 | Richmond, Indiana |
| Linendoll, Harry Alexander | ChE |  | Chicago |
| Link, Rue Showalter | Agr |  | Paris |
| Linnard, Elmer W. | Agr (SS) | 78 | Peotone |
| Linnell, Carrie Edna | LAS (SS) | 97 | Kellys, North Dakota |
| Linneen, Henry Wilson | ME | 31 | Lake Bluff |
| Linsley, Clyde Maurice | Agr | 1221 | Fairfield |
| Little, Adalbert Dudley | AE | 70 | Genoa |
| Little, Charles Reeves | Com | 99 | Duluth, Minnesota |
| Little, Ethel Esther | LAS | 90 | Champaign |
| Liu, Nai Yu | Com | 32 | Foochow, Chira |
| Lively, Carlos Alcium | LAS | 32 | Oblong |
| Livesay, Ruth Fiagg | LAS | 99 | East St. Louis |
| Livingston, Albert Keith | Com | 29 | Rock Island |
| Livingston, Alfred, Jr. | LAS |  | Champaign |
| Llewellyn, Harry Corson | Agr |  | LaGrange |
| Llewellyn, Marjorie Kauffman | HSAgr |  | LaGrange |
| Lloyd, Sergius Hopkins | Agr |  | Genoa |
| Locke, George Ferguson | Agr | 26 | LaSalle |
| Lockett, Lela | SS | 31 | Pckin |
| Lockhart, Harold Leo | ME, |  | Owensville, Indiana |
| Lockwood, Isabel Kathryn | LAS |  | Chicago |
| Logan, Frank Allyn | Com | 64 | Paris |
| Logsdon, Joseph Ezra, Jr. | Agr | 75 | Shazuncetozun |
| Lohmann, Lewis Edward 1913 | LAS | 31 | Pekin |
| Lohr, Louis Warren, A.B., 1913 | SS |  | Pana |
| Long, Jesse Richard | LAS |  | Summer Hill |
| Long, John Oras | LAS | 106 | Watseka |
| Long, Ruth Ida | LAS | 33 | Watscka |
| Loomis, Clayton Benjamin | ${ }_{S}^{\text {Agr }}$ | 64 | Chicago |
| Lotz, Harold Benjamin | AE | 1113 | Madison, Indiana |


| Loughery, Harold Barker | Mad |  | Polestine |
| :---: | :---: | :---: | :---: |
| Louret, Francis | Agr | 72 | Waldo, Wisconsin |
| Love, Beryl Franklin | LAS | 31 | Danaille |
| Love, Clifford Sharon | Agr | 100 | Sidicy |
| Love, Harry Halme | LAS | 31 | Nexton |
| Love, Martha Harriett | LAS | 30 | Dancille |
| Love, Mary Elizabeth | LAS | 115 | Urbana |
| Lovell, Clarence B. | ChE | 15 | Libertyrille |
| Lovell, M. McDonald | A | 74 | Chicago |
| Lovett, Pearl | SS | 8 | Urbana |
| Loveweil, Gladys | LAS | 27 | Chicago |
| Lowe, Albert Stafford. Jr. | ME |  | Shawnectown |
| Lowe, Cyrus Ching Chung | Com |  | Tien Tsin, China |
| Lowe, Rollin Cliford | Com |  | Ěanscille, Indians |
| Lowe, Wayne Marsh | L,AS | 17 | Chicaso |
| Lowery, Thomas Edwin | .fis |  | Stringticld |
| Lowman, Charles Elliott | SS | 109 | Lanark |
| Lowrence, Roy | LAS | 33 | Robinson |
| Lowry, Bessie | LAS | 62 | Lead, South Dakota |
| Lu, Chi Tsing | MnE (SS) | 112 | Kiangsi, China. |
| Lu, Ching Kui | ME |  | Mrsden, Fengsien, China |
| Lubelsky, Harry Walter | EE |  | Chicago |
| Lubelsky, Sam | L.AS |  | Chicago |
| Lucy, Bernie Hebron | Agr | 13 | Helena, Arkansas |
| Ludiow, Helen | LAS | 33 | Paxton |
| Ludvik, Benjamin Edward | LAS | 100 | Chicago. |
| Ludwig, Ethel Lenore | HSLAS | 60 | St. Louis |
| Ludwig, Lester John | Com | 102 | Ottoxac |
| Lueder, Herman Harrison | AE | 108 | Cherake, Iowa |
| Lueder, Roy Moore | $A E$ | 73 | Cherokee, Iowa |
| Lui. Sik Chew | Med |  | Honolul:a, Hawaii |
| Lumley, Arlene | LAS |  | U'rbana |
| Lumley, Harold McLean | Agr | 1021 | Urbana |
| Lumley, Leslie Robert | Agr | 101 | Urbana |
| Lummis, Irwin Lyt!e | ME | 76 | Quincy |
| Lummis, Merle Francis | LAS | 95 | Quincy |
| Lundberg, Bruce Gurler | Agr | 52 | Dekalb |
| Lundberg, Henry Gu:ler | Agr | 32 | DeKalb |
| Lunde, George Richard | Agr (SS) | 111 | Elgin |
| Lundeen, Curt Carl | $A E$ | 73 | Rock Islond |
| Lundgren, Andrew Victor Theodore | $A E$ | 131 | Red Oak, Iowa |
| Lundgren, Arnold Alinder | $C E$ |  | Rockford |
| Lundgren, Floyd Edward | EE | 35 | Lostant |
| Lungren, Arthur Nathaniel | ME (SS) | 88 | Aurora |
| Lungren, Edgar Emmanuel | SS | 137 | Ascrora |
| Lurie, Sidney Joseph | EE | 80 | Chicago |
| Lusk, Genevieve Aron | HSAgr | 66 | Qui:cy |
| Lutes, Gifford W. | $\stackrel{4}{4}$ | $78 \frac{1}{2}$ | Lutescille, Missouri |
| Luther, Elsie Emilie | SS | 4 | Champaign |
| Luther, Wilhelmina Caroline | LAS |  | Champaign |
| Luttrell, Arno Atlee | Ast sp |  | Wazerly |
| Lyle, Mary Stewart |  | 9 | Shelbyeille |
| Lyman, Mary Agnes Adelaide | LAS (SS) | 31 | Champaign |
| Lyman, Richard Dana | Agr | 194. | Chicago |
| Lynch, Margaret | LAS (SS) | 34 | Urbana |
| Innch, Virginia Esther | LAS | 50 | Rockford |
| Lynch, Chester Vernon | EE |  | Henderson, Kentucky |
| Lyon, Carlos Elmundorph | Com |  | Decatur |
| Lyon, Iohn Boyd | CerE | 104 | La Harpe |
| Lyon, William Ranit | LAS | 32 | Riverside |
| Iyons, Carrie Fay | HSLAS | 101 | Urbana |
| Lyons, Hazel Dell | LAS (SS) | 29 | Champeign |
| Lyons, Hazel Sibyl | LAS (SS) | 108 | Urbara |
| Lyons, Oscar Ivan | ME | 30 | Hoopeston |
| McAdams, Fred Andrew | Agr |  | Kansas |
| McAdams, May Elizabeth | Agr (SS) | 97 | Chicago |
| McAfee, Leo Gay | Com (SS) | 108 | Springfield |
| McAllister, Ivorine | $L_{S S} A S$ (SS) | 21 | St. Louis, Missouri |
| McAllister, Marietta Jane | SS | 8 | Pontiac |
| McBane, Wayne Winlard | EE |  | Metropolis |
| Mchride, Howard Inman | ME |  | Chicogo |
| McCabe, C. L., A.B., 1914 | ${ }_{5 S} 5$ |  | Carthage |
| McCabe, Marie Belle | SS | 7 | Pontiac |
| McCaffrey, Leslie Bernard | Com |  | Highland Park |
| McCall, Alice Ruth | LAS | 31 | Kersosho, Wisconsin |
| McCallister, Isaac Trost | ME |  | Anchor |
| McCallister, Roy Ivan | Com |  | Carmi |
| McCammon, Martha | LAS | 31 | Urbana |
| McCandish, Fred Raymond | Agr | 64 | Toledo |
| McCarroll, James Shipp | Agr | 29 | Owensboro, Kentucky |
| McCartney, Ward Bishop | Agr | 33 | Elkhart, Indiana |
| McCaskiil, Lyman Clauson | $\mathrm{Agr}^{\text {A }}$ | 32 | Taylorzille |
| McCaskrin, George W. | 55 |  | Ranto:l |
| McCentee, James | SS |  | Wellingion |
| McClellan, Kenneth Butler | Agr | 943 | Chicaga |


| McClellan, Russell Clyde | EE |  | Urbana |
| :---: | :---: | :---: | :---: |
| McClelland, Miles Joln | $A E$ | 1082 | Boise, Idaho |
| McCloud, James Forsyth | Com | 70 | Sheldon Missisi |
| McCluer, Donald | Agr sp |  | Jackson, Mississippi |
| McClure, Adelle Elizabeth | Mus | 48 | Atlanta |
| McClure, Winifred Leo | HSLAS | 116 | Chrisman |
| McClurg, Lola DeWitt, A.B., 1910 | SS |  | Urbana |
| McConn, Prudence Pratt | SS |  | Urbana |
| McConnel, Marian | HSLAS | 32 | Danville |
| McConnell, Marvin Greer | LAS | 45 | Chicago |
| MeCord, Fitch Landis | Agr | 21 | Paris |
| McCord, Howard Orestes | Com |  | Paris |
| McCormack, Joseph Hume | ChE (SS) | 111 | LaSalle |
| McCormack, Thomas Hume | CerE | 33 | LaSalle |
| McCormick, Charles Parnell | Com |  | Decatur |
| McCormick, Christie Frank | SS | $6 \frac{1}{2}$ | Alva, Oklahoma |
| McCoy, Alva Elisha | Agr (SS) | 103 | Altamont |
| McCoy, Homer Walter | ${ }_{\text {Agr }}(S S)$ | 77 | Mt. Sterling |
| McCulloch, Harry Weber, A.B., 1915 | SS |  | Milford |
| McCracken, Wendell Kemp | Com | 99 | Paxton |
| McCrory, Hazel Florence | LAS |  | Okmulgee, Oklahomo |
| McCullough, Helen E | HSLAS | 77 | Urbana |
| McCullough, Mary Elizabeth | LAS | 31 | Urbana |
| McCumber, Charles William | $A E$ | 1201 | Chicago |
| McDaniel, Homer Wesley | Med |  | Mechanicsburg |
| McDermott, Raymond Adam | Med | 61 | Batavia |
| McDonald, Georgia Helen | HSLAS |  | Lerna |
| McDonald, Grace | SS | 12 | Marian |
| McDonald, Joseph Nelson | ME |  | Chicago |
| McDonough, Joseph | Com |  | Urbana |
| McDougal, Grace Almira | LAS | 23 | Humbols |
| McDougal, Helen Alice | LAS |  | Cairo |
| McDowell, Robert E | Agr (SS) | 141 | Urbana |
| MacDowell, Sidney Monroc | ME | 65 | Addisan, New York |
| McEldowney, Roy | ME | 33 | Chicago |
| McElheney, Fred Wayne | ChE |  | Vandalia |
| McElhiney, Ruth | LAS | 31 | Kenney |
| McElroy, Mildred Cherington, A.B. (Ohio Wesleyan) 1914 | $L b$ | 33 | Delaware, Ohio |
| MacElvain, Ford Harsch | AE |  | Lawrenceburg, Indiona |
| McElveen, William Thomas, Jr. | Com | 99 | Evanston |
| McEvers, Ernest | $E E$ | 35 | Montezuma |
| McEvoy, Thomas Treston | Agr | 64 | Chicogo |
| McFall, Dumas Miller | $L$ |  | Mattoon |
| McFarland, Etta Clara | SS | $6{ }^{6}$ | Hoopeston |
| McFerson, William H. | ${ }^{\text {A }}$ E | $89 \frac{1}{2}$ | Boulder, Colorado |
| McGaughey, Guy Ennis |  |  | Lawrenceville |
| McGee, Thomas Clarence | LAS | 5 | East St. Louis |
| McGehee, Wilbur | Agr |  | Urbana |
| McGill, Webster David | $E E$ |  | Watseka |
| MacGillivray, Malcolm Edwards | LAS | 30 | Urbana |
| *McGowan, Thomas Fenton |  | 32 | Decatur |
| McGrath, Floyd Lawrence | Med | 53 | Savanna |
| McGrath, Wilson Thomas | Agr (SS) | 28 | Chicago |
| McGraw, Katherine Cecilia | Com |  | Chanpaign |
| McGregor, John Lancaster | $M E$ | 39 | Chicago |
| MacGregor, Robert Donald | Agr |  | Chicago |
| McGrew, Wallace Milton | $A E$ |  | Long Beach, Califorxia |
| McGuire, Ralph | Agr |  | Chicago |
| MacInnes, lirances Jean | $A g r$ | 101 | Urbana |
| McIntire, Elliott Charles | Com | 5 | Aurora |
| McIntire, Joseph Homer | Agr |  | Newman |
| McIntire, Mary Minerva | SS |  | Urbana |
| McKay, Ernest Gladstone | Agr |  | Evanston |
| MacKechnie, Harry Woodington | LAS | 101 | Brooklyn, New York |
| McKee, Mary Annette | HSLAS | 24 | Kankakee |
| McKeever, Robert Emmett | EE | 35 | Jackson, Nebraska |
| McKenna, Walter William | Com |  | Brooklyn, New York |
| McKenney, Hellen | Mrus |  | Dixon |
| McKennon, Margaret | SS |  | Georgetown, Texas |
| McKeon, Joseph Moore | MSE | 128 | Buffalo, New York. |
| McKim, Lawrence John | LAS |  | St. Louis, Missouri |
| McKinnell, Isabel Georgia | LAS (SS) | $64 \frac{1}{2}$ | Beardstown |
| McKinney, Norman | Agr | 67 | Chicago |
| McKnight, Clark Wilson | Com |  | Mason City |
| McKown, Russell Leamer | Ag' | 71 | Davenport |
| McLaughlin, George Southwell | EE |  | Pocatelle, Idaho |
| McLaughlin, James Robert | $S S^{\text {r }}$ | $60^{\frac{1}{2}}$ | Aledo |
| McLaughlin, Walter Wylie McLaughy, DeOrmond | $\stackrel{\text { Agr }}{ }$ | 601 | Cartter ${ }_{\text {New }}$ |
| McLee, Edward Brown | AE | 37 | Nackford |
| McMahan, Elsie Margaret | SS | 39 | Jcrseyville |

${ }^{*}$ Deceased, December 22, 1915

| McMillan, John Charles | SS | 12 | Aledo |
| :---: | :---: | :---: | :---: |
| MacMillan, Lawrence Claude | EE | 92 | Bridgeport |
| MacMillen, Lloyd Allen | EE | 22 | Grayslake |
| McMurray, Fannie Marie | LAS |  | Divernon |
| McNally, John Leo | LAS | 1112 | Pueblo, Colorado |
| McNamara, Janyes Leslie | LAS | 21 | Rock Island |
| McNaughton, Clayton Archibald | $C E$ |  | Urbana |
| McNish, David Thornley | Agr | 28 | North Crystal Lake |
| McNulta, Scott | Com | 69 | Decatur |
| McNutt, Wilma Lea | LAS |  | Lacon |
| McRobie, Douglas | LAS | 77 | Monitclair, New Jersey |
| McTaggart, Clarence Glenn | $S S$ | 63 | Pana |
| MclVilliams, Maric Lindsey | Mus | 58 | Urbana |
| McWilliams, Mark Dee | SS | 8 | Abingdon |
| Macauley, John Blair | ME | 34 | Evanstor |
| Macdonald, Alexander Paul, Jr. | Agr | 106 | Morris |
| Mach, George Robert | Agr |  | Brookfield |
| Machovee, Edward Paul | ME (SS) | 50 | Kansas City, Missonri |
| Mackey, James Corbett | Agr |  | Rockford |
| Mackic, Elton Thomas | Agr | 62t | New Orlcans, Louisiana |
| Mackin, Paul | $A E$ |  | Omaha, Nebraska |
| Macomber, Frank Bartlett | Com (SS) | 61 | Oak Park |
| Madden, Grace Erminic | LAS (SS) | $88 \frac{1}{2}$ | Jacksonville |
| Madden, Helen Louise, B.Mus., 1915 | LAS (SS) | 189글 | Jacksonville |
| Madden, Katherine Josephine | SS | 33 | Champaign |
| Maddock, Earl Chester | Agr | 28 | St. Joseph |
| Maddock, Rosa Goodeve | SS | 5 | Chicago |
| Maddox, Lloyd J | Agr |  | Palestine |
| Madison, Mary Adele | HSAgr |  | Urbana |
| Madsen, Olav | $A E$ | 67 | Litchicld, Minnesota |
| Magers, Elizabeth Julia | HSLAS |  | Marquette, Michigan |
| Maguire, Mary Josephine | SS | 11 | Alton |
| Mah, Wing Ngui | LAS sp (SS) | 76 | Cantor, China |
| Maher, Chauncey Carter | Med | 32 | Payson |
| Mahn, George Willis | $A E$ | 76 | Urbana |
| Mahood, Harry Samuel | $C E$ | 106 | Mt. Carroll |
| Main, George Chrysup | Agr |  | Barry |
| Main, Howard H | CE |  | Rockford |
| Maitra, Krishua Mohan | RME | 64 | Benares City, India |
| Makutchan, Clyde | $C E$ | 66 | Urbana |
| Malapert, Ernest Louis | Cont |  | Osage City, Kansas |
| Malgani, Abdulah | ME (SS) | 30 | Punjab, India |
| Mallers, John Bernard | ME |  | Chicago |
| Mallett, Norman James | CerE | 63 | Altoona, Pennsylvania |
| Mallory, Francis Bolton | $L A S$ |  | Batacia |
| Mallory, Richard Henderson | Agr | 34 | Batazia |
| Mallstrom, Roe Eugene | Com | 34 | Haraey |
| Maloit, Pauline Germaine | LAS | 96 | Elmiurst |
| Malsbary, Grace Estella | HSLAS (SS) | 31 | Champaign |
| Mandeville, Merten Joseph | Agr | 13 | Terre Haute |
| Mangan, Ralph Kernnith | ME |  | Chicago |
| Manguson, Maude Beatrice | Mus |  | Osco |
| Manley, John Charles | $E E$ |  | Chicago |
| Manley, Marion (Miss) | A | 92 | Junction City, Kansas |
| Manlcy, Myra Francis | LAS | 27 | Champaign |
| Manley, Otis Rowe | Cont | 71 | Harvard |
| Mann, Marjorie Dorothea | HSLAS | 66 | Elgin |
| Mannix, Pauline Marie | SS | 35 | Champaign |
| Manny, Theodore Bergen | Agr |  | Chicago |
| Manstield, Charles Fredric, Jr. | Agr (SS) | 101 | Monticello |
| Mapel, Frances Pauline | HS.Agr | 64 | Fairbury |
| Mapes, George Chandler | ME | 85 | Sazannah, Georgia |
| Marblestone, Rose | SS | 55 | Chicago |
| Marbold, Pauline | LAS | 72 | Greenview |
| Marcott, Margaret | LAS |  | Decatier |
| Marklin, Frederick William | EE |  | Chicago |
| Marks, Anna Edith | LAS |  | Dixon |
| Marks, Hazel Frances | LAS | 99 | Plymouth, Indiana |
| Markson, Harry | ME | 72 | Chicago |
| Markwardt, Henry William | $R C E$ | 73 | Elgin |
| Marlowe, Wilma | SS | 8 | Pontiac |
| Maroe, May Luella | SS | 6 | Rushville |
| Marquardt, Willard Horace | SS | 31 | Dayton, Ohio |
| Marquiss, Ralph Edwin | Agr |  | Monticello |
| Marsh, Carrie Ethel | LAS sp | 152 | St. Joseph |
| Marsh, J. S. | Agr | 44 | Saunemir |
| Marshall, Elsmere John | L.AS |  | Washington, D. C. |
| Marshali, Glenn Wylic | MnE | 25 | Rutland |
| Marshall. Robert Denkmann | Com | 20 | Rock Island |
| Marshall, Ralph William | SS | 133 | West Chicago |
| Marshall, Thomas Holland | LAS | 32 | Fairfield |
| Marsteller, Dudley Leonard | Con: |  | Roanoke, Virginia |
| Martell, Edmund Anthony | EE | 35 | Murphysboro |
| Martens, Margaret Louise | HSLAS | 32 | Anchor |


| Martin, Ada North | Mus sp |  | Madison, Wisconsin |
| :---: | :---: | :---: | :---: |
| Martin, Albert Thaddeus | Agr | 55 | Newton, Illinow |
| Martin, Charles Blake | Com | 8 | Mt. Carmel |
| Martin, Daisy Moore | LAS |  | Champaign |
| Martin, Dorothy | HSLAS |  | Loganspart, Indiana |
| Marin, Erımet Giles | A | 56 | Los Angeles, California |
| Martin, Fay Waldo | Com | 99 | Mt. Carmel |
| Martin, Frank Albert | ChE | 24 | Chicago |
| Martin, Isaac Roy | SS |  | Liberty, Missouri |
| Martin, Milford Maurice | LAS | 12 | Murphysboro |
| Martin, Walter Bunn | $5{ }_{5}$ | 61 | Peoria |
| Martin, Wilbur Francis | CerE |  | Homer |
| Martin, William Holmes | SS | 1313 | Greenville, Ohio |
| Martin, William Hugh | LAS | 32 | Beech Ridge |
| Martin, William Troy | Agr | 16 | Climar, Arkansas |
| Marx, Arthur William Kubs | A | 44 | St. Louis, Missouri |
| Marx, George Bernard | Com | 76 | Aurora |
| Maryan, Harry Isidor | LAS |  | Chicago |
| Mason, Arthur Helgeson | Cont | 97 | Urbana |
| Mason, Jean Fraser | LAS | 30 | LaSalle |
| Mason, Lee | Agr |  | New Richmond, Indiana |
| Mason, Ross Seguine | ME | 105 | Buda |
| Massey, Henry Laurens | Com |  | Littlc Rack, Arkansas |
| Masson, Lewis William | Agr | 31 | Buffalo, New York |
| Mateer, Howard Wilson | EE | 109 | Rutland |
| Mather, Asa Frisbie | LAS | $34 \frac{1}{2}$ | Plainficld |
| Mathews, William B | LAS (SS) | 112 | Yates City |
| Mathews, Williarn Rankin | Conn | 781 | Lexington, Kontucky |
| Matson, Harry Emil | ME | 39 | Chicago |
| Matthews, Albert Otto | LAS | 351 | Washington, D. C. |
| Mattingly, Leo Joseph | $A E$ | 113 | Champaign |
| Mattingly, William Brashear, B.S., 1914 | SS |  | Caira |
| Matuszewig, Veronica Catherine | LAS | 29 | Minonk |
| Maury, Daniel Evans | Com | 34 | Rosswille |
| Maury, Walter Carter | Agr |  | Rossitle |
| Mautner, Erwin William | ChE | 40 | Chicago |
| Mautz, William Plaford | Agr |  | St. Elmo |
| Mavor, Hugh Nelson | $A E$ | 111 | LaGrange |
| Maxwell, Leslie Blaine | Com | 70 | Paris. |
| Maxwell, Loyal C | ChE | 70 | Flat Rock |
| Maxwell, McKinley Vern | Agr |  | Flat Rock |
| Maxwell, Raymond Jones | Com | 34 | Paris |
| May, Clifford Blaine | Agr | 83 | Kirkland |
| Mayerstein, Ralph Maurice | Cont | $36 \frac{1}{2}$ | Lafayette, Indiana |
| Maynard, Donald Edmund | Med | 52 | Chicago |
| Maynard, Wesley Kenneth | Med |  | Chicago |
| Mayo, Thomas Bolton | LAS | 34 | Alton |
| Mead, Leo Shallenburger | Com | 61 | Grand Island |
| Mealiff, Arthur Edward | Agr | 100 | Chicago |
| Meals, Robert Woodruff | Agr | 52 | Peoria |
| Means, Walker Wilson | CE (SS) | 5 | Urbana |
| Mechin, Rene Jean | MnE |  | St. Louis, Missouri |
| Medendorp, Titus Arend | ME | 35 | Chicago |
| Meek, Frederick James | EE |  | Marissa |
| Meek, Harold Tecumseh | LAS (SS) | 413 | Pcoria |
| Meek, James Perry | Agr |  | Peoria |
| Meek, Wilbur | Com | 87 | Carrolltos |
| Mehaffey, Helen Irene | HSLAS |  | Chicago |
| Meier, Harold Irving | LAS |  | Marissa |
| Meisenhelder, W Benjamin | LAS | 77 | Palestine |
| Melin, Charles Raymond | Agr | 33 | Chicago |
| Melin, Ralph Norton | Agr |  | Chicago |
| Mellick, Edwin Clinton | SS | 14 | Ludcll, Kansas |
| Memmen, Dean Ellsworth | Agr | 30 | Minonk |
| Mendel, Ferdinand Albert | $M E$ | 31 | Chicago |
| Meneley, Olive Myrtle | Mus | 101 | Champaign |
| Mensenkamp, Louis Edward | LAS | 101 | Freeport |
| Menzel, Carl Alfred | ME |  | Chicago |
| Mercer, Charles Franklin | $C E$ | 39 | Kansas City, Missouri |
| Mercer, Ralph Dilworth | Agr | 34 | Vermont |
| Meriwether, Shannon | A | 51 | Sedalia, Missouri |
| Merker, David Felmley | Agr | 33 | Belleville |
| Mersills, Virginia | LAS |  | Belleville |
| Merritt, Cora Leone | HSLAS | 73 | St. Louis, Missouri |
| Merryman, Mary Elinor | SS | 7 | Carbondole |
| Metzger, LeRoy Paul | Com | 71 | Cairo |
| Metzler, Arthur Maurice | Com | 105 | Champaign |
| Metzler, John Newman | SS | 87 | White Hall |
| Metzler, Ralph Oliver | Com |  | Champaign |
| Mewhirter, Jannett Lou | HSAgr | 31 | Yorkeille |
| Meyer, Alfred Werner | Ch | 80 | Chicaga |
| Meyer, Alvin l'rederick | Ag r | 54 | Deerfield |


| Meyer, Antoine Ferdinand Ernst Henry | Agr |  | Aux Cayes, Haiti, West Indies |
| :---: | :---: | :---: | :---: |
| Meyer, Carl Theodore |  | 102 | Springfield |
| Meyer, Frank Wellington | Com |  | Beardstown |
| Meyer, Howard Maurice | $R C E$ |  | Ontario, Canada |
| Meyer, Husted McCullough | Com |  | Glencoe |
| Meyer, Pauline Augusta | ${ }_{\text {Com }}$ | $3{ }^{2}$ | Lawrence, Massachusetts |
| Meyer, Raymond Edward <br> Meyer, Wilber Henry | ${ }_{\text {Com }}$ | 34 | Chicago <br> Beardstown |
| Meyers, Charlotte | LAS |  | Belvidere |
| Meyers, Marguerite | LAS |  | Belvidere |
| Meyers, Mildred Irene | LAS | 31 | Pekin |
| Miao, Eu Choa | SS | 58 | Kiangsu, China |
| Michael, Richard William | Agr |  | Champaign |
| Michels, Walter | LAS |  | Chicago |
| Middleton, Edith Anna | HSLAS | 74 | Chicago |
| Middleton, Julian Gilbert | AE | 37 | Pomono, California |
| Midkiff, John Howard | Agr | 74 | Stonington |
| Miebach, Mary Theresa | M ${ }^{\text {c }}$ |  | Champaign |
| Miles, Luther Fiske | Agr | 281 | Urbana |
| Miles, Thomas Boyd | Agr | 44 | Lewistown |
| Millar, Oscar Melvin | ${ }^{\text {Agr }}$ |  | Mattoon |
| Millar, Russell Ward | Ch | 109 | Mattoon |
| Miller, Anna May | LAS |  | Decatur |
| Miller, Archie Roscoe | EE | 35 | Mohomet |
| Miller, Bertie Ethel | SS | 71 | Westield |
| Miller, Cassie Boggs,B.L.,1892 | SS |  | Urbana |
| Miller, Clifton Warner | $C E$ |  | Cairo |
| Miller, Cuyler Clark, Jr. | Agr | 27 | Carlinville |
| Miller, Daniel Edwin | $M E$ | 118 | Quincy |
| Miller, Dean Albert | CE | 39 | Canton |
| Miller, Elliott Strong | Сон | 96 | Oak Park |
| Miller, Erwin Franklin | A | 1132 | Onaga, Karsas |
| Miller, Francis H | Com | 34 | Chicago |
| Miller, Fred Raney | LAS | 98 | GilmGu |
| Miller, Harold Thomas | ChE | 32 | Burlington, Iowa |
| Miller, Joseph Gilman | Com |  | Glencoe |
| Miller, Joseph Harrison | $C E$ | 110 | Red Ook |
| Miller, Kathleen Winifred | LAS | 20 | Princezille |
| Miller, Kenneth Adlai | A | 64 | Bloomington |
| Miller, Kenneth William | LAS |  | Decatur |
| Miller, Max F | Com | 17 | Waterloo, Iawo |
| Miller, Mabel O | SS |  | La Place |
| Miller, Robert McClain | CE | 72 | Cairo |
| Miller, Stanford Curtis | LAS |  | Casey |
| Miller, Virginia Agnes | LAS |  | Galva |
| Milleson, Cecil Clyde | SS | 74 | East St. Louis |
| Millikan, Carl E | MnE | 29 | Chicago |
| Millin, Richard Bardwell | Agr | 108 | Ridgway, Pennsylvania |
| Millman, Harry Abram | Com | 31 | Chicago |
| Mills, John Turner | Agr | 108 | McNabb . |
| Mills, Lois Gertrude | LAS | 36 | San Luis Obispo, California |
| Mills, Niles Easton | Agr | 0.93 | San Luis Obispo, California |
| Millsom, Walter Clair | Cere | 95 | Macomb. |
| Milne, Edward Lawrence | SS |  | Champaign |
| Miner, Helen Nellora | Med | 30 | Adair |
| Miner, Henry | Agr | 991 | Waverly |
| Miner, Lester Ward, B.S., 1914 | $A g r$ |  | Shelbyaille |
| Mink, Dwight | Cont | 72 | Galva |
| Minkema, William Herman | ME | 75 | Chicago |
| Minnis, Lemuel Ernest | Agr | 102 | Chicago |
| Mischler, Clara Helen | SS | 612 | Springfield |
| Mischler, Lillian | SS | 12\% | Springfield |
| Missimore, Russell Clark | SS | 2 | Hillsboro |
| Mitchell, Dale Ira | Agr |  | Talbot, Indiana |
| Mitchell, Donald Richards | $A g r$ | 34 | Chicago |
| Mitchell, Elsie Louise | HSAgr | 116 | Havana |
| Mitchell, Forster Isaac | $L A S$ |  | Havanna |
| Mitchell, George William | Agr | 69 | Marion |
| Mitchell, Grace | LAS | 100 | Georgetown, Ohio |
| Mitchell, Leonard Osgood | Agr | 71 | Chicago |
| Mitchell, Robert Andrew | SS | 61 | Winchester, Kansas. |
| Mitchell, Robert Stephens | EE | 37 | St. Louis, Missouri |
| Mix, John Raymond | Med |  | Beardstown |
| Moberley, Edwin Stuart | $A g r$ | $30 \frac{1}{2}$ | Tallitah, Louisiana |
| Moburg, Ernest Rueben | $\mathrm{Agr}^{\text {r }}$ | 26 | Kirkwood |
| Model, Charles | SS | 5 | Brooklyn |
| Moffet, Donald Romain | L | 28 | Paxton |
| Moffett, Thomas Oscar | EE | 72 | Oakland |
| Mohlman, Harry | ${ }_{S}{ }^{\text {Sr }}$ | 98 | Urbana |
| Mohr, Alba Agnes | SS | 119 | Watseka |
| Mohr, Edward Emil | ME | 30 | Chicogo |
| Moll, Paul ${ }^{\text {Molyneaux }}$ Juanita Ounita | Com | 21 | St. Louis, Missouri |
| Molyneaux, Juanita Ounita | $L A S$ (SS) | 63 | Woodland |
| Moncrieff, James Weir | CerE | 37 | Otsego, Michigan |

\begin{tabular}{|c|c|c|c|}
\hline Mongreig, Louis Morgan \& Agr \& \& Cicero <br>
\hline Monohon, Ila E \& HSLAS \& 32 \& Greenup <br>
\hline Monroe, George Stuart \& Ch \& 74 \& Hillsboro <br>
\hline Montgomery, Thaddeus Lemert \& Med \& 68 \& Dexter, Missouri <br>
\hline Moo, Jen Yin \& AE \& \& Honolulu, Oahu <br>
\hline Moon, Paul Cyrus \& SS \& 43 \& DeQueer, Arkansas <br>
\hline Mooney, Paul \& LAS \& \& Chicago <br>
\hline Mooney, Raymond \& EE \& 115 \& Chicago <br>
\hline Moor, Hubert Watson \& ChE \& 73 \& Champaign <br>
\hline Moore, Albert Brophy \& LAS \& \& Aurora <br>
\hline Moore, Allen Ray \& LAS \& 43 \& Urbana <br>
\hline Moore, Allie Adelaide \& LAS \& 19 \& Urbana <br>
\hline Moore, Charles Eachman \& LAS \& \& Knowville, Tennessee <br>
\hline Moore, Edward Wilson \& Med \& 33 \& Murphysboro <br>
\hline Moore, Elbert Lansford \& SS \& \& Chicago <br>
\hline Moore, Eva Eleanor \& HSLAS \& \& Mattoon <br>
\hline Moore, Florence \& LAS \& \& Allerton <br>
\hline Moore, George Wilkinson
Moore, Hiram Wodrich \& Agr

dr \& \& Macomb <br>
\hline Moore, Hiram Wodrich
Moore, Irene Holbrook \& ${ }_{\text {Agr }}{ }_{\text {AS }}$ \& 31 \& Chicago
Nashrille <br>
\hline Moore, James Gregory \& SS \& 1213 \& Paris <br>
\hline Moore, Lewis Albert \& Agr (SS) \& $94 \frac{1}{2}$ \& Humbolt <br>
\hline Moore, Mabel Elizabeth \& HSLAS \& 62 \& Nashrille <br>
\hline Moore, Othmar \& MSE \& \& Garrett, Indiana <br>
\hline Moore, Paul Robert \& ME \& \& Carlinzille <br>
\hline Moore, Sara Elizabeth \& LAS \& 31 \& Danville <br>
\hline Moore, Vivian June \& HSLAS \& \& Stockton <br>
\hline Moore, Wayne Kenneth \& Agr \& 30 \& Chicago <br>
\hline Moore, William Abner \& \& \& Urbana <br>
\hline Moote, Truman Pharaoh \& CE (SS) \& 87 \& Manson, Iowa <br>
\hline Moran, Katharine Mary \& HSAgr \& 61 \& Bartlesville, Oklahoma <br>
\hline Morean, Clarence Wheeler \& Agr \& 49 \& Des Moines <br>
\hline Morehead, Gould \& ${ }_{L A g r}(S S)$ \& \& Montclair, New Jersey
Macomb <br>
\hline Morey, Clara Adah \& LAS \& 33 \& $\xrightarrow[\text { Macomb }]{\text { Manistee, Michigan }}$ <br>
\hline Morey, Philip Johnston \& Agr \& 53 \& Oak Park <br>
\hline Morgan, Dean Francis \& EE \& \& Kone <br>
\hline Morgan, J W \& SS \& 1303 \& Wood River <br>
\hline Morgan, May Merboth \& LAS \& $65 \frac{1}{2}$ \& Chicago <br>
\hline Morgan, Ralph Waldo \& ChE \& 104 \& Macomb <br>
\hline Morgan, Thomas Sherman \& \& \& East St. Louis <br>
\hline Morita, Hanyemon \& Com (SS) \& 351 \& Kisaraza, Japan <br>
\hline Morrell, Melvin Hill \& Agr \& \& Watseka <br>
\hline Morrill, Leslie Sherman \& ME \& 115 \& Blue Island <br>
\hline Morris, Bertha May \& SS \& 108 \& Greenview <br>
\hline Morris, Cecil Milo \& $A E$ \& \& Clinton <br>
\hline Morris, Harold Harrison \& ${ }_{\text {Agr }}^{\text {HSLAS }}$ \& 31 \& Clinton <br>
\hline Morris, Helen Elizabeth \& HSLAS \& 26 \& St. Louis, Missouri <br>
\hline Morris, Nelson Marvin \& MnE \& 74 \& Harrisburg <br>
\hline Morris, Wilbert Willard \& SS \& 61 \& Bay City, Michigan <br>
\hline Morrison, Carl Raymond \& $M E$ \& 41 \& Columbus, Indiana <br>
\hline Morrison, Clay Alexander \& $A g r$ \& 36 \& Elkhart, Indiana <br>
\hline Morrison, Ivan G \& Agr \& 67 \& Fairbury <br>
\hline Morrison, Lethe Eleanora \& HSLAS \& 12 \& Waterloo <br>
\hline Morrison, William, Raymond \& LAS (SS) \& 147 \& Waterloo <br>
\hline Morrissey, John O'Connell \& Agr \& 3 \& Bloomington <br>
\hline Morrow, Irwin Gealy \& $A$ (SS) \& $18 \frac{1}{3}$ \& Rapides, Louisiana <br>
\hline Morsch, Elmer John \& Agr \& 31 \& Hinckley <br>
\hline Morse, Guy Edward \& EE \& 2 \& Kansas City, Missouri <br>
\hline Morse, Richard Irving \& Com \& \& Olney <br>
\hline Morse, Robert Lay \& $M E$ \& \& Kervanee <br>
\hline Morton, Alfred Hammond \& CE \& \& Chicago <br>
\hline Morton, Marguerite \& $L A S$ \& \& Champaign <br>
\hline Morton, Robert \& Agr \& \& Homer <br>
\hline Moseley, Jason William \& A \& \& Calhoun, Kentucky <br>
\hline Moser, Margaret \& ${ }_{L}^{L A S}$ (SS) \& \& Chicago <br>
\hline Moser, Olga Fern \& Ags (SS) \& 101 \& Sigel <br>
\hline Mosier, Leota Irene \& HSLAS \& 101 \& Urbana <br>
\hline Moss, Alida Helen \& LAS \& 32 \& Urbana <br>
\hline Moss, C Sedgwick \& 4 \& $72 \frac{1}{2}$ \& Charles City, Iowa <br>
\hline Moss, Florence Louise \& LAS \& 68 \& Charles City, Iowa <br>
\hline Moss, Joseph Bardurant \& ${ }_{S}{ }_{S}$ \& $6 \frac{1}{2}$ \& Chrisman <br>
\hline Moss, Ruth Alice \& SS \& 82 \& Mt. Vernon <br>
\hline Mott, Maxwell \& Com \& \& Oak Park <br>
\hline Motter, Archie Runkle \& Com \& 29 \& Browns Valley, Minnesoto <br>
\hline Motter, Henry Edward \& Com \& \& Chicago <br>
\hline Mottier, Julia Louise \& HSLAS
$L A S$ \& 98 \& Gibson City <br>
\hline Moulden, Moulton, Gertrude Evelyn, A.B. (Oberlin) 1903 \& LAS \& \& Tuscola <br>
\hline A.B. (Rio Grande Coll). 1905 \& SS \& \& Urbana <br>
\hline Mounts, Will Walter \& Agr \& 109 \& Carlinville <br>
\hline Moyen, Carl Peter \& ChE \& 89 \& Chicage <br>
\hline Moyer, Charlene \& LAS \& \& LeRoy, Ohio <br>
\hline
\end{tabular}

| Moyer, Simon Jones | $E E$ |  | ElDara |
| :---: | :---: | :---: | :---: |
| Msoz, August Ferdinand | LAS |  | Chicago |
| Mroz, Rudolph John | Med |  | Chicago |
| Mueller, Carl Oscar. | $A E$ (SS) | 68 | Chicaga |
| Mueller, Harry Louis | Ch (SS) | 103 | Highland |
| Mueller, Henry Rollo, B.S. <br> (Baker Unin.) 1914 | Agr | 150 | Sedgurick, Kansas |
| Mueller, Herbert Edward | $A E$ | 73 | Chicago |
| Mueller, Herbert Zoller | EE | 107 | Quincy |
| Mueller, Richard Henry | Arr |  | Chicago |
| Mueller, Walter Rudolph | AE |  | Indianapalis, Indiana |
| Muessel, Richard Adam | Agr | 72 | South Bend, Indianc |
| Mulac, Louis Edward | $M E$ | 116 | Chicago |
| Mulford, Edgar Theodore | $C E$ | 59 | Mason City |
| Mulliken, Horace Watson | Agr |  | Humbaldt |
| Mulliken, June | LAS |  | Champaign |
| Mullins, Edward Richard | $A E$ | 76 | Champaign |
| Mullins, James Thomas | AE |  | Champaign |
| Mumm, Walter John | Agr |  | Sidney |
| Munns, Charles Willard | Com | 35 | Peoria |
| Munroe, Mary Flora | LAS | 24 | River Farest |
| Munson, Irving | SS | 7 | Princeton |
| Munson, John Leonard | Agt (SS) | 61 | Randalph |
| Munson, Morris George | AE | 12 | Urbana |
| Murata, Motosaburo | EE | 712 | Shingu, Japan |
| Murdock, Elizabeth Adams | LAS | 80 | Champaign |
| Murison, Richard Vivian | $A E$ | 4 | Evanston |
| Murphy, Everett Franklin | Agr (SS) | 97 | Marshall |
| Murphy, George Raymond | EE | 50 | Faribault, Minnesata |
| Murphy, Howard Dawson | Agr (SS) | 1031 | Chicago |
| Murphy, Louise Phares | HSLAS |  | Western Springs |
| Murphy, Mary Agnes | Mus | 95 | Sullivan |
| Murphy, Mildred Katharine | LAS | 12 | Decatur |
| Murphy, Naibert D | SS |  | Butte, Montana |
| Murplyy, Robert Brown | ME (SS) | 251 | Decatur |
| Murphy, Robert Emmet | ME |  | Anderson, Indiana |
| Murray, David Reese | LAS | 123六 | Chicago |
| Murray, Eliza B | SS |  | DeKalb |
| Murray, Grace Mildred | LAS | 67 | Champaign |
| Murray, Harry Edward | $A E$ |  | Menominee, Michigars |
| Murray, Leonard Ely | $A E$ |  | Springfield, Massachusetts |
| Murray, Norris Fey (B.S., 1912) | LAS |  | Mazon |
| Murray, Sprague Elmo | ${ }^{\text {Agr }}$ | 36 | Mazan |
| Murrill, Randall Tohman | SS | 137 | Flat River, Missauri |
| Musch, Harry Edwin | Ch | 32 | Beardstown |
| Mussenden, Ruth Isabel | HSLAS | 100 | Raswell, New Mexico |
| Muther, Charles Muther | $A E$ |  | Oak Park |
| Myer, Frank B | Agr |  | Kingman, Indiana |
| Myers, Delle Matilda | Agr |  | Sperling, Manitaba |
| Myers, Emma Frances | LAS | 21 | Summersville, West Virginia |
| Myers, Mabel Amanda | L.4S |  | Summersville, West Virginia |
| Myers, Merton Jasper | ME |  | Champaign |
| Myers, Waldo Kay | Com | 94 | Mansficld |
| Myers, Willian Henry | Med |  | Coal Valley |
| Nachtrieb, George Williams | Conn | 18 | Elkhart, Indiana |
| Naden, Gladys Leora | HSLAS | 35 | Newark' |
| Nafziger John Monroe | Agr | 34 | Hopedale |
| Nag, Nripendra Kumar | EE | 111 | Dacca, Bengal, India |
| Nag, Surendra Chandra | MSE | $70 \frac{1}{2}$ | Calcutta, Indiana. |
| Nagel. Charles August | EE |  | St. Louis, Missauri |
| Nakada, Kyoichi | EE | 83 | Orayama, Japan |
| Nakanischi, Shimaji | EE |  | Aichi, Japan |
| Nakayama, Mohi | EE | 75 | Kachi-Ken, Japan |
| Nance, Oliver Odell | SS | 113 | Cape Girardeau, Missouri |
| Nate, Mildired | LAS |  | Champaign |
| Nebel, Veta Thorpe | LAS | 99 | Clintan |
| Needham, Catherine | LAS | 33 | Urbana |
| Needham, John Wilbert | AE (SS) | $64 \frac{1}{2}$ | Urbana |
| Necdham, Minnie Lucile | HSLAS (SS) | $95 \frac{1}{2}$ | Urbana |
| Needler, Julien Hequembourg | $M E$ | 78 | Chicago |
| Necly, Bertha | S.S | $56 \frac{1}{2}$ | Marion |
| Neely, John Childs, Jr | A | 29 | Topeka, Kansas |
| Nefi, Harold Alp ha | Med |  | Rochelle |
| Neff, Lloyd Lovell | Agr | 1013 | Chicago |
| Neiburg, Simon Jacob | EE | 27 | St. Aldans, Vermont |
| Neil, Mark Crawford | LAS |  | Oak Park |
| Nelson, Adolph Lincoln | ME | 111 | Galesturg |
| Nelson, Elmer Yawrence | AE | 54 | Clicago |
| Nelson, Fisther Pauline | LAS (SS) | 42 | Fithian |
| Nelson, Gertrude | SS | $140 \frac{3}{4}$ | Momince |
| Nelson, Paul Scoficld | ME |  | Chicaga |
| N゙elson, Rny Emmett | L.AS sp |  | Palestina |
| Nelson, Severina Elaine | LAS | 36 | Oak Park |
| Nelson, Sidney William | Com |  | Winnetka |
| Nelson, Walter Stephen | EE | 83 | Chicago |

Nelson, William Oscar
Nesbitt, Carl Wesley
Nesheff, George
Neslage, Oliver John
Netcott, Roland Carl
Netz, Ralph Morlan
Neuhalfen, Mathias
Neuhauser, Edwin Valentine
Neville, Olive Myrtle
Newburn, Iva Florence
Newcomb, Edwin Eldwood
Newcomb, Walter Haines
Newell, Effie J
Newell, Josephine
Newell, Raymond Wilson
Newlin, Florence
Newlin, Harold Vance
Newlin, Jesse. H
Newlin, Ralph Thomas
Newlin, Walter Allen
Newlin, Willard Bogue
Newman, Reuben Charles
Newton, Doris Charlotte
Newton, Helen Charlotte
Newton, Robert Keith
Nichol, Edward Sterling
Nichol, George William
Nichols, Charles Henry A.
Nichols, Floris Wilson
Nichols, Harry Henry
Nichols, Herbert Luthy
Nichols, Hilton C
Nichols, Josephine Marie
Nichols, Mary Anderson, A.B.
(Beloit Coll.) 1910
Nicholson, Margaret
Nickell, Nelle
Nickolls, Cecil Richard
Niebergall, Philip Alfred
Nierstheimer, Minnie Barbara
Nightingale, Eugene Richard
Nihart, Fred Dallas
Niu, Yin Hsiang
Nix, Julius Carl
Noble, Joseph Morgan
Noble, Merle Emmett
Noble, Porter Charles
Nolan, Albert Joseph
Nolan, John Timothy
Nolin, Ruby Edith
Noone, Byron Mortimer
Norberg, Alfred
Nordenholt, Walter
Norgaard, Ralph
Norlin, Fred Christian, Jr.
Norling, Albert Emanuel
Norman, Gerald William
Norman, Milton Eugene
Normile, John Morrissey
Norris, Dwight Reed
Norris, Richard Daniel
North, Clyde James
North, Page Lane
Norton, Arlo
Norton, Arty Everett
Norviel, Herald Gernard
Nott, Edson Lowell
Nowlen, Gladys
NuIl, Miriam Ellen
Nunhesser, Selma
Nusbaum, Emil Justice
Nyberg, Florence Anna
Oakes, Ella Baxter
Oakes, Hubert LaMont
Oakes, James Lowell
Obenchain, Maude Edna
Oberdorfer, Henry Dixon, B.S., 1910
Oberg, Philip Wiseman
Oberlander, Marie
Oberne, George Struble
Oblander, Helen Elizabeth
O'Brien, Paul Thomas
Ocheltree, Maurice Webster
Ochoa, George Vizcaino
Ochs, Chester Adam

| $M E$ | 77 | Pcoria |
| :---: | :---: | :---: |
| ChE | 40 | Macomb |
| ME |  | $V$ Tirnovo, Bulgaria |
| $M E$ | 122 | St. Louis, Missours |
| $A E$ | 68 | Independence, Iowa |
| Com | 35 | Albion, Indiana |
| AE | 881 | Grand Island, Nebraska |
| Com | 26 | Gridley |
| HSLAS | 28 | Kewance |
| HSLAS (SS) | 37 | Urbana |
| A | 31 | Burlington, Kansas |
| $\stackrel{C}{\text { S }}$ |  | Fizarlcstown, Massachusetts |
| HSLAS (SS) | 4 | Urbana |
| ${ }_{\text {Agr }}$ |  | Keithsburg |
| LAS | 70 | Robinson |
| SS | 2 | Decatur |
| $L$ |  | Robinson |
| ${ }^{\text {Agr }}$ | 38 | Annapolis. |
| $\stackrel{L}{\text { L }}$ MS | 39 | Indianapolis, Indiana |
| HSAgr |  | Glenıi Ellyn |
| Mus |  | Urbana |
| EE | 331 | Jerseyville |
| LAS |  | Columbus, Ohio |
| Com | 65 | Anderson, Indiana |
| Agr | 18 | Hebron |
| ${ }_{\text {Con }}$ | 101 | Lacon |
| ${ }_{L A S}$ |  | Washinington, |
| Agr |  | Momence |
| LAS | 62 | Dixon |
| $L^{L} b$ |  | Hebron |
| SS | 133 | Gibson City |
| $L A S$ |  | Fairfield |
| Agr sp | 87 | Stark |
| LAS |  | New Orleans, Louisiana |
| HSLAS |  | Pekin |
| $\underset{S}{E E}$ | 22 | Champaign |
| SS RME | 612 | Pana |
| RME | 40 | Huchow, Chekiang, China |
| LAS | 113 | Wichita, Kansas |
| LAS |  | Sozoy. |
| Agr | 22 | Bloomington |
| Agr | $99 \frac{1}{2}$ | Harvard |
| CE | 38 | Gilbcrt, Minnesota |
| LSAS |  | Maword ${ }^{\text {Maverth, New Jersey }}$ |
| CE | 139 ${ }^{\frac{1}{2}}$ | Champaizn |
| Agr |  | Oak Park |
| LAS |  | Wheaton, Minnesota |
| CE | 101 | Chicago |
| Agr |  | Aurora |
| ${ }_{C E}{ }^{\text {S }}$ |  | Kirkwood |
| ${ }_{A}$ |  | Chicago |
| ${ }_{\sim}^{A}$ | 67 | Bloomington |
| $C E$ | 73 | Newnian |
| $A g r$ | 104 | W'inchester |
| Agr | 30 | Clicago |
| $A g r$ |  | Bloomington |
| Agr |  | Alto Pass |
| Med | 30 | Urbana |
| ${ }_{\text {Agr }}$ | 25 | Byron |
| ${ }_{\text {SS }}^{\text {HSLAS }}$ | 40 | Morrison |
| HS |  | Coichester |
| EE |  | Streator |
| LAS sp |  | Urbana |
| HSAgr | 58 | Latera |
| ${ }_{L}^{\text {Agr }}$ |  | Latra Dayton Ohio |
| SS | $6 \frac{1}{2}$ | South Whitley, Indiana |
| Com |  | Bloomington |
| Agr | 16 | New York City |
| ME |  | Chicago |
| LAS |  | Buslinell |
| SAS (SS) | $15 \frac{1}{2}$ | Moplc Park |
| EE |  | Guadalajara, Mexico |
| Com | 59 | Chicago |

O'Connell, Terome Anthony
O'Connell, William Rolfe
Odell, Laura
Odenkirk, Zellie Coy
Oestreicher, Maud Esther
Ogg, John Hurley
O'Harra, Reaburn James
Ohinata, Chiyozi
Ohrum, Dwight Broadnax
Olander, Eirnest Allen
Olbrick, Fred George
Olesen, Alma Carrie
Olesen, Harold Loeffel
Olin, Irwin Blaine
Oliveras, Ovidio
Olmsted, Roscoe Thomas
Olsen, Arthur Alexis
Olsen, Carlton Frederick
Olson, Arthur Luther
Olson, Milton Olaf
Omeara, Allan Richard
O'Neil, Margaret Ellen
Opie, Glen Elizabeth
Orland, Frank Addison
Orland, Fred William
Orton, Julian Rockwood
Osborn, Deane Harold
Osborn, Howard Gunnell (A.B., 1915)
Oshorne, Pauline Theodora
Ostermeier, Bertha Johanna
Ott, David Lee
Ott, John Ekern
Ott, Percy Wright
Otto, Gordon
Otto, Harwood
Oulson, Fern Fannie
Ousley, Glen Charles
Overbee, William Bryan
Overend, Harrison George
Overlock, John Andrew
Overton, Ralph Marion
Owen, Charles Norton
Owen, Edith
Owen, Harold Patterson
Owen, Harry Lea
Owen, Jane
Owens, Bernice Russell
Oxman, John Murrell
Pack, Mary
Paddock, Rolf Cottingbam
Paddock, Richard
Page, George James
Page, Harold Meredith
Pagin, Jobn Beitner
Paisley, Sela Isabel
Palfrey, John Robert
Palm, Elizabeth Myrtilla, B.S.
(Michigan Coll.) 1911
Palmer, Arthur Bowen
Palmer, Charles Shattuck
Palmer, Gerald Lewis
Palmer, Walter Fred
Pancoast, Donald A.
Pankow, Grace Elizabeth
Papmeier. Louis Stahl
Parden, Frank Broyles
Parish, William Love
Park, Jay Peter
Park, Martha Ann
Parker, Gcorge Thomas
Parker, Helen, B.Mus., 1914
Parker, Gilbert Morris
Parker, Joel Weaver
Parkes, Charles Holcombe
Parkinson, Kenneth Warren
Parks, Catherine Elizabeth
Parks, Frank Austin
Parks, Ralph Milter
Parlee, Edward Wesley Thomas
Parmely, Miles McKinstry
Parr, Arthur Eldon
Parr, Harold Lucian
Parrill, Dean

| Com |  | Springheld |
| :---: | :---: | :---: |
| Com | 31 | Springfield |
| SS | 8 | Oakland |
| $E E$ |  | Auburn, Indiana |
| SS |  | $V i n c e n n e s$, Indiana |
| ME | 39 | Buffalo, New York |
| Agr | 23 | Chicago |
| Com (SS) | 92 | Matsumoto, Jopan |
| $R C E$ | 64 | Indianapolis, Indiana |
| CE | 1237 | Topeka, Kansas |
| $C E$ | 981 | Cedar Falls, Iowa |
| HSLAS |  | Highlond Park |
| CE | 35 | Highland Park |
| Coin | 47 | Eranston |
| LAS | 69 | Chicago |
| Com (SS) | 34 | Catlin |
| Agr (SS) | 781 | Nequark |
| ME | 150 | Chicago |
| Agr | 283 | Chicaso |
| SS | 8 | Monticello |
| Com | 72 | Chicago |
| SS | 4 | Dayton, Ohio |
| HSLAS | 31 | Wheaton |
| REE | 72 | Murphysboro |
| Agr |  | Murpliysboro |
| LAS |  | Lincoln |
| Com |  | Urbana |
| $\begin{aligned} & \mathrm{Agr} \\ & \mathrm{LAS} \end{aligned}(S S)$ | 121 | Coldwoter, Michigan |
| SS | 11 | Springfield |
| ME | 106 | Prophetstown |
| ME | 771 | Chicago |
| MSE | 81 | Mt. Hermon, Louisians |
| Agr | 671 | Chicago |
| Med | 35 | Chicago |
| SS | 68 | Godfrey |
| ${ }_{\text {AEr }}$ |  | Brocton |
| A | 931 | Edelstein |
| MnE |  | Chicago |
| ME | 75 | Winchester |
| ME | 116 | Chicago |
| SS | 4 | Amo, Indiana |
| $C E$ | 39 | Chicago |
| $A E$ | 106 | Plano |
| LAS |  | McHenry |
| Agr | 23 | Pana |
| ${ }^{\text {Agr }}$ |  | Lake Bluff |
| HASLAS | 33 26 | River Forest Pana |
| Med |  | Terre Haute, Indiana |
| Agr | 62 | Chicago |
| LAS | 24 | Keota, Towa |
| ME | 125 | La Grange |
| Mus | 86 | Urbana |
| Agr | 11931 | Urbana |
| Lb |  | East Lansing, Michigan |
| $C E$ | 34 | Mt. Pleasant, Iowa |
| Ch (SS) | 771 $\frac{1}{2}$ | Urbana |
| Com | 83 | Chicago |
| SS | 5 | Salamanca, New York |
| ME | 31 | Champaign |
| HSLAS (SS) | 26 | Elgin |
| CE |  | Litchfield |
| LAS |  | East St. Louis |
| $A E$ | 113 | Greenfield |
| Agr | 31 | Chicago. |
| HSLAS |  | St. Louis, Missouri |
| ${ }^{\text {A }}{ }^{\text {r }}$ | 58 | Carrollion |
| SSME | 65 | Champaign |
| CE | 34 | Mattoon |
| LAS |  | Chicago |
| Agr | 87 | Maxuell |
| LAS | 62 | Du Quoin |
| Com (SS) | 37 | Urbana |
| Mus | 51 | Urbana |
| ${ }_{\sim}^{2}$ |  | Chicago |
| $\mathrm{Chgr}_{\text {(SS }}$ | 417 | Urbana |
| ${\underset{C e r E}{ }}_{\text {Agr }}(S S)$ | 715 | Urampaign |
| SS | 8 | Forrest |

Parsons, Maud E., A.B., 1907
Parsons, Robert Roy
Partlow, Carrie Marie
Pastel, Alfred Robert
Patchill, Glen T.
Pathak, Mukand Lall
Patterson, Joseph Julian
Patterson, Nellie Rand
Patterson, Willa Ruth
Patton, Frederick William
Patton, Harry
Patton, John V.
Patton, Lee Moyer
Patton, Richard Chalmers
Paul, Berenice Marie
Paul, Frank Martin
Pauli, Adolph Frederick
Pause, Clara Elnora
Pavey, Charles Allen
Pavietas, Charles S.
Pawson, John Thomas
Peadro, Benjamin Harrison
Peadro, Bernice F.
Peadro, Eva McDonald
Peale, Margaret
Pearce, Charles Ernest
Pearson, Francis H.
Pearson, Homer Arnold
Pearson, Robert Miller
Pecchia, Victor Anthony
Pechmann, Henry Charles
Peck, Blaine Leroy
Peck, Frederick Albert
Peck, Irving Kellogg
Peck, Roy Lee
Pedler, Russell Henry
Peirson, Mary Lucile
Pell, Hazel Maria
Pemberton, Bessie
Pendarvis, Harry Reed
Pendarvis, Wilbur Otis
Pendry, Eliza Ruth
Penhallow, Lambert Benjamin
Peniston, Oscar T.
Penny, James Leonard
Percival, Frank William
Percival, Joseph W.
Percival, Lilley Ruth
Percival, Marion Louise
Percival, Stella Rebecca
Percy, George Stanford
Perkins, Frances Janet
Perlman, Mandel
Perlman, Samuel Charles
Perrott, Richard Henry
Perry, Edna Verne
Perry, Robert Ashman
Peters, Everett Robert
Petersen, Marvis Hecht
Peterson, Chester Almon
Peterson, Eleanor Sarah
Peterson, Franklin Merle
Peterson, Irving Leonard
Peterson, James Andrew
Peterson, Joel Asbury
Peterson, Mabel Elizabeth
Peterson, Reuben Walter
Peterson, Silas Carlisle
Peterson, Timothy Edwin
Peterson, William Chandler
Petesch, Edyth Marion
Petesch, Gerner
Pethybridge, Frank Howard
Petter, Stanley Dubois
Pettit, Arthur Edwin
Petty, Lawrence Otis
Petty, Manley Ross
Petzing, Edwin Rudolph
Pfeffer, Louis Herman
Pfeiffer, Conrad Louis
Pfeiffer, Rudolf Salisbury
Phalen, Robert William
Pheanis, Russell Hitchner

| SS |  | Urbana |
| :---: | :---: | :---: |
| Com |  | Urbana |
| LAS (SS) | 21 | Danville |
| A | 45 | Chicago |
| ${ }_{E E}^{C o m}(S S)$ |  |  |
|  | 113 | Dichoot, Lyall Prur, ${ }_{\text {Prijab, }}$ |
| A | 96 | Danville |
| HSLAS | 82 | Chicago |
| SS | 103 | Baldzuin |
| Agr | 63 | Montclair, New Jersey |
| Com LAS | 513 | Waynesburg, Pennsylvania |
| Agr |  | Bridgeport |
| LAS | 35 | Atlanta |
| LAS |  | Chicago |
| ME | 31 | Kewanee |
| LAS (SS) | 113 | Peoria |
| Com | 35 | Chicago |
| Com | 21 | Chicago |
| $\stackrel{\text { Agr }}{\text { Com }}$ |  | Nau;amiestis, Kaona, Russia |
| Com |  | Sudell |
| LAS | 95 | Sullivan |
| Mus |  | Urbana |
| HSLAS | 30 | Belvidere |
| Com |  | White Hall |
| ME | 38 | Hinsdale |
| EE | 71 | Thorntown, Indiana |
| LAS |  | Thorntown, Indians |
| $C E$ | 941 | Chicago |
| $A E$ |  | Webster Groves, Missouri |
| Agr |  | Thomson |
| ${ }_{M n E}$ | 43 | Chicago |
| ${ }_{\text {MnE }}$ |  | Jolict |
| $C E$ | 97 | Oak Park |
| ME | 98 | Chicago |
| HSLAS | 31 | Murphysboro |
| HSAgr | 33 | Urbana |
| SS | 171 | Eldorado |
| ${ }_{L}^{E} E$ | 117 | Chicago |
| LAS | $26 \frac{1}{2}$ | Chicago |
| ME | 39 | Chicago |
| LAS |  | Dixon |
| Agr |  | Evanston |
| Com |  | Champaign |
| $\mathrm{Agr}^{\text {r }}$ | 33 | Champaign |
| HSAEgr | ${ }_{132}$ | Urbana |
| LAS | $130 \frac{1}{2}$ | Champaign |
| Mus | 66 | Champaign |
| $\xrightarrow[L A S]{L}$ |  | Chicago |
| Com | 51 | Chicago Mississippi |
| LAS |  | Chicago |
| LAS (SS) | 843 | Claremont |
| SS | 601 | Plainficld |
| $M E$ | 56 | Urbana |
| Agr | 19 | St. Joseph |
| Agr | $28 \frac{1}{2}$ | Chicago |
| Agr | 69 | Galesburg |
| HSAgr | 155 | Galesburg |
| Comr |  | Browinstown |
| ${ }_{\text {Agr }}$ |  | DeKalb |
| ${ }_{\text {LAS }}$ LAS |  | Chicago |
|  | 28 | Maywaod |
| Agr | 68 | Chicago |
| Agr (SS) | 8 | Herscher |
| Agr |  | Mesa, Arisona |
| ASLAS | 108 | North Crystal Lake |
| ${ }_{C h E}^{\text {HS }}$ AS |  | McHenry |
| ${ }_{\text {Cher }}$ |  | McHenry |
| Agr | 65 | Chicago |
| LAS | 64 | Paducah, Kentucky |
| Agr |  | Sumner ${ }^{\text {Satansas }}$ |
| Agr | 623 | Sumner |
| $E E$ | 37 | Shumzay |
| Agr | 79 | Lebanon |
| ME | 773 | Peoria |
| Com | 30 | Evanston |
| Com | 113 | Monticello |

Philbrick, Gladys
Philbrick, Lois
Phillips, Alice Emma
Phillips, Frank Williams
Phillips, Harriet Muriel
Phillips, Joseph Edward
Phillips, Lemuel
Phillips, Minnie Alice
Phillips, Ruth
Phillis, Louis Irving
Phipps, James Blaine
Pickard, Dorothy Everett
Pickard, Marion Frances
Picken, John Francis
Picken, Ralph Montgomery
Picker, Edna Adessa
Pickett, Arthur William
Pieper, Arnold Christian
Pieper, John
Pierce, Benjamin Elmer
Pierce, Clinton Albert
Pierce, LeRoy
Pierce, Maurice J.
Pierik, John Cornelius Jr.
Pierson, Anna Mary
Pierson, Frank Harlan
Pierson, Raymond Menry
Pierson, Walter Raymond
Piblgard, Eric Frederick
Pilchard, Edwin Ivan
Pinckard, Harold Recenus
Pingel, Eunice Marie
Pinkley, James Pierpont
Pinkney, Fred Theodore
Piper, Leo Edward
Pitsenbarger, Ethel Gertrude
Plagge, Irwin Fred Willard
Pletcher, Velma Coe
Plymale, Betha
Poehlmann, Earl Franklin
Poehlmann, Walter Gustave
Pogue, Harold Austin
Poirot, Severine Andrew
Polakow, Alexander Hyman
Polk, Arthur Eugene
Polk, Robert Edmund
Polkowski, Anna
Pollock, Leone Ruth
Pool, Ernst Howard, A.B., 1915
Poor, Leonard Shroule
Pope, Walter Scott
Poppove, Racho Petroff
Porter, Ada Lenore
Porter, Harry Hubert
Porter, Hazel Lucille
Possolt, Bertha Theresa
Postel, Urban Stuart
Postle, George Richardson
Postlewaite, Harriet Leotine
Potter, Ellis J.
Potter, Glenn Edward
Potter, Phil Harry
Powell, Henry Albert
Powell, Ruth Mabel
Powers, John Howard
Powers, I. Orin
Powers, Ray Austin
Prall, Beatrice, A.B.
(Univ. of Arkansas) 1911
Prante, Beulah Wise
Pratt, James Bruce
Preble, Robert Curtis
Presson, Lola Iris
Preston, Alvin Fred
Price, Arthur Lowell
Price, Charles Bradlaw
Price, Melville Halsey
Price, Miles Oscar, S.B.
(Uní. of Chicago) 1914
Price, Raymond Lester
Primm, James Kelley
Primm, Pauline Elizabeth
Primm, Philip Timon
Primmer, George Henry

| LAS |  | Champaign |
| :---: | :---: | :---: |
| LAS | 64 | Champaign |
| HSLAS (SS) | 31 | Champaign |
| SS | 61 | Cerro Gordo |
| Agr | $33 \frac{1}{2}$ | Chicago |
| Agr | 172 | Green Valley |
| LAS |  | Mt. Vernon, Indianc |
| HSLAS | 65 | Sullivan |
| HSLAS | 49 | East Cleveland |
| ME | 39 | Chicago |
| LAS (SS) | 331 | McDonald, Kansas |
| LAS |  | Mayzuod |
| LAS |  | Mayurood |
| Agr | 109 | Argyle |
| Agr | 34 | Argyle |
| HSLAS |  | Assumption |
| CE | 39 | Chicago |
| EE |  | Chatham |
| Agr | 114 | Urbana |
| $C E$ | 94 | Genoa |
| $C E$ | 35 | Brooklyn, New York |
| SS |  | Morning Sun, Iowa |
| Com |  | Gifford |
| Com |  | Springfield |
| SS |  | Lexington |
| MSE | 64 | Fairfield, Iowa |
| ChE |  | Chicago |
| Com | 111 | Princeton |
| A | 1061 | Chicago |
| ${ }_{\mathrm{Com}}$ | 18 | Manstield |
| Com Mcd |  | Monticello |
| A | 101 | Gibson City |
| LAS | 109 | Chicago |
| A | 12 | Byron |
| LAS | 74 | Champaign |
| Ch | $68 \frac{1}{2}$ | Decrfield |
| HSLAS | 97 | Rochester, Indiana |
| HSLAS (SS) | 35 | Dunleith, West Virginia |
| Agr | 27 | Morton Grove |
| Agr |  | Morton Groze |
| Com | 99 | Decatur |
| $L$ L (SS) |  | Bellcrille |
| ChE (SS) | 132 | Chicago |
| CerE |  | LaGrange |
| CerE | 62 | LaGrange |
| HSLAS | 31 | Polo |
| $L$ |  | Ottawa |
| Com | 62 | Streator |
| SS | 8 | Stronghurst |
| EE | 57 | Selo Musina, Bulgaria |
| $S S$ | $7{ }^{7 \frac{1}{2}}$ | Milwaukee, Wisconsin |
| MnE | 74 | Gerlaw |
| $\mathrm{Agr}^{\circ}$ | 5 | De Land |
| Com | 68 | Mascontah |
| A |  | Elgin |
| Agr (SS) | $37 \frac{1}{2}$ | Urbana |
| A | 158 | Morrison |
| EE | 72 | Springfield |
| Agr (SS) | 55 | Chicago |
| Agr sp |  | Birmingham, Alabama |
| Com |  | Quincy |
| Com | $\begin{gathered} 68 \\ 1267 \end{gathered}$ | Decatur |
| Agr | 62 | Joliet |
| $L b$ (SS) | 43 | Hope, Arkansas |
| $L A S$ |  | Quincy |
| Com | 89 | Sheldon, Iowa |
| $\stackrel{M E}{H S L A S}$ |  | Oak Park |
| HSLAS Agr | 81 | Champaign |
| ${ }^{\text {Agr }}$ | 112 | Montfort, Wisconsin |
| ${ }^{\text {Agr }}$ Agr ${ }^{\text {a }}$ | 30 102 | Decatur |
| $\stackrel{A g r}{\text { Ch }}$ sp | 102 63 | Vienna <br> Chicago |
| Lb | 14 | Plymouth, Indiana |
| $E E$ | 26 | Rockford |
| LAS (SS) | 108 | Champaign |
| Mus | 24 | Champaign |
| ${ }_{S S}{ }^{\text {Agr }}$ | 101 | Champaign |
| SS | 8 | Sidney |

Prince, Ben James
Prince, William Jasper
Pritchard, Elliott Alfred
Proelss, Otto
Propst, Duane Willard
Prosser, Catherine Stewart
Prosser, John Aubrey
Protine, Fred Leon
Prucha, Martin John, Ph.D. (Cornell) 1913
Pruett, Eugene Francis
Pzzypyszny, Casimir
Pugh, Ada Roberta, A.B., 1915
Pulcipher, K DeWitt
Pulsipher, Irene Emma
Purcell, Bryant Franklin
Purcell, William Thomas
Purnell, William Frank
Pursell, James Roland
Putnam, Mary Heiskell
Quandt, Coramae
Quesenberry, Ruth Lucille
Questel, Denjamin Harrison
Quick, Beryl Wayne
Quick, Harry
Quiglcy, Laurence Joseph
Quinn, Florence Katherine
Quisno, Raymond Edward
Raab, Anita Emma
Raaberg, Ralph Skancke
Racheff, Ivan
Rackliffe, Thomas Thayer
Rafferty, John Joseph
Rafferty, Raymond Charles
Raffowitz, Frank
Rafinski, Clcment Joseph
Rabel, John Clifford
Rahn, Lester Addison
Rahn, Robert Charles
Raibourn, Claude
Raibourn, Paul Albert
Raines, Lester Courtney
Raithel, Kathrene Rose
Ramirez, William
Ramsay, Crawford John
Ramser, John Hubert
Randa, Charles Edward
Randall, Earl Everett
Randall, Frank John
Randall, Grace Louise
Randall, Oscar
Randolph, Cora Creagar
Randolph, Glenn Lake
Rang, Carl King, A.B., 1914
Rankin, Luro Jane
Rankin, Robert Edmund
Ranney, George Henry
Ranney, Joel Alden
Ranney, Maude Esteline
Ranney, Nathan Charles
Ranney, Willard Parminter
Ransford, Maurice Reuben
Rao, Dharwan Vijaya Lobja
Raphaelson, Sampson Milcs
Rapp, John Holly, A.B., 1915
Rasmussen, Harold Eijner
Ratcliff, Maude Hadley
Ratcliffe, Isaac LaGrange
Rathbun, Harry Rowland
Rathbun, Hubert Honens
Rathsack, Mary
Rawlings, Howard Charles
Rauch, George Clarence
Ray, Elva Artrice
Ray, Luke Cranston
Read, James Kempt
Read, William Gordon
Reagan, Maurice Edwin
Reber, John Alfred
Redding, Charlene Clara
Reding, Ralph Spears
Reece, Austin Newton
Reece, Robert Howell
Reed, Cecil Charles
Reed. Hazel Viola


Reed, Tohn Wesley
Reed, Leo Bracy
Reed, Maurice Johnson
Reed, Robert Wallace
Reeder, John Cormin
Reese, Leal Wiley
Reese, Lucile Nancy
Reese, Raymond Leslie
Reess, Stella Georgia
Reeves, Bert
Rehm, George Edward, Jr.
Rehnquist, Ernest Ferdinand
Reichelderfer, Harry
Reid, George Hoster
Reid, Harold Speer
Reid, Mildred
Reid, Stewart Franklin
Reinel, Bert Edward
Reinsch, Bernhard Paul
Reinwald, Frederick John
Reiter, Rutherford Graff
Remington, MacWilliams Daniel
Remley, Walter Brown
Renner, Enos Henry
Renning, Albert Gordon
Reno, Guy Benjamin, A.B., 1915
Rentchler, Marion David
Renwick, George W.
Replinger, John Edward
Reschetz, Ernest Mathers
Retherford, Miriam Browning
Retz, Catherine Mable
Reuling, Clarence Weiss
Reuter, Helen
ReVeal, Ivan Lindsey
Reynolds, Ora Edgar
Rhoads, Marie Corzine
Rhodes, Alice Louise
Rhodes, Carlyle Seeds
Rhodes, Golda May
Rhodes, Opal Terrissa
Rhue, Lena Cecelia
Rhue, Perry Marion
Rice, Katherine Grace
Rice, Nathan Lyman
Richards, Gladys Ersel
Richards, John Ott
Richards, Lenore, A.B., 1915
Richardson, Francis Edward
Richardson, Harvey Russell
Richart, Berta Estella
Richart, Blanche Belle
Richey, Friedel Chapin, B.S., 1914
Richie, Wilson Leaverton
Richman, James Herbert
Richmond, LeVoy Fred
Richmond, Noble Leslie
Richmond, Warren McLellan
Richter, Gertrude Katharine
Richter, Harry Allen
Ricker, Ethel
Ricketts, Hazel
Ricks, Juanita May
Rideout. George Rawleigh
Rider, Geo. L.
Rider, G. Wellington
Ridge, Frances Marion
Riegel, Bertha
Rigg, Granville LeRoy
Rigg, Joseph Harold
Riggins, Martha Frances
Riggs, Mildred Eleanor
Rike, Ronald Van Atta
Rinaker, Janet
Rinaker, John Irving
Ringeisen, Hazel Novella
Ripple, Ruth Anna
Rising, Blance Tosephine
Risley, Walter John, Jr.
Risser, Constance Katherine
Rissinger, Arthur Joe
Ritt, Walter William Henry
Ritter, John Gilman
Ritter, Walter Theobald
Ritts, Charles Laurence
Roach, Doris Eleanor

| L.AS |  | Eost St. Lous |
| :---: | :---: | :---: |
| Com | 23 | Eldorado |
| $M n E$ | 75 | Emerson |
| ${ }^{\text {Ag }}$ |  | Warsazu |
| SS | 388 | Pittsfield |
| $L$ ( ${ }^{\text {cer }}$ ) |  | Urbana |
| Agr (SS) | $51 \frac{1}{2}$ | Urbana |
| $A g r(S S)$ | 49 | Jonesboro, Arkansas |
| HSLAS | 8 | St. Louis, Missouri |
| Agr (SS) | 14 | Chicago |
| EE | 70 | Chicago |
| EE | 30 | Peoria |
| $A g r$ | 31 | Mt. Vernon |
| Agr | 36 | St. Paul, Minnesoto |
| HSLAS |  | Sullivan, Indiana |
| $\stackrel{C O m}{L A S}$ |  | Springfield |
| ${ }_{\text {L }}$ AS | 49 120 | Streator |
| ${ }_{\text {A }}{ }^{\text {E }}$ E | 120 | Marcatine, Lowa |
| SS |  | Pittsburgh, Pennsylvania |
| A | $60{ }^{2}$ | St. Louis, Missouri |
| Agr |  | Waynestown, Indiara |
| Agr (SS) | 25 | Urbana |
| Com sp | 15 | Highland Park |
| $L$ | 33 | Browning |
| Com |  | Mt. Vernon |
| ME | 108 | Chicago |
| AE |  | Chicago |
| EE | 72 | Staunton |
| IISLAS | 21 | Carthage, Indiana |
| HSLAS | 66 | Ottawg |
| Com | 59 | Morton |
| SS | 6 | Quincy |
| ChE | 26 | Hoopeston |
| LAS | 94 | Guthric |
| LAS | 29 | Champaign |
| LAS |  | Hargey |
| CE | 110 | Lovington |
| HSLAS |  | Urbana |
| HSLAS |  | Urbana |
| Com | 3 | Champaign |
| Com | 33 | Chanpaign |
| LAS | 54 | Philo |
| Agr |  | Philo |
| Mus |  | Champaign |
| ${ }^{\text {Agr }}$ |  | Silvis |
| LAS | 131 | Urbana |
| Agr | 27 | Chicago Heights |
| EE | 72 | Morristown, New York |
| HSLAS | 18 | Urbana |
| LAS | 130 | Chicago |
| SS | 74 | Georgetown |
| EE | 32 | Villa Grove |
| Com: |  | Taylorville |
| Com |  | Champaign |
| Agr | 69 | Geneseo |
| LAS | 311 | Davenport, Lowa |
| Com (SS) |  | Wilmette |
| ${ }_{\text {As }} s^{\text {P }}$ (SS) | 4 | Urbana |
| SS | 3 | Urbana |
| Com | 16 | Clinton |
| Com |  | Frecpart |
| SS | 61 | Hart, Michigan |
| EE (SS) |  | Elgin |
| LAS (SS) | 68 | Champaign |
| HSAgr | 12 | Galatia |
| $\mathrm{Agr}^{\text {r }}$ | 1023 | Golden Gate |
| Agr sp |  | Golden Gate |
| HSLAS | 443 | Atwood |
| ${ }^{\text {Agr }}$ |  | LeRoy |
| LAS | 85 | Carlinville |
| Agr | 31 | Springfield |
| LAS |  | Toledo, Ohio |
| LAS |  | Chicago. |
| $L A S$ sp |  | Champaign |
| Ch ${ }_{\text {HS }}$ |  | Decatur. |
| HSLAS |  | Champaign |
| Med |  | Mason City |
| $A$ | 29 | Crystal Lake |
| $A E$ | 78 | Chicago |
| REE | 47 | Chicago |
|  | 132 |  |
| LAS | 62 | Decotur |


| Roane, Theodore | $L_{S S}$ AS | 59 | Chicago Won Wisconsir |
| :---: | :---: | :---: | :---: |
| Roberts, C. J. | SS | 321 | Birnaan Wood, Wisconsin |
| Roberts, Elmer Clifford | AEm | 324 | Decatur |
| Roberts, Frances Ella | LAS |  | Thompsonville |
| Roberts, Harold Higbee | ME | 143 | White Hall |
| Roberts, Herbert | SS |  | Westville |
| Roberts, Jerome Gillespie | MnE (SS) | 55 | Chicago |
| Roberts, Malcolm Douglas | Agr | 63 | New York City |
| Roberts, Thomas Tenhook, Jr. | Agr sp | 3 | Decatur |
| Robertson, Arthur Beekman | Agr | 32 | Pctersburg |
| Robertson, Charles Venable | Agr | 66 | Carlinville |
| Robertson, Harris Morton | SS | 701 | Petersburg |
| Robertson, Hugh Schuyler | - CerE | 111 | Champaign |
| Robertson, Jane | SS |  | Champaign |
| Robertson, Miriam Selina | HSAgr | 67 | Champaign |
| Robinson, Albert William | ME | 108 | Oak Park |
| Robinson, Edith Alice | LAS |  | Goodfield |
| Robinson, Ethelyn Clyde | HSLAS | 34 | LaSalle |
| Robinson, Glenn Warren | Agr | 651 $\frac{1}{2}$ | Lincoln |
| Robinson, Harold Lynn | LAS |  | Urbana |
| Robinson, Henry Duncan | SS | 87 | Rockford |
| Robinson, Hugh Dean | LAS | 33 | Harvey |
| Robinson, John Lester | L | 62 | Mt. Vernon |
| Robinson, Matthew Rodgers | EE |  | Port Royal, Pennsylvania |
| Robinson, Millard Milton | Com |  | Maquokcta, Lowa |
| Robinson, Myra | HSLAS |  | Kansas |
| Robinson, Paul Gardner | Agr sp |  | Harvey |
| Robinson, Ruth Love | HSAgr | 94 | Edzuardsville |
| Robinson, Warren Isaac | Agr | 68 | LaSalle |
| Rockey, Paul Thomas | $A E$ | 6012 | Freeport |
| Rockhold, Frank Duncan | $E E$ |  | Wilmette |
| Rodgers, Perry Harrison | LAS | $40 \frac{1}{2}$ | Atwood |
| Rodriguez, Antonio | CE | 332 | Mata Sta. Clara, Cuba |
| Roe, Raymond | A | 32 | Chicago |
| Roesner, Hedwig Elizabeth | SS | 143 | Moline |
| Roessler, William Otto | Agr (SS) | 1121 | Shelbyville |
| Rogers, Elsie Marie | HSLAS | 69 | Havana |
| Rogers, Gardner Spencer | Agr | 98 | Evanston |
| Rogers, Harry Thomas | AE | 107 | Champaign |
| Rogers, Henry Sheldon | Agr | 69 | Marenga |
| Rogers, Minnie Oleta | SS | 612 | Champaign |
| Rogers, Russell David | $A E$ | 109 | Pekin |
| Rohlfing, Walter Louis | Agr | 100 | Groveland |
| Rohn, Fred Andrew | $A E$ | 103 | Chicago |
| Robrbough, Elsie Gwendolyne | LAS |  | Kinmundy |
| Rohrer, Frank Philip | LAS | 97 | Gilman |
| Rollins, Neta | LAS | 31 | Paxton |
| Romeiser, Alvin | Com | 28 | Belleville |
| Romero, Newman | LAS | 43 | Valparaiso, Chile |
| Romig, Jesse Arnold | EE | 33 | Champaign |
| Rompel, Ruth Edith | LAS | 30 | Champaign |
| Roney, George Andrew | ChE |  | Sullivan. |
| Roos, Edwin George | Com | 67 | St. Louis |
| Root, Kimball | SS | 1371 | Chicago |
| Rooth, James | CE | 20 | Joy |
| Roscoe, George Howard | Agr | 77 | Blue Island |
| Rose, Harold Boone | ME | 115 | Urbana. |
| Rosecrans, Crandall Zachariah | $M E$ |  | Champaign |
| Rosen, Bernard | Cons | 5 | Chicago |
| Rosenberg, Emannel | LAS |  | Decatur |
| Rosenberg, Frank | CerE | 113 | Chicago |
| Rosenberg, Herbert Bernard | Agr | 77 | Granite City |
| Rosenkrans, Dale DeForest | Agr |  | PawPaw |
| Ross, Anna Russell | LAS |  | Cayrolltan |
| Ross, Gertrude Duncan | SS | 22 | Philo |
| Ross, Harry Albert | Agr | 68 | Champaign |
| Ross, John McLinn | LAS | 56 | New Haven, Connecticut |
| Ross, Kenneth Dwight | Com | 107 | Grand Island, Nebraska |
| Ross, Nelda Glendora | HSAgr | 33 | Easton. |
| Ross, Stanley Parker |  | 21 | Champaign |
| Rost, Theodore August | LAS |  | Petersburg |
| Rotramel, Everett Roy | Agr |  | Benton |
| Rotrock, Howard Moore | $C E$ | 111 | Chicago |
| Rounds, Fred Grafton | A | 137 | St. Paul, Minnesota |
| Rourke, Ellen Mary | SS | 1307 | Springfield |
| Rowe, Charles Baer | A | 72 | Chicago |
| Rowe, Jack LeRoy | $E E$ | 66 | Chicago |
| Rowe, James | $M E$ | 75 | Three Rivers, Michigan |
| Rowland, Nestor Sherman | Agr |  | New Haven, Connecticut |
| Roy, Frank Winston | $E E$ |  | Danville |
| Rubright, Franklin LeRoy | Med | 32 | Emerson. |
| Ruedi, Charles Henry | Com (SS) | 59 | St. Louis, Mirsouri |
| Rueff, Joseph Alvin | ME | 107 | Oak Park |

Ruehe, Mabel Louise
Rugh, Lucien Edgar
Rumsey, Lois
Rumsey, Mary Hilliard
Rundle, Howard Edward
Rundle, w B
Rundles, Charles Morton
Rundles, William Lloyd
Rundquist, Elmer Theodore
Runneberg, Eiton Cromwell
Runyan, Clarence Edson
Ruppel, Arthur Daniel
Ruppel, Paul Earl
Rush,Paul White
Rush, Roy Leslie
Rusk, Bessie Frances
Russel, Stuart
Russell, Charles Clifton
Russell, Edwin Avery
Russell, Robert Marshel
Russett, Jasper Phillip
Russinoff, Evan Paul
Russo, William Joseph
Rust, Harold Jacob
Rust, Louis John
Rusy, Ben Franklin
Rutherford, Florence
Rutledge, Burtch Urwin
Ryan, Benjamin Harold
Ryan, Howard Robert
Ryan, Joseph Francis
Ryan, Walter Richard
Ryder, Bruce Ivan
Rydor, Earl
Sabin, Albert Robbins
Sachs. Ward Hanson, B.S.
Sackett, Fred Ward
Saelhof, Clarence Charles
Saffell, Gladys Deforest
Sager, Anna Ellen
Saidla, Glenn Ercol
Sailer, Frank
Salerno, Joan
Salisbury, Meta Emogene
Salladin, George Edward
Saltzman, Herbert Sollie
Samuels, Freda Irma
Samuels, Theresa Minna
Sandehn, Casper Wilhelm
Sanders, Frank Wilson
Sanderson, Arthur Kingston
Sandler, Edward Adolf
Sandrold, Conrad Elmer
Sanford, Harriet Adelaide
Sanford, Juanita Lorraine
Sanford, P C
Sanmann, Frank Paul
Sankey, Claude Wilson
Santee, Albert Merritt
Santiago, Alfreda Viola
Sarett, Lew R, A.B. (Beloit Coll.)
Sargent, Francelia Plumly
Sargent, Frank Akin
Sargent, Hubert Eugene
Satterfield, Helen Charlotte
Sattinger, Fanny Rutir
Saunders, Carl Jefferson
Savage, William Chauncey
Savage, William Elliott
Sawyer, Gertrude
Sawyer, Isaac Cornelius
Sawyer, Philetus Thomas
Saxton, Charles V'an Keuren
Saylor, Owen Webster
Scanlan, Chester Jerome
Schaede, Emma Adelina
Schaefer, Edgar Frederick
Schaefer, William Adolph
Schalck, Michael Andrew
Schalier, Gilbert Simon
Schaumberg, Edward Geerge Jr.
Schecht, Max
Schecter, Ralph Wendell
Scheer, Raymond Ancil
scheffer. Wilhelmenia
Schenck. Henry Gelbac?

| Mus | 128 |
| :---: | :---: |
| Agr | 15 |
| LAS | 341 |
| LAS (SS) | 941 |
| REE | 109 |
| Agr | 69 |
| LAS | 108 |
| Agr | 1211 |
| Agr | 33 |
| Agr | 71 |
| A | 92 |
| Agr |  |
| $M E$ |  |
| Med | 36 |
| L. 4 S | 991 |
| SS |  |
| $L A S$ |  |
| Agr |  |
| $\stackrel{C}{S S}$ | 37 |
| A | $95{ }^{3}$ |
| RME |  |
| Agr |  |
| Com |  |
| EE | 109 |
| $A g r$ | 741 |
| ${ }_{L}$ | 100 |
| Agr |  |
| EE |  |
| Agr sp |  |
| L.AS | 32 |
| Med |  |
| EE | 17 |
| Agr |  |
| Agr sp |  |
| LAS |  |
| Med |  |
| LAS (SS) | 87 |
| HSLAS | 67 |
| Agrsp |  |
| Agt |  |
| SS | 10 |
| HSLAS | 33 |
| Com | 35 83 |
| ${ }_{L} S_{\text {S }}$ | 83 92 |
| LAS | 31 |
| SS | $16 \frac{1}{2}$ |
| Agr |  |
| ME |  |
| LAS |  |
| Com | 43 |
| HSLAS | 97 |
| LAS | 673 |
| SS | $6 \frac{1}{2}$ |
| Agr |  |
| SS | 61 |
| LAS | 93 |
| $A E$ (SS) | 721 |
| ${ }^{L}$ | 42 |
| Com | 32 |
| Agr |  |
| ${ }_{L}^{\text {CE }}$ AS |  |
| ${ }_{S S}^{\text {LAS }}$ |  |
| SS | 7 |
| Com | 11 |
| Agr | 72 |
| Med | $91 \frac{1}{2}$ |
| Agr | 33 |
| Ch |  |
| Agr | 33 |
| ${ }_{S}{ }^{\text {S }}$ S | 59 |
| ${ }_{\text {SE }}$ | 5 |
| Mus sp |  |
| LAS | 104 |
| Com | 16 |
| Agr | 94 |
| ME | 108 |
| 4 | 83 |
| LAS | 801 |
| $L A S$ (SS) | $99 \frac{1}{2}$ |
| ${ }_{\text {LSAS }}$ | 32 |
| Com |  |

Urbana
Arcola
Mattoon
Mattoon
Iron Mountain, Michigan
Clintons
Huntertown, Indiana
Huntertown, Indiana
Harvey
Crosby, Texas
Eugene, Oregon
Lynn, Massachusetts
Beardstown
Pittsfield
Mesa, Idaho
Arcola
Jacksonville
Wheaton
Buffalo, New York
Jeffersonville
Ccdar Rapids, Iowa
Bulgaria
Chicago
Pekin
Pekin
Chicago
Newman
Chatsworth
East Moline
Elgin
Pcoria
Alton
Bradford
Springtield
Chicago
Towanda
Danville
Chicago
Urbana
Bclvidere
Crawfordsville, Indiana
Chicago
Soa Paulo, Brazil
Urbana
Milford, Nebraska
Chicago
Chicago
Chicago
Rockford
Cincinnati, Ohio
LaGrange
Cairo
Moorhead, Iowa
Danville
Lebanon
Shelby, Michigan
Havana
Neze Castle, Pennsulvania
Pasadena, California
Philippines
Urbana
Indianapolis, Indiana
Ferris
Newport, New Hampshire
Chicago
Indianapolis, Indiana
Roswell, New Mexico
Frankfort, Michigan
Bellerille
Norborne, Missouri
Springficld
Springficld
Pucblo, Colorado
Johnston, Pennsylvania
Bloonington
Champaign
Quincy
Chicago
Butlicr, Kentucky
Mendota
St. Louis, Missouri
Brooklyn, New York
Danville
Bethany
Jamestosurn, New York

Schenck, Ralph Edwin
Schenck, Vernon Gates
Schernekan, William John
Schickedanz, Louis Herman
Schiesswohl, Ralph Louis
Schiffin, Arthur Krissler
Schindler, Samuel
Schlacks, Henry Valentine
Schlader, Edward Holmes
Schlader, Henry Mathias
Schleifer, Ferdinand John
Schlemm, Robert Max
Schloss, Philip
Schlueter, Waldo Lauff
Schmeltzer, Chauncey Brockway
Schmidt, Clyde Clarence
Schmidt, Earl Cochran
Schmidt, Henry Galen
Schmidt, Karl William
Schmitt, Jay Stelbrink
Schneider, Arthur Charles
Schneider, Delmont Joseph
Schneider, Herbert
Schneider, Nora Wilhelmine
Schneider, William Henry
Schnellbacher, Jacob Paul
Schoch, Arthur John
Schoembs, Frank Alvin
Schoene, Herbert Frank
Schoessel, Waldo Edward
Scholl, Raymond Stanley
Schori, Margaret Opal
Schreiber, Edwin Henry
Schreiber, Louis Henry
Schreiber, Nathan
Schreiner, Harold Cordes
Schreiner, Warren William
Schriner, Emma Ellen
Schroeder, Arnold Henry
Schroeder, Robert Henry
Schroeppel, Harold Henry
Schroyer, Malcolm Edward
Schuck, Arthur Frederick
Schueler, Herbert
${ }^{*}$ Schuette, Otto Theodore
Schuler, Dement
Schuler, Don Buel
Schultz, Clarence William
Schultz, Louis William
Schulz, Ernest Rudolph
Schulz, Frank
Schulz, John A
Schumacher, Dixie Howard
Schumacher, Howard James
Schutte, William George
Schwagmeyer, Emil Henry
Schweitzer, Benjamin Cecil
Schwing, Roy Rene
Scott, Esther Selb
Scott, Ethel Leota
Scott, George Eugene
Scott, Gerald Russell
Scott, Gladys Russell
Scott, Lincoln Bain
Scott, Ralph A
Scott, Robert Ashmore
Scott, Roy Sunderland
Scott, Shirley Edward
Scott, Sidney Glenn
Scoville, John Allen
Scruby, Mildred Emma
Scupham, Edward Jefferson
Search, Geneva Matilda
Seale, Joseph Pearle
Seavey, Harry Richmond
Seay, Paul Hendrix
Secord, Arthur Wellesley
Seeger, Hallie Josephine
Seehausen, Paul
Seely, Bessie Louise
Segur, John Bartlett
Seibert, Kenneth Seward
Seidner, Floyd

| SS | 76 | Urbana |
| :---: | :---: | :---: |
| Com |  | Jamestown, New York |
| CerE | 35 | West Salem |
| ME | 111 | Pontiac |
| Com | 111 | Pontiac |
| ME | 36 | Chicago |
| SS | 5 | New York City |
| EE | 16 | Chicago |
| REE (SS) | 109 | Oak Park |
| ChE | 9 | Oak Park |
| Agr | 68 | Nashville |
| ME | 55 | Chicago |
| Agr (SS) | 32 | Terre Haute |
| Com | $87 \frac{1}{2}$ | East St. Louis |
| ${ }_{\text {Cer }}$ | 19 | Manteno |
| ${ }_{\text {Ag }}$ | 1 | Fort Missoula, Montana |
| SS |  | Belleville |
| $A E$ | 1331 | Kansas City, Missouri |
| LAS | 26 | Peoria |
| ${ }_{M E}$ | 84 | Galena |
| $M E$ |  | St. Louis, Missouri |
| Med | 22 | Chicago |
| LAS | 22 | Springficld |
| Com |  | Peoria |
| EE | 57 | Tower Hill |
| $L^{L}$ |  | Cairo |
| $A E$ | 63 | Chicago |
| Agr | 44 | Rock Island |
| ${ }^{\text {A }}{ }^{\text {gr }}$ | 97 | Crafton, Pennsyivania |
| ${ }_{S}^{S S}$ | 151 | Elmwood |
| Agr | $33^{2}$ | Chicago |
| LAS | 54 | Chicago |
| $E E$ | 54 | River Forest |
| ${ }^{\text {Agr }}$ |  | River Forest |
| SAS | 25 | Peoria |
| Med |  | Nashville |
| EE | 72 | Mt. Carroll |
| LAS | 17 | Pontiac |
| $\cdots \mathrm{ME}$ |  | Washington, Indiana |
| ${ }_{\text {M }}^{\text {MEr }}$ (SS) | 69 | LaSalle |
| ${ }_{\text {Com }}^{\text {Agr }}$ (SS) | 1251 | Chicago |
| A | 182 | Wichita, Kansas |
| EE |  | Harvard |
| Med |  | Oak Park |
| Agr | 115 ${ }^{\frac{1}{2}}$ | Russia |
| Com | 32 | Elmwood |
| Ch | 66 | Elmwood |
| HSLAS | 67 | Rockport, Indiana |
| Med |  | Highland Park |
| ME | 101 | Marseilles |
| Com |  | Quincy |
| Com | 32 | Mt. Carmel |
| ${ }_{L}^{\text {LAS }}$ |  | Peoria |
| SS | 61 | Danville, Indiana |
| $A E$ | 27 | Chicago |
| ${ }^{\text {Agr }}$ | 693 | Chicago |
| HSLAS |  | Xenia, Ohio |
| $\mathrm{Agr}^{\text {( }}$ SS ) | 107 | Bostor, Massachusetts |
| Agr | 96 | Rock Falls |
| ${ }^{\text {Agr }}$ Ag | 91 | Paris ${ }^{\text {Roarfish }}$ South |
| Agrs? |  | Spearfish, South Dakota |
| Som | 130 | Anderson, Indiana |
| CE | 39 | Pcoria |
| LAS |  | Urbana |
| ${ }^{\text {Agr }}$ | $29 \frac{1}{2}$ | Hamezwood |
| $\stackrel{H S L A S}{S S}$ |  | Onarga Fairnount, Indiana |
| EE | 35 | Momence |
| Com | 713 | Scottville, Kentucky |
| ${ }_{\text {SS }}$ | 8 | Greenville |
| ${ }_{\text {S }} S^{\text {S }}$ (SS |  | Beardstown |
| LAS (SS) | $6 \frac{1}{2}$ | Chebanse |
| HSAgr |  | Joliet <br> Watseka |
| A |  | Keudallille, Indiana |
| $A E$ | 31 | Elkhart, Indiuna |

Seifert, Herbert Frank
Seifried, Arthur Gcorge
Seiler, Erna
Seiler, Herman Seiler
Seiple, Sara Tyson
Sellars, William Heine
Sellner, Edna
Selzer, L.ouis Jacob
Semple, Arthur Truman
Senbold, Heinrich John
Sense, Mattie Alice
Senseman, Harold Leonard
Severance, Lyle Elwood
Seward, George Ralph
Sexauer, IEmilie
Sexauer, James Monroe
Sexauer, Mae Magdalen
Scymour, Arthur Romeyn, Ph.D.
(Unia. of Wisconsin) 1907
Seyster, Lois Ferne
Shaddock, Rolla Edward
Shade, Claude Cloide
Shaffer, Randolph Clinton
Shaffer, Rolla Fleming
Shaffer, Susan Kurzenkuabe
Shaffer, Wilhelmine
Shapiro, Jacob
Shapland, Fern Elizabeth Page
Shapley, Ralph P
Sharer, Donald David
Sharp, Bertha Lee
Sharp, Etliel Ruth
Sharp, James C
Shaver, Elizabeth Fritzalen
Shaw, Charlotte Joy
Slaw, Delia
Shaw, Frederick Wood
Shaw, Hallic
Shaw, Mary Louise
Shaw, Wilfred
Shaw, William Henry
Shawhan, Mercy Nadine
Shawl, Ray Iris
Shay, Mary Lucille
Shea, Earl Clifford
Sheaff, Robert Phineas
Sheasby, Victor
Shedden, Forest Robert
Shedden, James William
Sheeks, Paul Preston
Sheets, Ancel J
Sheets, Haven McKendree
Sheets, A Vernon
Sheffer, William Heber
Shelby, Edwin It
Shelden, Walter William
Sheldon, Beulah Mulford
Sheldon, Henry Kellogg
Sheldon, Nelson Edward
Shellabarger, William Lincoln
Shelley, Earl Frank
Shellhorn, Boyd Stanley
Shelton, Wilma Lov, A.B., 1914
Sheppard, Charles Howard
Sheridan, Mary Beall
Sherman, Caroline Elizabeth
Sherman, Leta Elmina
Sherman, Ruth Miears
Sherrick, John Chauncey
Shewmon, Joc Allen
Shields, John Erwin
Shilling, Franklin William
Shimer, Earl Lester
Shing, Chi Ting
Shipley, Paul Donald
Shively, Jean
Shlandernan, Harry Ricker
Shockley, Ruth
Shoemaker, James Wright
Shoemaker, Richard William
Shonkwiler, Francis Lucian
Shonle, Horace Abbott
Shott, Rutli Elma
Shriver, IIelen Elizabeth

| $L A S$ | 90 |
| :--- | ---: |
| $A g r$ | 110 |
| $L A S$ | 24 |
| $A g r$ |  |
| $S S$ |  |
| $A g r$ | $(S S)$ |
| $C h$ | 110 |
| $A$ | 71 |
| $A g r$ | 37 |
| $A g r$ | 997 |
| $H S A g r$ | 23 |
| $A E$ | 74 |
| $A g r$ | 61 |
| $M e d$ | 90 |
| $S S$ |  |
| $A g r$ | 31 |
| $L A S$ | 94 |

Mus sp
LAS
Agr
Agr
Agr
${ }_{\text {HSAgr }}$
LAS
HSLAS
Agr
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Mus sp
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HSLAS
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HSAgr sp
HSLAS
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HSLAS
Agr
LAS
$\mathrm{Agr}^{2}$
LAS
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Agr
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$C E$
Lb
CE
HSLAS
LAS

## SS

Ag
$\stackrel{A g r}{\mathrm{Ag}^{2}}$
$\stackrel{\text { L.On }}{ }$
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Agr
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Agr
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Ch (SS)
HSAgr (SS)
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1091
71

Thiensuille, Wisconsin
Chicago
Woodstock
Urbana
Larned, Kansas
Champaign
Quincy
Evansville, Indiana
Riverton
Huntingburg, Indiana
Watseka
Monmouth
Lalising, Michigan
Mason City
Detroit, Michigar
Belvidere
Belvidere
Urbana
Champaign
Macoat
Montpelier, Indiana
Plymouth
Jeffersonville
Champaign
Champaign
Chicago
Saunemin
Rockford
Decatur
Urbana
Urbana
Champaign
Gibson City
Urbana
Rockport
Chicago
Rockport
Harrisburg
Marshall
6 Marion, Indiana
Decatur
Peoria
Decatar
Lead, South Dakota
Holcomb
Chicago
Elgin
Chicago
LeMars, Iowa
Lawrencerille
Georgetown
Frecport
Auburn, Indiana
Nezu Orleans, Lauisiana
Winnebago
Chicago
Shartsburg
Rocliford
Decatir
Mt. Vernon
Mt. Carmal
Terre Haute
Edwardsville
Sullivan
Vienna, Virginia
Casey
Urbana
Monmouth
Oak Park
Lewistown
Decalur
Palestine
China
Petersburg
Champaign
Pasadena, California
Peoria
Charleston
Murphysboro
Monticello

| Shroyer, David Mirven | Agr | 27 | Urbana |
| :---: | :---: | :---: | :---: |
| Shryock, Lyle William | Agr |  | Canton |
| Shup, Laurence Edgar | LAS | 34 | Newton |
| Shuping, Dan | $C E$ |  | Hillsboro |
| Shy, Frank Spain | Com | 34 | Olney |
| Siegfried, Edward Olaf | $A E$ | 1041 | Chicago |
| Siegmund, Humphreys | EE | 81 | St. Louis, Missouri |
| Siegrist, Damon Carl | Agr |  | San Jose |
| Siemens, Anna Blanchard | LAS | 31 | Kansas City, Missouri |
| Siemons, Webb Mellin |  | 99 | St. Joseph, Missouri |
| Sigfridson, Ebba Beatrice | HSAgr |  | Geneva |
| Signor, Nellie Marie, A.B., 1912 |  | 44 | Urbana |
| Silberman, Oscar Emil | $C E$ | 107 | Homezuood |
| Silver, Harold Austin | Agr |  | Urbana |
| Silver, Hazel Marguerite | HSAgr |  | Philo |
| Silver, Milton Gans | LAS | 67 | Champaign |
| Silverman, Isadore | Agr | 48 | Chicago |
| Silverman, Michael | Med |  | Cleveland, Ohio |
| Simmons, Elwyn Leroy | $A E$ |  | Oak Park |
| Simmons, Haskell George | $E E$ |  | Avon |
| Simmons, Sidney Britain | Agr | 10 | Fayetteszille, North Carolina |
| Simmons, Theodore Switzer | Agr | 99 | St. Charles |
| Simms, William Henry, J r. | Agr | 1151 | Gibson City |
| Simons, Rayna DeCosta | LAS | 683 | Chicago |
| Simpson, Earl Bruce |  | 28 | Eldorado |
| Simpson, Irene Elizabeth | LAS |  | Urbana |
| Simpson, John Milton | CE | 53 | Terre Haute, Indiana |
| Simpson, Laurance Packer | LAS | 12 | Onawa, Iowa |
| Simpson, Luther Franklin | ME | 75 | Мошеаqиа |
| Simpson, Mary Alice | Agr | 1033 | Chicago |
| Simpson, Nelle Lucille | HSAgr | 73 | Macomb |
| Simpson, Sebastian Solon | LAS | 263 | Pana. |
| Simpson, Thomas Moore | Agr | 60 | Alexis |
| Simpson, William George | LAS | 35 | Dundee |
| Sims, Delbert Edward | LAS | 43 | Newton |
| Sims, Jules Verne | LAS | 78 | Indianapolis, Indiana |
| Sinclair, Ovid Eugene | $E E$ | 653 | Mazon |
| Singer, Aaron Ernest | LAS |  | Chicago |
| Singh, Charn Jit | $E E$ | 86 | Punjab, India |
| Singleton, James Hubert | SS | 38 | Buckley |
| Sipe, Raymond Erwin | Agr | 34 | Rochelle |
| Sippell, Beth Ester | LAS | 51 | Tampico |
| Sisson, Earl | Agr | 291 | Factoryville, Pennsylvania |
| Skaer, Edwin W | SS | 117 | Marissa |
| Skaggs, Allen Orrin | $L$ | 30 | Shipman |
| Skelly, Ernest James | Com |  | Davenport, Iowa |
| Skelton, Charles Leonard | Agr (SS) | 1301 | Urbana |
| Skelton, Maurice Bradford | LAS |  | Fairfield |
| Skelton, Winfred George | LAS |  | Fairfield |
| Skinner, Bertram Eugene | Agr |  | Chicago |
| Skinner, Marion Langworthy |  |  | Princeton |
| Skinner, Melvin Benjamin | REE |  | Salem |
| Slack, Herbert Lee | CE | 105 | Chicago |
| Slack, William Silas | $E E$ | 34 | Salem |
| Slade, Katherine Claire | LAS | 29 | Rockford |
| Sladek, George Edward | CerE | 72 | Chicago |
| Sladek, Robert Bohumie | Agr | 34 | Cicero |
| Slaght, Evert Leroy | $A E$ |  | Chicago Heights |
| Slater, Frank Clifton, A.B., 1914 |  | 66 | Cherry Valley |
| Sleph, Irving Edward | LAS |  | Chicago |
| Sloan, Amelia Marie | HSAgr | 65 | Champaign |
| Sloan, Deena Agnes | HSLAS |  | Urbana |
| Sloan, Madelene Rebina | HSAgr |  | Urbana |
| Sloan, William Fin!ay | Agr (SS) | 1013 | Belfast, Ireland |
| Slocum, Russell Wade | Agr |  | Chicago |
| Small, Dee | Agr |  | Galatia |
| Smallwood, J P | Com | 64 | Decatur |
| Smart, Ada Almira | LAS |  | Hinsdale |
| Smart, Alfred | MSE | 56 | Chicago |
| Smart, Chauncey Harrison | Agr (SS) | 63 | Hinsdale |
| Smart, Ethelyn Marion | LAS |  | Hinsdale |
| Smart, Nellie Mav | LAS sp |  | Hinsdale |
| Smetana, Robert Joseph | $A E$ |  | Chicago |
| Smidl, Edward | $A E$ | 80 | Chicago |
| Smiley, Arval Marion | Agr |  | Tab, Indiana |
| Smiley, Earl James | $C E$ (SS) |  | Elgin |
| Smiley, Lionel David | EE (SS) | 105 | Woodstock |
| Smith, Bryan Arthur | Med | 27 | Sullivan. |
| Smith, Arthur Frederick | SS | $6^{6 \frac{1}{2}}$ | Ford City, Missouri |
| Smith, Clarles Eugene | CE (SS) | 126 | Chicago Michian |
| Smith, Clara Mabel | LAS (SS) | 83 | St. Clair, Michigan |
| Smith, Clarence Walter Smith, Cleone Frances | LAS | 62 | Champaign |
| Smith, Cleone Frances | LAS |  | Champaign |


| Smith, Cloyde Moffatt | MSE |  | Champaign |
| :---: | :---: | :---: | :---: |
| Smith, David Mervin | Agr |  | Urbana |
| Smith, Earl Joseph | SS | 7 | Canton |
| Smith, Fern Gladys | LAS |  | Mayzood |
| Smith, Forest Henry | EE | 36 | Libertyville |
| Smith, F Raymond | SS |  | Grand Ledge, Michigan |
| Smith, George Edward | Agr |  | Mahomet |
| Smith, George Crammer | A |  | Peoria |
| Smith, George Leslie | Agr | 64 | Geneseo |
| Smith, Gladys Louise | HSLAS | 85 | Rochelle |
| Smith, Glenn Calvin | Agr (SS) | 1063 | Urbana |
| Smith, Glenn Collins | Agr | 70 | Greenfield |
| Smith, Hawley Lester | LAS (SS) | 453 | Clifton |
| Smith, Helen May | LAS | 60 | Rock Falls |
| Smith, Herbert Edgar | LAS (SS) | 114 | Cobourg, Ontario |
| Smith, Hubert Argo | ${ }_{\text {A }}$ | 102 | Urbana |
| Smith, Irene Fern | SS | 133 | Red Bud |
| Smith, Isaac Wesley Kclly | Agr |  | Carmi |
| Smith, Jaeob Allen | CerE | 2913 | Altoona, Pennsylvania |
| Smith, Tennie Marie | SS | 9 | Benton |
| Smith, Tesse Parker | CerE | 22 | Depue |
| Smith, John Wesley | ME | 74 | Geneseo. |
| Smith, Julian Francis | Ch | 111 | Champaign |
| Smith, Kenneth Hamilton | LAS sp (SS) | 17 | Chicago |
| Smith, Leonidas Logan |  | 32 | Effingham |
| Smith, Lois Loella | Mus |  | Urbana. |
| Smith, Lucius Skinner, Jr. | Com |  | DuQuoin |
| Sinith, Margaret Helen | HSLAS |  | Elmwood |
| Smith, Marian Kathryn | LAS |  | Monticcllo |
| Smith, Marshall Eugene | SS | 151 | Greenville |
| Smith, Orion Otis | Comsp |  | Oakzuood |
| Smith, Orrin Richard | LAS |  | Plainfield |
| Smith, Ralph Lindon | Agr | 34 | Bellfozer |
| Smith, Raymond Charles | Agr | 34 | Amboy |
| Smith, Robert C | SS |  | Pekin |
| Smith, Ronald Emerson | EE |  | Owenszille, Indiana |
| Smith, Russell Mayes | Com |  | Chicago |
| Smith, Theodore Hammond | Med | 27 | Godfrey |
| Smith, Valda Eveline | HSL.AS | 31 | Geneseo. |
| Smith, Wilhelma Zoe | LAS | 103 | Champaign |
| Smithers, Perry Lafayette | Com |  | Wilmette |
| Smohl, Barbara Belle | LAS (SS) | 72 | Vandalia |
| Smoot, William Everett | Agr . | 62 | Greenview |
| Snell, Clarence Eastlake | Com | 31 | Oak Park |
| Snell, Harry Stirling | ChE | 32 | Oak Park |
| Snider, George Wilson | Agr | 26 | Broken Arrow, Oklahoma |
| Snoddy, Raymond Leffel | LAS | 112 | Danville |
| Snock, Earl Villiam | Agr | 101 | Ottaza |
| Snow, Ruth Lucille | Miss |  | Elgin |
| Snyder, Daniel Victor | $C E$ |  | Chicago |
| Snyder, George David | CerE | 29 | Altoona, Pennsyluania |
| Snyder, Glenn | $A g r$ | 983 | Billett |
| Sodaro, Joseph Clarence | Mcd |  | Aurora |
| Soenksen, Paul William | Com | 35 | Haruey |
| Somers, Aloysius Joseph | Agr | 28 | Kankakee |
| Somers, Francis Patrick | ChE (SS) | 341 $\frac{1}{2}$ | Kankakec |
| Somers, Russell Ivan | LAS |  | St. Joseph |
| Sommers, Ralph Mitehell | $\mathrm{COMm}^{\text {cos }}$ |  | Chicago |
| Sorenson, Cari Severn | SS |  | Michigan |
| Sortwell, Harold Haynes | CerE | 37 | Indianapolis, Indiana |
| Soule, Edgar C | SS |  | San Antonio, Texas |
| South, Augustus William | LAS | $10 \frac{3}{3}$ | Hamımond |
| Southard, Edna Margaret | SS | 87 | Edwardsville |
| Southromb, Leslie Spencer | Com |  | Morris |
| deSouza, Jacy Tolentino | EE |  | Brazil |
| Sowers, Gordon Alfered | Agr | 54 | Kingran, Indiana |
| Spainhour, Alma Marie | LAS |  | Clinton |
| Spangenlurg. Vernon Floyd | A |  | White Hall |
| Spangler, Charles Foskey | Com | 55 | Amboy |
| Sparks, Keith Emanuel | Ch |  | Connersville. Indiana |
| Sparling, Clarence Eugene | $A E$ | 27 | Osgood, Indiana |
| Spates, Alfred | ME |  | Taylorville |
| Spates, Gladys Mary | HSLAS |  | Taylorville |
| Spatny, Zdenka | LAS |  | Chicago |
| Spear, Helen Eudora | HSLAS | 28 | Rockford |
| Speer, Dallas Moss | $A E$ |  | Chicago |
| Speisman, Irvin Gabriel | Agr |  | Chicago |
| Spelce, John Edward | LAS |  | Sycamore |
| Spencer, Blanche Beebe | Com sp |  | Vondalia |
| Spencer, Synthia Eugenia | LAS | 53 | Champaign |
| Spencer, Frnestine Ellen | LAS |  | River Forest |
| Spencer, John Ralph | Com |  | Geneseo |
| Spencer, Nora Virginia | Mus sp |  | Homer |
| Spencer, Ralph William | Agr | 17 | Lazerenceville |
| Spencer, Stanley Fred | Com Com |  | Urbana |
| Sperry, Ralph Edward | Com | 35 | Macomb |

Spiegler, Loui
Spink, Phil Marion
Spitz, Milton Joseph
Sprague, George Chester
Sprague, Norman Ellsworth
Springer, George Dusant
Springer, Paul Bliss
Sproull, Raymond Arthur
Squier, George Kasson
Sputh, Dr. Carl Brosin
Stafford, Edward Einerson
Stahl, Walter Andrew
Stall, Willis Preston
Stallings, Eugene Michener
Stallings, Samuel Joseph
Stamas, Theodore Albert
Stamp, Fred Pfarr
Stangel, Adelaide Josephine
Stangel, Victor
Stanley, Deane Field
Stanley, Ethel Marguerite, A.B.
(Fairmount Coll.) 1913
Stanley, Leon
Stanley, Walter
Stansfield, James Gillispie
Staples, Alexander Dale
Staples, John Forest
Stark, John Wayne
Starkel, Cbarles Leslie
Starkey, Shirley Leland
Starner, Verner
Starr, Stephen William
Starrett, Robert George
States, Mary Louise
Stead, Charles Baldwin
Stead, Rowland Wilson
Steers, William Beeson
Stefanoff, Nenko
Steigle, Carlton Fred
Stein, Bertha Marie
Steinhoff, Frederick Louis
Steinmayer, Alwin Gustave
Steinmayer, Reinhard A J
Stejskal, Marie Antoinette
Stephens, Fay
Stephens, Gertrude Ethel
Stephens, Haze! Margaret
Stephens, Thomas Earl
Stephens, William
Stephenson, Alma Grace
Stephenson, Marvin Schutte
Sternaman, Edward Carl
Stetson, George Hopkins
Steuart, Edward Paul
Stevens, Adeline Chapman
Stevens, Earl Grover
Stevens, Edith Hasseltine
Stevens, Helen Gordon
Stevens, Tohn Grjer
Stevens, Joseph Hammond
Stevens, Marie Felicia
Stevens, Richard William
Stevens, Robert Gardincr
Stevens, Vernon Thompson, A.B., 1915
Stevens, Wayne McKenzie
Stevens, Wentworth Holt
Stevenson, Ailsie Miller
Stevenson, Dorothy
Stevenson, Elmira Comfort
Stevenson, Tred Luither
Stewart, Bessie Jean, М.B.
(Indiana Univ.) 1911
Stewart, Carl Russell
Stewart, Frank
Stewart, Frank Samuel
Stewart, John Wilson
Stice, Kenneth Seymour
Stice, Oston Angus
Stidham, Melissa Geneva
Stiegemeyer, Clara Marie
Stienecker, John Alvin
Stiles, LeRoy Christie
Stillwell, Gennieve Maud
Stine, Cleo Edwin

| ChE |  | Chicago |
| :---: | :---: | :---: |
| Com | 331 | Chicago |
| Ch | 15 | Chicago |
| Agr | 5 | Lockport |
| $C E$ | 39 | Piqua, Ohio |
| Agr | 116 | Evarts, Vermont |
| SS | $6 \frac{1}{2}$ | Grand Island, Nebraska |
| LAS | 64 | Mazon |
| ME | 97 | Rockford |
| SS |  | LaCrosse, Wisconsin |
| L.AS |  | Alton |
| ME | 116 | Chicago |
| Agr | 65 | Champaign |
| ChE |  | Danville |
| Com |  | Amarillo, Texas |
| ${ }_{\text {LAS }}$ | 391 | LaGrange |
| LAS |  | Wheeling, West Virginia Champaign |
| LAS | 41 | Champaign |
| Med |  | Urbana |
| $L b$ |  | Clearwater, Kansas |
| Agr (SS) | 65 | Downers Grove |
| Com | 59 | Anderson, Indiana |
| Agr |  | Lawrenceville |
| RCE | 36 | South Bend, Indiana |
| Agr | 33 | South Bend, Indiana |
| Agr |  | Nebo |
| $L_{\text {L }}$ AS | 29 | Belleville West Virgimia |
| ${ }_{\text {Ch }}{ }_{\text {chr }}$ | 100 | Rounswood, West Virginia Carlisle |
| LAS |  | Champaign |
| Com |  | Sheldon, Iowa |
| $L A S$ | 29 | Urbana. |
| $C E$ |  | Griggssille |
| $C E$ |  | Galua |
| L,AS |  | Metropolis |
| RME |  | Kotel, Bulgaria |
| Agr |  | Plainizeld |
| HSLAS | 34 | Blue Island |
| CerE | 72 | Chicago |
| EE | 107 | LaSalle |
| Cer ${ }^{\text {e }}$ | 100 | LaSalle |
| LAS |  | Chicago |
| ${ }_{\text {Agr }}$ |  | Springfield, Missouri |
| SS | 1003 | Murphysboro |
| HSAgr |  | Champaign |
| Agr | 65 | Champaign |
| EE | 30 | Champaign |
| LAS |  | Chicago |
| A | 69 | Green Bay, Wisconsin |
| ME |  | Springficld |
| Agr |  | Granville |
| LAS | 12 | Harvey |
| LAS |  | Marictta, Ohio |
| SS | 8 | Mackinaw |
| HSAgr | 103 | St. Louis, Missouri |
| LAS | 65 | St. Louls, Missouri |
| ME |  | Chicago |
| Com |  | Chicago |
| HSLAS | 33 | St. Louis, Missouri |
| Agr | 109 | Corpus Christi, Texas |
| $E E$ | 33 | Chicago |
| $L$ |  | Corpus Christi, Texas |
| Agr | 56 | Taylorville |
| Agr | 110 ${ }^{\frac{1}{2}}$ | Urbana |
| HSAgr | 66 | Peoria |
| HSAgr | 65 | Gilman |
| HSAgr |  | Strcator |
| A | 2612 | Galesburg |
| $L b$ |  | Bloomington |
| Agr | 107 | Monmouth |
| Med | 61 | Champaign |
| Agr | 116 | Monmouth |
| SS |  | Sioux Falls, South Dakota |
| CerE | 105 | Urbana |
| Agr |  | Waverly |
| ${ }_{L A G S}$ |  | Mahomet Missouri |
| LAS |  | St. Louis, Missouri |
| Com | $66^{61}$ | Chicago Oak Park |
| HSAgr (SS) | $37 \frac{1}{3}$ | Urbana |
| Agr |  | Stronghurst |

Stinson, Rita
Stipp, Daniel Webster Voorhees
Stiritz, Benjamin Andrew
Stirton, Janues Crear
Stockdale, Thonas Elmer
Stockenberg, Ruben
Stocker, Harry Frederick
Stocker, Lawrence Orville, B.S., 1912
Stockton, Dean Bales
Stockton, Washington Withrow
Stoddard, George Wellington
Stoll, Frank Henry
Stoll, Laura Louise
Stoltey, Ethel Lynette
Stone, Albert Getten
Stone, Charles Arthur
Stone, Charles Holmes,M.A.
(Univ. of Georgia) 1913
Stone, George William
Stone, Pearl Anjanct, B.Pe.
(State Normal, Springfield, Mo.) 1908
Stone, William Samuel
Stoner, Loren Norton
Stoppel, Fred Herbert
Storer, Esther Susie
Storer, Walter Henry
Storm, Mabel Fern
Story, Jessie Gertrude
Stouffer, Ernest Lawrence
Stoutenborough, George
Stoutzenberg, Florence Thomas
Straight, Merton Taunor
Straight, Ruth
Strathern, N Grant
Stratton, Beraice Elizabeth
Stratton, Grace Bruce
Straub, Walter Fred
Strauch, Donald Jay
Strauch, Donald Williom
Strawn, Paul
Strawn, Robert Emerson
Streed, Felix Lewis
Stremmel, George Stephens
Stretch, Lemma
Strickland, Ray Malcolm
Stringer, Joseph Kenneth
Stroheker, Frank Sewall, A.B., 1915
Strong, James Kibbe
Strong, Jesse Woodford
Strong, Truman Jefierson
Strong, William Augustus, A.B., 1914
trubinger, Joseph Roy
Struever, Carl Chester
Stubenrauch, Edgar Albert
Stuhr, William
Stumpf, Elmer Henry
Sturm, Clark Henry
Sukumlyn, Stephen Williams
Sulger, Alden Harwood
Sullivan, Edna Frances
Sullins, Thomas Byrns
Summitt, James Levi
Sun, Eu-lin
Sundell, Roy Dehm
Sunderiand, Glenn Henderson
Sutcliffe, Constance
Sutcliffe, Dorothy
Sutherland, Harold Hoyle
Sutherland, Wilbor Mills
Sutton, Frank Howard
Sutton, Nora
Sutton, William Henry
Svitavsky, Robert Ingersoll
Swaim, Donald Tyler
Swaim, Earle Frank
Swanberg, Edmund DeForest
Swanberg, Marion Gocrz
Swanson, Frances Eleanor
Swanson, Norvid Raymond
Swartwout, Edgar Chessman
Swartwout, Nelson Rudolph
Swartz, Fay Wood
Swarm, Geraldine
Swarm, Paula

| HSAgr | 961 | Champaign |
| :---: | :---: | :---: |
| $S S$ | 25 | Danville |
| Agr | 33 | Murphysboro |
| $C E$ | 111 | Chicago |
| $C E$ | 76 | Grand View, Idaho |
| ME | 4 | Rockford |
| $C E$ | 113 | Highland |
| SS |  | Pana |
| ME |  | Sidell |
| Agr |  | Sidell |
| $A E$ | 69 | Milwaukee, Wisconsin |
| LAS |  | Chicago Heights |
| LAS | 42 | Chicago Heights |
| HSLAS | 28 | Urbana |
| AE | 113 | Chicago |
| CerE | 72 | Chicago |
| $\stackrel{L}{A g r}^{L b}$ | 34 | Athens, Georgia Potomac |
| $L b$ |  | Strafford, Missouri |
| LAS |  | $V i l l a ~ R i d g e ~$ |
| Agr |  | Pittsfield |
| SS | 7 | Rochester, Minnesota |
| LAS | 39 | Centralia |
| LAS |  | Centralia |
| LAS | 25 | Morrisonville |
| LAS (SS) | $51 \frac{1}{2}$ | Urbana |
| A | 36 | Decaiur |
| Com | 35 | Maraa |
| HSAgr | 82 | Greenville |
| Agr | 44 | Fortda, Iozva |
| SS | 8 | Western Springs |
| LAS | 36 | Madison, Wisconsin |
| HSLAS (SS) | 86 | Chicago |
| LAS | 64 | Chattanooga, Tennesses |
| ChE | 20 | Chicago |
| REE |  | Peoria |
| SS | 8 | Champaign |
| Agr |  | Jacksonville |
| Agr | 14 | Pleasant Plains |
| $C E$ | 38 | Waukegan |
| Med |  | Maconsb |
| Com | 31 | Newcastle, Indiana |
| Agr (SS) | 121 | Urbana |
| Com | $57 \frac{1}{2}$ | Chicago |
| L | 51 | Barry |
| Agr | 65 | Keithsburg |
| Agr | 34 | Canton |
| A | $88 \frac{1}{2}$ | Spokanc, Washington |
| $A g r$ |  | Jolict |
| Agr |  | Sidell |
| Ch | 27 | Peru |
| A | 32 | Sheboygan, Wisconsin |
| $\stackrel{\text { A }}{\text { Con }}$ | 95 | Rock Island |
| EE | 34 | Elgin |
| Mfed |  | Kief, North Dakota |
| Ags |  | Terre Haute, Indiana |
| HSLAS |  | Champaign |
| SS | 7 | Lebanon |
| LAS (SS) | $7 \frac{1}{2}$ | Pesotum |
| $\mathrm{Agr}^{\text {r }}$ | 46 | Kiangsu, China |
| ME | 107 | Oneida |
| Agr |  | Golden Gate |
| LAS (SS) | 43 | Urbana |
| LAS (SS) | 96 | Urbana |
| Agr | 29 | McNabb |
| Agr | 102 | $\mathrm{McNab3}$ |
| Com | 1003 | Chicago |
| LAS | 33 | Oakland |
| LAS | 43 | Washington, D. C. |
| EE |  | Racine, Wisconsin |
| Com | 59 | Danville |
| LAS | 14 | Chicago |
| EE | 36 | Worthington, Minnesota |
| HSLAS | 33 | Chicaga |
| LAS (SS) | 98 | Urbana |
| Agr | 105 | St. Charles |
| Agr | 102 | Elgim |
| LAS |  | Elgin |
| Mus | 73 | Urbana |
| SS | $2 \frac{1}{21}$ | Normal |
| SS | 72 | Normal |


| Swearingen, Paul Van | ME |  | Champaign |
| :---: | :---: | :---: | :---: |
| Sweeney, Arthur Frantz | Com | 30 | Chicago |
| Sweet, Orville Roberts | Agr | 32 | Sherman |
| Swenson, Carl Elmer | ME | 82 | Chicago |
| Swensson, Ebenezer Earl | ME | 40 | Lindsborg, Kansas |
| Swett, Courtland Ritchie | Agr |  | Chicago |
| Swett, Lewis Wentworth | $E E$ | 107 | Springfield |
| Swick, Curvella H | Com | 461 | Galton |
| Swick, Mary Ethel, A.B., 1915 | LAS |  | Urbana |
| Swick, Nellie May | LAS (SS) | 99 | Urbana |
| Swift, Gertrude Lucile | HSLAS | 33 | Streator. |
| Swigart, Alta Caroline, A.B., 1910 | Lb | 49 | Champaign |
| Swigart, Blanche Belle | SS | 54 | Rapatee |
| Swigart, Faith Gretchen | LAS | 66 | Champaign |
| Swindler, Henry | Com | 26 | Magnolia |
| Swindler, Rollin Leland | Agr | 69 | Magnolia |
| Swits, Marguerite Maud | LAS | 99 | Terre Haute, Indiana |
| Swormstedt, Leroy | RME | 121 | Urbana |
| Taggart, Clementine | LAS | 101 | Wooster, Ohio |
| Taggart, John Findlay | ${ }^{\text {Agr }}$ | $64 \frac{1}{2}$ | Wooster, Ohio |
| Tai, Fang Lau | SS | 5 | Shase, China |
| Talbot, James | $A g r$ |  | Sterling |
| Talbot, Rachel Harriet | LAS | 30 | Urbana |
| Taliaferro, Marguerite | SS | 7 | Watseka |
| Tallmadge, Chester Livingstone, Jr. | $L A S$ |  | New York City |
| Tang, Sung | SS |  | Changsha, China |
| Tanner, John Riley | SS | 791 | Flora |
| Tanner, Thomas Sheridan | $A E$ | 97 | Dwight |
| Tanton, Glenwood Charles | $A g r$ | 51 | Washington |
| Tarbox, Robin James | Agr |  | Urbana |
| Tatsch, Walter Karl | $C E$ | 13 | Chicago |
| Taubeneck, Victor Everett | $E E$ | 19 | West Union |
| Taulbee, Horton Mills | Agr | 35 | Hillsboro |
| Taylor, Amos Lovejoy | SS |  | Farmersburg |
| Taylor, Benjamin Franklin | LAS |  | Lacon |
| Taylor, Edwin George | Com | 94 | Burlington, Iowa |
| Taylor, Grace DeEtte | HSAgr (SS) | 62 | Westplains, Missouri |
| Taylor, Inglis Mitchell | Ch | 29 | Harrisourg |
| Taylor, Kathleen | HSLAS |  | Harrisburg |
| Taylor, Laurence Righter | Ch | 17 | Indianapolis, Indiana |
| Taylor, Loren Einmerson | $L$ |  | Danville |
| Taylor, Max | LAS | 73 | Pryor, Oklahoma |
| Taylor, Norris Onslow | ChE | 31 | Geneseo |
| Taylor, Ross | LAS sp |  | Carrier's Mills |
| Taylor, Ross Wallace | LAS | 32 | Bement |
| Taylor, Roy H. | Agr | 33 | Bismarck |
| Taylor, Thomas C | $A g r$ | 33 | West Plains, Missouri |
| Teeters, Mary Etta | HSLAS | 64 | Auburm, Indiana |
| Teixeira, Emilio Alves | MnE (SS) | $82 \frac{1}{2}$ | Cassia, Minas, Brazil |
| Temple, Jane | SS | $5{ }^{2}$ | Page's Mills, South Caroling |
| Tendick, Frank Hulit | $C_{\text {Che }}$ | 98 | Canton |
| Tener, Katherine Randall | LAS | 67 | East Cleveland, Ohio |
| Terry, Mead Mechan | Com |  | Chicago |
| Terry, Robert Byron | Ch |  | Girard |
| Terry, Robert Isaac | Agr (SS) | 93 | Indianapolis, Indiana |
| Thacker, Charles Brooks | Agr | 60 | Vienna |
| Thal, Adolph Friederich | ChE |  | Champaign |
| Thal, Olga Elizabeth | LAS (SS) | 1133 | Champaign |
| Thatcher, Frederick Robert | Com | 40 | Elgin |
| Thiele, Joel Baker | E E |  | Ramsey |
| Thiele, Ross Henry | A | 85 | Ramscy |
| Thieleman, William Carl | $C E$ | 39 | Chicago |
| Thies, Walter Fred | Cont | 125 | St. Louis, Missouri |
| Thomas, Abiler Royce | Agr (SS) | 112 | Big Rock |
| Thomas, Clair Joel | ${ }_{\text {Agr }}$ | 113 | La Harpe |
| Thomas, Elizabeth | $L A S s p$ |  | Pa,rion |
| Thomas, Glen Herbert |  | 84 | Waterzille, Kansas |
| Thomas, Grace | Mus |  | Weldon |
| Thomas, Harold Dewey | Agr |  | Bisbec, Arizona |
| Thomas, Harry A | $A g r$ | 31 | Rockford |
| Thomas, Joe Lee | Agr | 146 | Charleston, West Virginia |
| Thomas, Tohn Theron | LAS |  | Bellesrille |
| Thomas, Maurice Loyd | EE | 102 | St. Louis, Missouri |
| Thomas, Nelson Keno | Com |  | St. Louis, Missouri |
| Thomas, Polly Elizabeth | HSLAS (SS) | 100 | Big Rack |
| Thomas, Ralph Raymond | EE | 111 | St. Louis, Missouri |
| Thomas, Royle Price | Agr |  | Sullivan, Indiana |
| Thomas, Stanley Jeremiah | MSE | 71 | $V i n c e n n e s, ~ I n d i a n a ~$ |
| Thomas, Theodore Gladstone | ${ }_{S}^{A}$ | 33 | Chicago |
| Thomason, Pauline | SS | 3 | Quincy |
| Thompson, Alice A. | LAS |  |  |
| Thompson, Fred Leo | LAS | 313 | Garrett, Indiana |
| Thompson, George S. | Com | 68 | Kankakee |
| Thompson, Guy Holsinger | SS | 71 | Chadwick |
| Thompson, Harold Henry | Com |  | Tiskibua |


| Thompson, Herle Alle |
| :---: |
| Thompson, Lillian Maud |
| Thompson, Marvin Waterbury |
| Thompson, Orlando Stephen |
| Thompson, Russell Hopkins |
| Thompson, William Charles |
| Thompson, William Lewis Voris |
| Thompson, William McKinley |
| Thompson, Willis Jf. |
| Thomsen, Marvin William |
| Thomson, William White |
| Thor, Alfred Ulmo |
| Thorne, Frank Hilton |
| Thornsburgh, Zada Goff |
| Thornton, Maurice Emerson |
| Thorp, William Walter |
| Thorud, Bert Marshall |
| Thory, Hans Christian |
| Threlkeld, James Graydon |
| Threshie, Robert David |
| Thurlow, Henry Plummer |
| Thurston, Alfred William |
| Thurston, Alvin Stewart |
| Ticknor, James Hotchkiss |
| Tiffany, Hubert Cliassce |
| Tiffin, Joseph Dow |
| Tillotson, Clara Eva |
| Tillotson, Ella A. |
| Tillson, Vivian Earle |
| Tilton, James Frederic |
| Tilton, Walter Joseph |
| Tinımerman, Frederic Harris |
| Tinkey, Otto George |
| Tinney, Loraine Henrietta |
| Tobias, Frank |
| Todd, Clyde L. |
| Todd, Dana Lee |
| Todd, Malcolm Newton |
| Todd, Ralph Dawson |
| Todd, Vincent Hollis, A.B. (Harvard) |
| 1907, A.M., 1910, Ph.D., 1912 |
| Toll, Arno William. |
| Tolmie, Thomas William |
| Tombaugh, Glen Dech |
| Tomlin, Harry Capps |
| Tompkins, Ralph Hawthorne |
| Tompkins, Roy Woodruff |
| Tong, Teh-Cliang Yee-Cheng |
| Toothaker, Harry Hawkins |
| Tornquist, Alpha Caroline |
| Torrence, Frank H. |
| Torrence, Franklin Albert |
| Towe, Harold Thendore |
| Tower, Alexander McJunkin |
| Tower, Carleton Myron |
| Townsan, George Leland |
| Townsend, Mary Wilson |
| Townsend, Mildred Lorene |
| Towson, Irene |
| Tracy, Elizabeth Lail |
| Tracy, Paul Hubert |
| Traxler, Elinor Evangeline |
| Traxler, Ivan W. |
| Treat, Edna Almeda, B.Mus. <br> (Oberlin Conservatory) 1910 |
| Treat, Gladys Annie |
| Treischel, Chester |
| Trelease, Sidney Briggs |
| Trenchard, Wilma |
| Treu, Max Rudolph Hendrick |
| Trickle, Lenox Edmond |
| Tritt, Frances Irene |
| Troeger, Philip Theodore |
| Trost, Opal Winifred |
| Troster, Marion Collier |
| Troster, Oliver John |
| Trout, Clement Eddy |
| Troutman, William Chilton |
| Trowbridge, Charles Edgar |
| Trowbridge, William Oliver |
| Troxel, Floyd Elsworth |
| True, Leighton Jay |
| Trumbo, Silas Max |
| Tucker, Gladys May |

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White Heath
Chicago
Chicago
Harvey
Sullivan, Indiana
Chicago
Indianapolis, Indiana
La Rose
St. Louis, Missouri
Fulton
Rockville, Indiana
Rollo
Berwyn
Urbana
Indianapolis, Indiana
Rochelle
36 Chicago
8 Chicago
Decatur
Dunlap
Lynn, Massachusetts
Champaign
Chicago
Pearia
La Grange
Walshville
Roswell, New Mexico
Roswell, New Mexico
Naperville
Hoopeston
Fairmount
Manistee, Michigan
Decatur
Pekin
Normal
Clay City
Oklahoma City, Oklahoma
Carlyle
La Harpe
Greentilie
Chicago Heights
Manchester, Iowa
86
Pleasant Plains
Eagle Grove, Iowa
Joliet
Hunan, China
Sandozal
Champaign
Hanover
Chester
Toledo, Ónio
Fort Wayne, Indiana
Beloit, Wisconsin
Urbana
Wyoming
Champaign
96 Anderson, Indiana
31 Paris
29 Urbaina
Urbana
Oberlin, Ohio
Oberlin, Ohio
Urbana
Hardin, Missouri
Johannesburg, South Africa

## Rantoul

125 Pontiac
105 Storm Lake, Iowa
Urbana
Bellflower
Bellfower
Urbana
Carl Junction, Missouri
South Bend, Indiana
South Bend, Indiana
Minonk
El Cajar, California
Pontiac
Highland Park

Tucker, Gustave Morton
Tucker, Rolland Henry
Tucker, William Henry
Tudor, Herbert Ovando
Tuell, Wallace Gerry
Tukey, Harold Bradford
Tupper, James Oliver
Turley, Harold Edwin
Turnbull, Clifford Griffith
Turner, Alexander Harvey
Turner, Charles Edward
Turner, Chester Charles
Turner, Frank, A.B., 1914
Turner, George Lewis
Turner, Harold Horton
Turner, James Craigmile
Turner, James Marion
Turner, Luther Martin
Turner, Merle Bernice
Turner, Wayne Isaac
Turnquist, Elmer Nels
Turnquist, Ivar William
Turpin, Charles Udell
Tuthill, James Pierce
Tuttle, Charles Asa
Tuttle, Charlotte
Tuttle, LeRoy Hammond
Tweedie, Norman James
Twells, Robert
Twomey, Thomas Leo
Tyler, James Hersey
Tyler, Miriam Streator, A.B.
(Western Reserve Univ.) 1915
Unger, George Walter Adolph
Urbain, Arthur Jules
Urbain, Lottie Octavia
Ursich, Joseph Edward
Utley, Nelson Monroe
Utter, Henry Benjamin
Vail, Edna Cora
Valentine, Frank Wayne
Valentine, George Snow
Van Cleave, Bruce
Van Cleave, Wallace
Vanden Boom, Gerry Christopher
Vanden Boom, Leona Margarete
Vanden Bosch, James Walter
Vanderpool, Arthur Meritt
Van Deusen, Arthur Stowe, Jr.
Van Deusen, John Leroy
Van Deventer, Frank Macknet
Vandeventer, Fenton Ross
Van Dorn, Theodore Joseph
Van Dyke, Earl Henry
Van Frank, Elliott Dudley
Van Horn, William Henry
Van Horne, George Hamilton
Van Meter, Craig
Van Natter, Francis Marion
Vanneman, Russell William
Van Praag, Alex Jr.
Van Praag, Solomon
Vansant, Rodman Fleming
Van Sickler, John Russell
Van Winkle, Paul Keith
Van Winkle, Stephen Neel
Varner, Joe Woodyard
Varney, Clara Elsie
Vaughan, Fred Nathan, Jr.
Vaughn, Elizabeth Kate
Vaughn, Howard Flaghn
Vaughn, Myra
Vaughn, Rufus Emerson
Vaught, Sallie McCormick, A.B. (Ohio Wesleyan Univ.) 1908
Vear, Leonard Ray
Vedder, Earl Charles
Veirs, Willard Lewis
Venable, Farold Livingston
Vernon, Edith
Vernon, Maris Hurford
Vial, Harold Craigmile
Vial, Helen Gertrude

| Ccre | 72 | Chicago |
| :---: | :---: | :---: |
| Agr | 33 | Minoink |
| ChE |  | Morrison |
| SS | $6 \frac{1}{2}$ | Hol:on, Kansas |
| $E E$ | 75 | Cantor |
| Agr | 33 | Berzey |
| Agr (SS) | 1072 | Woodstock |
| Agr | 33 | Burney, Indiana |
| Agr |  | Champaign |
| Agr | 70 | Loda. |
| $L A S$ | 71 | Ster!ing |
| Agr | 70 | Champaigit |
| $S S$ |  | DuQuoin |
| LAS |  | Chicago |
| ME | 14 | Clicago |
| Agr | 34 | Loda |
| SS | $8 \frac{1}{2}$ | Lovington |
| $E E$ | 52 | Beardstown |
| $L A S$ |  | Champaign: |
| Agr |  | Urbana |
| LAS | 27 | Cainion |
| Agr | 34 | CJicago |
| Com |  | St. Louis, Missouri |
| $C E$ (SS) | 61 | Elgin |
| $E E$ |  | Moincnce |
| A |  | Wilmette |
| Com |  | Oak Park |
| $L A S$ |  | Wheaton |
| CerE |  | Waln!et Hill |
| SS | $6 \frac{1}{2}$ | Dor:glas, Arizona |
| $C E$ (SS) | 70 | Úrbana |
| Lh |  | Richmond |
| A | 35 | Oak Park |
| $C h$ |  | DuQuoin |
| HSLAS | 111 | DuQuoin |
| Med | 25 | Joliet |
| Com | 33 | Chicago |
| $A E$ | 36 | Missonla, Montana |
| HSLAS |  | Chicago |
| $C h$ | 32 | Mt. Vernon |
| Com | 32 | Evanston |
| $L A S$ | 64 | Springigeld |
| Agr | 32 | Springficld |
| ME | 104 | Quincy |
| Mus sp |  | Quincy |
| Agr |  | Soutl Bend, Indiana |
| $M E$ |  | Morris |
| Com | 33 | Eranston |
| $C E$ | 19 | Greenvillc |
| $M E$ |  | Decatrir |
| $A g r$ |  | MIt. Sterliztg |
| $L A S$ | 29 | Springfold |
| Agr | 69 | Plainficld |
| A | 104 ${ }^{2}$ | Rialto, California |
| $A E$ |  | Ǩc:t, Ohio |
| Agr |  | Jerscyzille |
| $L$ | 28 | Mattoon |
| $L A S$ (SS) | 102 | Gasion, Indiana |
| Com | 20 | Urbaina |
| $C E$ | 63 | Decatur |
| $C E$ | 44 | Decatier |
| Agr | 98 | Philadclphia, Pennsylvania |
| $C E$ | 353 | Roanokc, Virginia |
| Com | 65 | Chicago |
| A | 22 | Henderso:t, Kentucky |
| Agr | 24 | Paris |
| $H S A g r$ |  | Delavan |
| Agr | 32 | Anboy |
| SS | 4 | Urbana |
| $A E$ (SS) | 32 | Urbana |
| HSLAS (SS | $) 96$ | Urbana |
| Agr | 171 | St. Louis, Missouri |
| $L b$ |  | Lebanon, Indiana |
| Agr | 34 | Clicago |
| LAS | 65 | Gasport, New York |
| Mcd (SS) | 35 | Urbana |
| ME |  | East St. Louis |
| SS | 8 | Tolcdo |
| CE | 75 | Moline |
| Agr | 33 | La Grange |
| HSLAS | 72 | La Grange |

Vial, Ralph Hoyt
Vibelius, Siegfried Nathaniel
Vidal, Stephen
Vissering, Eckbart Bernhard
Viet, Elmer Bennett
Voeks, Forrest
Vogele, Alfred Charles
Voight, Herbert Louis
Voight, Marie Louise
Volk, William Joseph
Volstorff, Fred Albert
Von Fossen, Cyril Hill
Von Ohlen, Floyd William George
Voorhees, Evangeline
Voorhees, Lawrence Elmer
Voorhees, Vanderveer
Vopicka, Fred Frank
Voss, Anna
Waddington, Glenn George
Wade, Elizabeth
Wadleigh, Theodore
Wadsworth, Goldie May
Waggoner, Karl Marshall
Wagner, Charles Arthur, Jr.
Wagner, Frank Hans
Wagner, Leo Ernest
Wagner, Wesley Gephart
Wagner, Winton A
Wagstaff, Charles Dudley
Wahl, Leo Jacob
Wait, Bernice
Wakefield, Mildred Amy
Wakeland, Fred Raymond
Wakeland, Guy Earl
Wakely, Jolin Everett
Waldie, Benjamin Dickeson
Waldo, Abner Weston
Waldo, John Hardenbergh
Walk, Marney Lawrence
Walker, Cbarles E.
Walker, Clifton James
Walker, Elliott Pyle
Walker, Frank Abram
Walker, George William
Walker, Helen
Walker, Jennie Grace
Walker, John Urquhart
Walker, Mae Ella
Walker, Michael W., B.S. (Krox Coll.) 1901
Walker, Nelle
Walker, Stanton
Walkerly, Margaret Magđalene
Wall, Harriet Edythe
Wall, Richard Clark
Wallace, Edgar Dearborn
Wallace, Lewis Bryant
Wallace, Paul Samuel
Wallace, Samuel Haywoó
Wallage, Stanley Tiffin
Wallin, Marie Elizabeth
Walmer, Joseph Charles
Walraven, Wesley Burnbam
Walser, Stephen Albert
Walsh, Earl Joseph
Walsh, John Edward
Walsh, Leo Bernard
Walters, Prentice
Walton, Howard Roberts
Walton, James Kelley, Jr.
Walworth Stanton Eugene
Walz, Ida Emilie
Wamsley, Adalaid May
Wang, Chin Wu
Wang, Te Chang
Wanzer, James Marshall
Warbritton, Hattie
Ward, Amy
Ward, Arthur Andrew
Ward, Cecelia Blair
Ward, Frank Howard
Ward, Herbert Benjamin
Ward, Janet
Ward, Mary Helen
Ward, Mary Myrtle

| Agr | 100 | La Grange |
| :---: | :---: | :---: |
| A | 109 | Joliet |
| MSE |  | Gallup, New Mexico |
| LAS | 32 | Minonk |
| ChE | 29 | Joliet |
| Com | 35 | Rockford |
| Agr | 34 | Assumption |
| CE (SS) | 114 | Chicago |
| Mus |  | Athens, Ohio |
| $C E$ | 33 | Chicago |
| $M E$ | 30 | Elgin |
| Med |  | Beardstown |
| Agr |  | Hincklcy |
| LAS |  | Upper Alton |
| LAS | 103 | Alton |
| LAS | 12 | Alion |
| $A E$ | 61 | Chicago |
| Mus | 51 | Chompaign |
| ME | 77 | Dewey |
| HSAgr | 76 | Emparia, Kansas |
| Agr (SS) | 42 | Herscher |
| $L_{A} A S$ | 618 | Connersville, Indiana |
| E E | 35 | Springfield, Missouri |
| Agr |  | Rockford |
| Agr |  | Rock Island |
| Agr |  | Bellefonte, Pennsylvania |
| Com |  | Anderson, Indiana |
| Agr | 48 | Tyston, Indiana |
| EE (SS) | 38 | Sterling |
| $S_{L A S}$ |  | Greenville ${ }^{\text {a }}$ |
| Agr | 28 | Hoopeston |
| Agr | 62 | Hoopeston |
| SS | $8 \frac{1}{2}$ | Danville |
| A Cor |  | Chicago |
| Cem (SS | 8 | Libertyuille |
| CerE (SS) |  | Urbana |
| Mas |  | Chicago |
| CE | 116 | Chicago |
| Conn |  | Butler, Missouri |
| Agr | 63 | Aurora |
| Agr | 105 | Mackinaw |
| HSLAS | 32 | Clintor |
| LAS (SS) | 97 | Cicero |
| Com ${ }^{\text {HSLAS }}$ | 30 | South Bend, Indiana |
| SS |  | St. Louis |
| $L A S$ | 31 | Carterville |
| MSE | 73 | Champaign |
| Com | $62 \frac{1}{2}$ | Champaign |
| LAS | 76 | Staunton |
| Com |  | Summituille, Indiana |
| Com | 85 | Chicaso |
| Com (SS) | 96 | Homer |
| EE (SS) | 26 | Saianno |
| Agr |  | Oak Park |
| SS | 130 | Poris |
| $\underline{L}$ AS | $65 \frac{1}{2}$ | Champaign |
| Com | 66 | Coiro |
| $C E$ | 106 | Centralia |
| Agr | 82 | Brooklyn, New York |
| $A E$ | 37 | La Crosse, Wisconsin |
| $E E$ | 88 | Peoria |
| Agr | 69 | Rantoul |
| SS | $135 \frac{3}{3}$. | Macamb |
| Com | 65 | Chantpaign |
| Agr | 883 | Anna |
| Agr | 30 | Urbana |
| LAS | 85 | Danville |
| HSAgr (SS) | 34 | Quincy |
| Agr (SS) | 122 | Honan, China |
| Agr (SS) | 120 | Soochow, China |
| $\stackrel{\text { Agr }}{ } \stackrel{\text { S }}{ }$ | 109 | Ook Park |
| HSLAS | 98 | El Paso |
| EE |  | Oakglen |
| LAS | 38 | Urbana |
| Aigr | 30 | Dewey |
| Agr ${ }_{\text {HS }}$ |  | Gerreseo Chicago |
| $\xrightarrow[\text { HSLAS }]{\text { HS }}$ | 18 | Chicago Sterling |
| SS | 25 | Glasgow |


| Ward, Mary Winifred | LAS | 33 | Saybrook |
| :---: | :---: | :---: | :---: |
| Ward, Raymond Lec | Com |  | Bement |
| Ward, Thomas Harrison | EE |  | Roslindale, Massachusctes |
| Ward, Victor | $C E$ |  | El Paso |
| Ward, William Dutch | Com |  | Decatur |
| Wardhaugh, Sarah Edna | SS | 8 | Jacksonville |
| Ware, Gay Hollenbeak | Agr |  | Barry |
| Ware, Manierre Barlow | $A g r$ | 73 | Kenilworth |
| Warford, David Arthur | Com | 41 | Elisabethtown |
| Warmolts, Cornelia Sara | HSLAS | 22 | Oregon |
| Warmolts, Earl Hugh | Med |  | Oregon |
| Warmolts, Lambertus, Jr. | Med | 65 | Oregon |
| Warner, Robert L. | $L$ |  | Diron |
| Warnock, Harper McDill | Agr | 119 | Little York |
| Warnock, Laura Ream | SS | 9 | Remington, Indiana |
| Warnshuis, Edward John Henry | Com | 30 | Oak Park |
| Warren, Daniel Edwin | Agr | 73 | Belvidere |
| Warren, Dorothy | HSLAS |  | Watseka |
| Warren, May Anna | LAS |  | Mansfield |
| Warren, Paul Wilbur | Ch | 34 | Fort Wajne, Indiana |
| Warren, Ralph Rowe | $C E$ | 30 | La Solle |
| Wascher, Herbert Frederick | Agr |  | Champaign |
| Washburn, James William | MSE | 67 | Lenor Dalc, Massachusetts |
| Wasson, Loran Arthur | Com | 22 | Harrisbu:rgh |
| Waterman, Louise Hale | LAS | 60 | Chicago |
| Waters, George Gerald | EE |  | St. Louis, Missouri |
| Watkins, Beulah | SS | 5 | Danville |
| Watson, Marry Francis | Ch | 66 | Granite City |
| Watsen, John Wesley | Agr | 110 | DeKalb. |
| Watson, Lelia Elta | HSLAS (SS) | 96 | Champaign |
| Watson, Ray Marcus | Agr | 66 | Cobden |
| Watt, Russell A | $A E$ (SS) | 32 | Champaign |
| Watts, Amos Holston | LAS |  | Nashoille |
| Watts, Helen Mac | HSLAS |  | Urbana |
| Wead, De Forest Emery | $C E$ | 68 | Peoria |
| Wead, John Trimmer | Med | 34 | Wyomirg |
| Weart, James Garrison Jr. | Agr |  | Winnetka |
| Weaver, Lillian R. | LAS |  |  |
| Webb, Brent Girdler | A |  | Louiswille, Kertuck; |
| Webb, Donald Frederick | Agr | $30 \frac{1}{2}$ | Chicago |
| Webb, Jasper Kent | ${ }^{\text {Agr }}$ | 154 | Niota |
| Webb, Katbarine Ann | LAS |  | Chicago |
| Webb, Lina | SS | 9 | Ewing |
| Webb, William Robert | SS | $1 \frac{1}{2}$ | Granite City |
| Webber, Albert G | $L$ | 28 | Decatur |
| Webber, Harry Edwin | $A E$ | 144 | Chicago |
| Webber, Robert Alfred | ChE | 28 | Urbana |
| Weher, Frederick Gottlieb | Agr |  | Tower Hill |
| Weber, Gertrude T | LAS | 114 | Olney |
| Weber, Leonard Fred | Med | 27 | Buckley |
| Webster, Frederick Farrar | Agr | $66 \frac{1}{3}$ | Oberlin, Ohio |
| Webster, Gladis Gilbert | Agr | 6.4 | Washington, Indiana |
| Webster, Lewis Selwyn | MSE | $21 \frac{1}{2}$ | Bartozi, Florida |
| Wedge, Leslie B | Con | 30 | Kewanee |
| Weeks, Charles Horace | Com: | 34 | Jolie: |
| Weems, Charles Lee | LAS | 46 | Quincy |
| Weenink, Ruth Antoinett | HSAgr | 66 | Dillon, Montana |
| Wehrle, Frank Ignatius | Agr | 66 | Carmi |
| Webrie, Thomas Henry | Com |  | Carmi |
| Weil, Ruth Carmen | $L A S$ | 66 | Oelwein, Iowa |
| Weilepp, Laura Elizabeth | HSLAS | 611 | Decotur |
| Weiler, Edward Grover | EE | 148 | West Salem, Ohio |
| Weinberg, Elizabeth | HSAgr | 64 | Rushwille |
| Weinberg, Flora Jane | SS | 130 | Rushvillc |
| Weingarten, Helen Henrietta | LAS |  | Champaign |
| Weinshank, Harry | ME |  | Indianapolis, Indiana |
| Weir, Amy Azalea | HSLAS (SS) | 23 | Marshall |
| Weir, Pearl | HSAgr | 31 | Marshall |
| Weise, Nicholas George | Agr | 30 | Chicago |
| Weisiger, George Bates, LL.B., 1911 | SS |  | Homer |
| Weiss, Della | LAS | 62 | Chicago |
| Weiss, Marion Virginia | LAS | 78 | Champaign |
| Welch, Donald Louis | LAS |  | Fort Collins, Colorado |
| Weller, Herbert Clay | LAS | $3 \frac{1}{2}$ | Hindsboro |
| Wells, Harry Andrew | Agr | 62 | Dalton, Pennsylvania |
| Welsh, Kathryn Clare | HSLAS | 22 | Bradford |
| Welsh, Robert Patrick | Agr |  | Bradford |
| Welty, David Charles | Agr | 65 | Amboy |
| Welty, Duncan Oliphant | Agr | 30 | St. Louis, Missouri |
| Wenke, Vernon Arthur | Com |  | Geneseo |
| Wensley, Lucy Drinkwater | LAS |  | E. Cleveland, Ohio |
| Wenzlaff, Soloman Henry | LAS |  | Yankton, South Dakota |
| Wesseling, Amalie Elizabeth | LAS |  | St. Louis, Missouri |
| Wessels, Marie | Mcd | 33 | Quincy |

West, Charles Aron
West, Linnie Minnic
West, Lloyd Alvin
Westbay, James Herron
Westbrook, Harold William
Westenhaver, LeRoy John
Westerberg, Glenn Lambert
Westerman, Rodolpho G.
Westlund, Emil Hialmer
Westman, Adolph Fred
Weston, Jessie Beatrice
(Ph.B. Univ. of Chicago) 1907
Westphal, Betty Marie
Whalen, Oren Leslie
Wham, Benjamin, A.B., 1915
Wharton, Wayne Thompson
Wheat, Marcell Henry
Wheaton, Hazel Dean
Wheeler, Adelaide Cynthia
Wheeler, William Erastus, Jr.
Wheelhouse, Elizabeth Lux
Wheelhouse, Mary Elizabeth
Wheelock, Earle Nathaniel
Whipple, Helen Katherine
Whisenand, Helen Grace
Whitacre, Elson Harmon
Whitchurch, Helen Margaret
White, Agnes Chloe
White, Catherine Nell
White, Frank Herbert Jr.
White, George Richard
White, Grace Belle
White, Harold Hartwell
White, Lyde Evangeline
White, Marion Kingsley
White, Merla Marie
White, Orville Oscar
White, Phares Lemar
White, Ralph Hugh
White, Russell Sherman
White, W. Powers
White, William Wallace
Whitelaw, Arthur Keith Jr.
Whitford, Hobert S.
Whiting, Vivian Justina
Whitley, Guyon Carl
Whitman, George Bruington
Whitmire, Clarence Leonard
Whitnel, Joe
Whitney, Harold Bruce
Whitney, Joseph Lafeton
Whitney, Leonard Hilliard
Whitney, Wayne K.
Whitson, Herman Ansel
Whittemore, Kenneth Stoddard
Whitten, Jennie Alma
Whitten, Mabel
Whitten, Myrtle
Whittington, Ray Norton
Whittum, Florence Lucille
Whitver, Howard Clifford
Wible, Tom
Widdis, Annie Laurie
Wieboldt, Anna Ernestine
Wiedemann, Newell Evert
Wicrsema, Henry
Wiese, Alvin Otto
Wiggins, Kelley
Wiggins, Rolla Elbert
Wight, Edith Marian
Wikoff, Ruth Isabel
Wilcox, Fannie Miles
Wilder, Charles Lucas
Wilder, Joseph David
Wildermuth, Joe Henry
Wiles, Bertha Harris
Wiley, Harry Houghes
Wiley, Robert lirnest
Wiley, Russel Warren
Wiley, Wallace Faris
Wilford, Robert Nicholas
Wilhite, George Merrill
Wilkins, Ernest Jesse
Wilkins. Stanlev Charles

| SS | 5 | Cherokee, Iowa |
| :---: | :---: | :---: |
| LAS | 60 | Watseka |
| EE | 29 | Yates Citv |
| RME | 83 | Monett, Missouri |
| Com | 32 | Centralia |
| $M n E$ | 33 | Chicago |
| LAS |  | Moline |
| REE | 24 | Curityba, Brazil |
| Com | 95 | Chicago |
| ME | 25 | Winona, Minnesota |
| Lb | 33 | Urbana |
| SS | 8 | Belvidere |
| Agr | 23 | Rose Hill |
| $L$ | 32 | Cartter |
| Com |  | Moline |
| Com |  | Chicago |
| LAS | 95 | Galesburg |
| HSAgr | 67 | Lawrens, Iowa |
| $L$ | 42 | East St. Louis |
| HSLAS | 31 | Decatitr |
| LAS | 97 | Decatur |
| Agr | 55 | Wilmette |
| LAS | 99 | Medina, New York |
| LAS |  | Harvard, Nebraska |
| AE | 29 | Chicago |
| HSAgr | 99 | Salem |
| HSLAS | 63 | Marion |
| Mus | 33 | Urbana |
| EE | 110 | Chicago |
| $A E$ | 107 | Buffalo, New York |
| SS | 371 | Rantoul |
| Com | 33 | Chicago |
| Come (SS) | 85 | Urbana |
| HSAgr | 64 | St. Joseph, Missouri |
| HSAgr |  | Urbana. |
|  | 60 | Carlinuille |
| RME (SS) | 112 | Oxford, Indiana |
| SS |  | Davenport, Iowa |
| Com | 30 | Chicago |
| Agr |  | LeRoy, Kansas |
| Com |  | Chicago |
| LAS | 23 | Wood River |
| Agr |  | Clayton |
| HSLAS | 66 | Urbana |
| Com | 99 | Webster City, Lowa |
| Agr | 168 | Cameron |
| SS | 688 | Urbana |
| $L_{\text {L }}$ | 58 | East St. Louis |
| CE |  | Silver Spring, Maryland |
| Com | 65 | Oak Park |
| $M n E$ | 75 | Downers Grove |
| SS | 5 | Champaign |
| EE | 23 | Rushville |
| Com | 46 | East Aurora, New York |
| SS | 817 | De Kalb |
| SS | 2 | De Kalb |
| SS | 81 | Fillmore |
| Agr |  | Benton |
| HSLAS |  | Herscher |
| Com | 31 | Urbana |
| Co:n |  | Masont City |
| SS | 4 | Detroit, Michigan |
| HSLAS | 37 | Chicago |
| A | 31 | East St. Louis |
| EE |  | Fulton |
| LAS | 35 | Chicago |
| $E E$ |  | Anna |
| SS | $8 \frac{1}{2}$ | Goreville |
| L.AS | 32 | Chicago |
| LAS |  | Austin, Chicago |
| SS |  | Georgctown, Texas |
| ME |  | Peoria |
| Com |  | Decatur. |
| A $A$ AS |  | Champaign. ${ }_{\text {Kansas }}$ City, Missouri |
| CE | 70 | Siout City, Iowa |
| $M E$ | 108 | Warren |
| AE |  | Chicago |
| EE |  | Anna |
| Agr | 66 | Arrora |
| $\stackrel{\text { Med }}{\text { LAS }}$ | 354 | Greenficld Farmington, Missouri |
| Agr | 643 | Chicago |

Wilkinson, Wardell
Willard, Dora Alta
Willcockson, John Robert
Willey, Gilbert Stewart
Williams, Beulah Naomi
Williams, Chester Albert
Williams, Eugene Charles
Williams, Floyd Earl
Williams, George Alfred
Williams, Grace Ethel
Williams, Irene
Williams, John Milton
Williams, Leslie Albert
Williams, Margaret Stuart, A.B. (Univ. of Texas) 1912
Williams, Marie Effie
Williams, Oswald Howell
Williams, Richard Kimball
Williams, Walter Emmett
Williams, William Howard
Williamson, Edna Goldman
Willits, Ward Maurice
Willmarth, Clarence Alfred
Willoughby, June Washburne
Wills, Mary Etta
Willson, Harold Edwin
Wilson, Alfred David
Wilson, Allen Center
Wilson, Clarence Leon
Wilson, Ewing
Wilson, Grover C
Wilson, Helen May
Wilson, Isabella Chilton
Wilson, Lyle Avery
Wilson, Lyndon Rutledge
Wilson, Ralph Oliver
Wilson, Ray Walker
Wilson, Willard Oliver
Wilson, William Paterson
Wilson, Winifred
Wiltsee, Beatrice Lenore
*Winans, Harold George
Winans, Jason Hobart
Windle, Clifford Cover
Wing, Orion
Wingard, Harry
Winkelmann, Roland Earl
Winkler, Ross Wayne
Winn, Benjamin
Winn, George Pickrell
Winn, Glen Hollis
Winokur, Morris Charles
Winship, Mary Alameda
Winslow, Lawson Tracy
Winter, Elijah
Winters, Lawrence Morse
Winters, Nina Lucille
Wirt, Verna Edna
Wirth, Fremont Philip
Wirth, Walter Valentine
Wise, Clark Edward
Wise, Opal
Wisegarver, Elizabeth Pauline
Withers, William Price
Witherspoon, Clyde Finley
Withrow, Frances Louise
Woerman, Lillian Honens
Wold, Ingal Ensor
Woleben, Fred Alvin
Woleben, Wilbur Townsend
Wolf, Elsa Caroline
Wolfe, Laura
Wolfe, Roy Friesner
Wolfers, Robert Charles
Wolff, Aline Jeannette
Wolgast, Dora Emma
Wolgast, Leota Alice
Wolter, Herbert
Wolter, Mitchell
Womacks, Mahel, A.B., 1915
Wong, Isaac Nelson
Wong, Marvin Yik Hseu

| Com | 35 | Chicago |
| :---: | :---: | :---: |
| LAS |  | Urbana |
| SS |  | Fillmore |
| ${ }^{\text {Agr }}$ | $15 \frac{1}{2}$ | Warren, Minnesota |
| LAS | 31 | Hume |
| A | 70 | Sterling |
| Com |  | Sterling |
| ME | 56 | Rockfard |
| LAS | 33 | Pearia |
| LAS |  | Watseka |
| HSAgr | 22 | Ravanna, Missouri |
| LAgr | 34 33 | Dixan |
| Agr | 33 | Ava |
| Lb (SS) | 59 | Hamilton, Texas |
|  |  | Marion |
| A (SS) | 14 | Granite City |
| Agr sp |  | Chicago |
| Med |  | Nattieville, Arkansas |
| ${ }^{\text {Agr }}$ |  | Henry <br> Tuscola |
| Com | 35 | Harvey |
| Com (SS) | 36 | Atlanta, Gcorsia |
| HSLAS |  | Kewanna, Indiana |
| SS | 131 | Watseka |
| $M n E$ (SS) | 102 | Baltimare, Maryland |
| Agr | 100 | McNabb |
| $C E$ | 71 | La Grange |
| Med | 31 | Carbondale |
| SS | 4 | Decatur |
| EE | 71 | Walnut |
| LAS | $113 \frac{1}{4}$ | Chicago |
| HSLAS (SS) | 103 | Arbuckle, West Virginia |
| $C E$ | 35 | Hamburg |
| EE | 16 | Chicago |
| Agr | 30 | McNabb |
| Com (SS) | 39 | Princeton, Missouri |
| Com | 63 | Wilmot, Mississippi |
| $A E$ |  | Coal City |
| LAS' (SS) | 52 | Atwood |
| HSAGr |  | Marion, Indiana |
| EE | 371 | Aurora |
| Agr |  | Rutland |
| ${ }^{\text {Agr }}$ Sp | 31 | Mt. Morris |
| ${ }_{\text {S }}{ }_{\text {S }}$ | 1301 | Capron |
| LAS |  | Champaign |
| LAS | 35 | Belleville |
| Agr | $30 \frac{1}{2}$ | Newurian |
| ${ }_{E E}^{\text {Agr }}$ (SS) |  | Richmond ${ }^{\text {daty }}$ Missouri |
| $E E(S S)$ <br> Com sp | 51 | Kansas City, Missouri Chicago Heights |
| RCE | 111 | Volinsky, Russia |
| HSLAS | 30 | Tiskilzua |
| Agr |  | Lewiston, Montana |
| ${ }_{\text {Agr }}$ | 60 35 | Annawan |
| Com | 35 | Chicaga |
| Mus |  | Kansas |
| HSLAS |  | Le Rov |
| SS | 71 | Waterloo |
| ChE | 74 | Mt. Carmel |
| Agr | 59 | Champaigit |
| LAS |  | Champaign |
| HSLAS | 66 | Champaign |
| $C E$ |  | Ashland, Wisconsin |
| Agr (SS) | 34 | Champaien |
| LAS |  | Springfield |
| $L A S$ | 20 | St. Louis, Missonrs |
| Agr | 10612 | Dixan |
| Agr |  | Marengo |
| Agr |  | Chicago Heights |
| $\stackrel{H S A g r s p}{ }$ |  | Urbaıa |
| SS |  | Covington, Kentucky |
| ${ }_{\text {Agr }}$ |  | La Place |
| ${ }_{\text {L }} / S^{\text {S }}$ |  | Hopkins, Missouri |
| HSLAS | 34 | Urbana |
| Mussp |  | Danforth |
| LAS | 32 | Danfort/z |
| $A g r$, | 32 | Danrille |
| ${ }_{S}^{L A S}$ | 103 | Moline |
| ${ }_{\text {Com }}$ |  | Champaign |
| Com |  | Fukien, China |
| Com |  | Shanghai, China |

Wong, Yuk Man
Wong, STom Quong
Woo, Yin
Wood, Adeline
Wood, Benjanin F
Wood, Charles Clifford
Wood, Eva Myrtle
Wood, Helen Louise
Wood, Henry Lowell
Wood, Paul Washington, Jr.
Woodcock, Helen Ernestine
Woodham, George Elmer
Woodroofe, Louise Marie
Woodrow, Raymond Burns
Woodruff, Arthur Eugene
Woodruff, Paul Allison
Woodruff, Ruth Beatrice
Woods, Andrew Chevalier Jr.
Woods, Frances Octavia
Woods, Grace Blacklidge
Woods, Lenna Adaire Beryl
Woods, Lois May, B.L.
(Úniv. of California) 1915
Woods, Lyle Lucile
Woods, Ralf Charles
Woods, Ray James
Woodyatt, Harold
Woolford, Robert Hugh
Woolford, Samuel Ward
Woolman, Rachel Margaret
Woolman, Richardine
Worcester, Richard Ladd
Worner, Henry Harold
Worthington, Robert Jr.
Woulfe, Henry Francis
Wray, Charles William
Wrede, Bertram Alfred
Wright, Agnes
Wright, Donald Townsend
Wright, Douglas Jr.
Wright, Edward Paul
Wright, Emma
Wright, Josef Franklin
Wright, Joseph William
Wright, Mildred Winifred
Wright, William Edson
Wright, Willie Zeno
Wrisley, George Alfred
Wu, Hueyjung Lcance
Wu, Wei Yeh
Wuerker, Adolph Kirsch
Wuertenbaecher, Harry Edward
Wuerzinger, Ella Marie
Wycoff, Benjamin Henry, B.S., 1915
Wykle, Ethel Marie
Wync, Walter Louis
Yale, Gertrude Emily
Yamada, Yasujo
Gamamota, Soichi T
Yang, Tsao Shing
Yapp, William Wodin, M.S., 1914
Yates, James Stephen
Yeager, Leland Edward
Yeazel, Lloyd Homer
Yee, Gan Chyo
Yerington, John George
Yerkes, Charles Wrenn
Yindroek. Leo Edwin
Yockey, Nerle Albert
lonkman, Ceorge.
Young, Arthur Tatarian
Young, Paul Morris
Young, Philip Page
Youngblood, Alta Miriam
Youngman, Witbur Hughes
Yount, John Joseph
Yu, Hsi Chi
Yu, Lin Lune
Zaleski, Jan Paul
Zelle, Carl Alfred
Zeller, Laurence Willard
Ziegenhagen. Walter
Ziese, Fred W


## $L b$

LAS (SS)
Agr
Com
Med
LAS

## HSAgr

LAS
Agr
Med
$E E$
Agr
$L A S$
$L A S$
ChE
$\stackrel{\mathrm{Agr}}{\mathrm{CE}}$
HSAgr
Com
CerE (SS)
Agr
Med
LAS
ChE
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Com
LAS
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SS
${ }^{\text {Agr }}$
LAS
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LAS
Comsp
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SS
ChE (SS)
${ }_{S}{ }^{\text {Agr }}$
$\operatorname{Sin}_{\mathrm{M}} \mathrm{S} E(S S)$
Cont
$C E$
Com
Com
LAS
Agr
Con
Com
LAS sp
Agr (SS)
Ch
Com
AE

Canton, China
Deadwood, South Dakota
Swatow, China
Sullivan
Independence, Missouri
Jacksonville
Oak Park
Pekin
Potomac
Carrolton
Ogden, Utah
Grayunlle
Champaizn
Green Valley
Champaign
Georgetown
Chicago
St. Louis, Missouri
Sterling
Champaign
Berkeley, California
Champaign
Evanston
Evanston
Dixon
Grecnville, Mississippi
Urbana
103 Urbana
Roodhouse
San Jose
Petersburg
Chicago
Rockford
Chicago
Charles City, Iowa
Chicago
Decatur
Brocton
McLean
Alton
Herscher
Okauchee, Wisconsin
Gifford
Vermilion
Chicago
Shanghai, China
Hunan, China
Alton
St. Louis, Missouri
Chicago
Latra
Mahomet
Vermont
LaGrange
Kagoshinna, Ken, Japan
Honolulut, P. I.
84ㄴ Hunan, China
Champaign
Oak Park
Maywood
East Lynn
Changuing, Clina
Watereliet, Michigan
Moweaqua
Chicago
Beardstown
Fulton
Chicago
Oszego
Chicago
Hoopeston
Santa Paula, California
Middletow'n. Indiana
Shanghai, China
Shanghai, China
Poland
Lake Fork
Brazil, Indiana
Oak Park
Sullivan

Zimmermann, Arthur Charles
Zimmermann, Harry Gustav
Zinser, Robert Bruce
Zolotkoff, Hyman Jacob
Zuckerman, Benjamin Selman

| AE | 127 | Peru <br> PAS <br> Com <br> LAS |
| :--- | ---: | :--- |
| AS | 89 | Washington <br> Chicago <br> (hicago |
|  |  |  |

## COLLEGE OF MEDICINE

## Name

Anderson, Richard Elseph
Appelle, Conrad George
Armstrong, Clifford Oakley
Armstrong, Victor Scott, B.S.
Baker, William Asa
Barbour, Orville Everett
Barickman, Robert Irving
Barnett, Edwin Judge
Beatty, Hannah Jane
Beilin, David Solomon
Bennett, John Francis
Benjamin, Harry Webb
Berge, Maurice Aurelius
Bergin, Clifford Edward
Bernstein, Alick
Bivings, Franklin Carlisle
Blim, Warren Caldwell
Blodgett, Pliny Russell, B.S.
Bolka, Bernard Joseph
Bourbon, Rollo Preston
Bowell, Roy Melson
Brosnan, John Thomas
Browne, Lewis Edwin Joel
Brucker, Edward Arthur
Burling, Wesley Morgan
Brynes, William Armstrong
Capron, Manley Joseph
Carothers, Herbert Chapman
Carpenter, Fred Elton
Carroll, William Franklin
Carstenson, Albert Brockway
Casey, Emmett Francis
Cecil, Eugene Randolph
Clamitz, Arthur Isadore
Clark, Alger Arthur
Claypool, Blaine Wilson
Cobb, Horace R
Cody, Michael Milton
Connell, Walter Joseph
Cooper, James Swaney
Cooper, Ward
Cotton, Schuyler Opp
Cross, Aubrey James
Curl, Howard E, A.B.
Cushman, Agnes Beulah
Cutting, Lloyd David
Dame, Louis
Doktorsky, Maurice
D'Vorak, Albert Charles
Dyer, William Holmes
Dysart, Benjamin Quincy
Earel, Fred Elwell
Eby, Ida
Eck, Cbarles Patt, Plı.C., Ph.G.
Ehrlich, Maxmilian Charles
Eisenberg, David
Elston, Lynn Wickwire
English, Lloyd Hayden
Evans, Arthur Morgan
Eye, Boyd Franklin, Jr.
Fetherston, James Edward
Fink, Marion Shelly
Finsand, Victor
Fisch, Max Eleazar
Fordyce, Alexander William
Fox, Natban Henry
Francisco, Sixto Acosta
Frederickson, Sophia Henrietta
Gates, Leo Vincent
Gilchrist, Virgil Martha, B.S.
Gilmore, Russel Adams
Glover, Harold Mortimer
Goggin, John Gervase
Goldberg, Benjamin
4
4
4
4

Rock Island
Mt. Carroll
Bloomington
Sioux Falls, South Dakota
Richmond, Maine
Peoria
Lewisville, Minnesota
Peoria
Lake Vicw, Ohio
Chicago
Waterford, Wisconsin
Chillicothe
Ransom
Chicago
Chicago
Atlanta, Gcorgia
Crcte
Harvard
Michigan City, Indiana
Kansas City, Missourri
Rolling Prairie, Indiana
Chicago
Lewistown, Missouri
Fond du Lac, Wisconsin
Muskegon, Michigau
Minneapolis, Minncsota
Waldron, Colorado
Chicago
Reasnor, Iowa
Hannibal, Missouri
Waverly, Iowa
Chicago
Chicago
Chicago
Chicago
Chicago
Kalamazoo, Michigan
Chicago
Farley, Iowa
New Wilmington, $P$..
Parsons, Kansas
Vermilion, South Dakota
Aberdeen, Was!.ington
Osborne, Kansas
Bethany, Missouri
Stevens Point, Wisconsin
Chicago
Chicago
Kewance, Wisconsin
Chicago
Grancille
Abingdan
Columbus Grove, Ohio
Chicago
Chicago
Minneapolis, Minnesota
Angola, Indiana
Chicago
Chicago
Talmadge, Kansas
Edmonton, Alberta
Chicago
Abcrdeen, South Dckota
Chicago
Gilman
Chicago
Batangas, Philippine Islands
Chicago
Elgin, Minnesota
Moscow, Idaho
Michigan City, Indiana
Newton, Kansas
Rochester, Minncsoto
Chicago

Golden, Waldo Emerson, A.B.
Golub, Samuel
Govig, Olaf John
Greenfield, Jacob Rachmiel
Grissom, Calton Barney
Groos, Louis Peter
Hall, Alice Kassie, A.B.
Hanson, Harlow James, B.S.
Hardinger, Paul Milton
Hartweil, Basil Orman
Hasek, Victor Hugo
Hawthorne, Grace Maude
Hilbert, John William
Hildebrand, Gustav John
Hommel, Placido Ramos Vasquez
Huber, Paul Robert, Ph.G.
Hughart, Harold Hershall
Hunt, Gerald Charles
Ignatius, Arsharvie
Israelson, William
Iverson, Louis
Jacohson, Clarence August
Jacobson, Leo Jacob
Jaracz, Walter John
Teffrey, James Robinson, Jr.
Jeffries, Daniel William
Telliffe, Martin Bushnell
Jones, Orion Chester
Karatz, Morris Baron
Katz, Harry
Kelly, Everett Clyde
Kinnedy, Josephine, A.B.
King, Kalph
Kipnis, Benzion
Kline, Ralph Glenn
Koch, Herman Carl
Koptik, George
Kulasavicz, Bernard IT
Kutzenberger, Helen Pearl
Kwauk, Zang Yien, B.S.
Lampert, Max
Langlois, Harvey Louis, A.B.
Leibinger, Henry Robert
Leiserwitz, Samuel Brody
Levinson, Arthur Samuel
Lipp, George Robert
Lifschutz, Jacob
Lungmus, Bruno
3

Nalcolm, William Alexander
Mandanas, Aniceto Ylagan
Marchan, Juan Sixto
Marcus, Morris
Mars, Hartley Farnham, Ph.C.
Martin, Leon Wade, Ph.C.
Masson, Hervey Fulton, Ph.C., M.D.
JIatthews, Cora Arminta
Neacham, Hubert Franklin
May, Edwin Ralph
Meggers, Edward Charles
Mercey, Raymond John
Moffett, Reuben Alvord
Morin, Oswell
Moulton, Gertrude Evelyn, A.B.
Autholland, William James
Murply, Thomas Benton
McCoy, Henry James
McGuiness, IIugh Stanley
McGuire, Mary Ruth
McRae, Maury Holcombe
McNally, William Duncan
Nakaya, Fusa
Nigro, Rocco
Norton, Harry Sims
Norwond, Lincoln Harrison
Oclis, Clara MI
Oliver, IIenry Earle
Olson, Clarence Willard
Orcutt, Arthur Henry, A.B., S.B.
Paskind, Jacob
Peterson, Harry Michael
Peterson, Joe Oliver
Peterson, Ralph Waldo
Piasezyanski, Francis
Pino, Ralph Harrison

Champaign
Chicago
Cylinder, Ioza
Chicago
Syracuse, Kansas
Escanaba, Michigan
Chicago
Hutchinson, Minnesota
Gays
Maysville, Missouri
Cedar Rapids, Iowa
Nevada, Iowa
Chicago
Sheboygan, Wisconsin
Neilsville, Wisconsin
Chicago
Pocatello, Idaho
Des Moines, Iowa
Armenia, Turkey in Asia
Chicago
Badger, Minnesota
Chicago
Chicago
East Chicago, Indiana
Nortonville, Kansas
Marietta
Mansfield, Ohio
Redmon
Minneapolis, Minnesota
Chicago
Chillicothe
Wheaton
Olney
Chicago
La Porte City, Iowa
Harvard
Cicero
Bessemer, Michigan
Jerseyville
Canton, China
Forest Park
Kankakce
Chicago
Herscher
Chicago
Brandon, Wisconsin
Chicago
Chicago
Higbee, Missouri
Banan, Philippine Islands
Barceloneta, Porto Rico
Chicago
St. Paul Park, Minnesota
Plainziell, Michigan
Washington, Iowa
Champaign
Oak Park
Clinton
Walker, Ioza
St. David
Wenona
Danville
Reva, South Dakota
Chicago
Oakesdale, Washington
Amboy
Chicago
Holstcin, Iowa
Corinth, Mississippi
Chicago
Kyota, Japan
Chicago
Pontiac
Bhejacket, Okiahoma
Oak Park
Sigourncy, Iowa.
Escanaba, Michigan
Arcola
Chicago
Chicago
Princeton, Minnesota
Chicago
Chicago
Ithaca, Michizan

Piro, Victor
Preston, William Booker
4
4
Propst, Duane Willard
Radabaugh, Rudolph Charles, B.S.
Radeff, Ivan Nicholas
Raihala, Wilhelm
Raim, William
Raman, Henry Benjamin
Rankin, Fred Martin
Ray, James Henry
Rock, John Lestrange, B.S., A.B.
Rosenheim, Ethel, B.S.
Rowland, Samuel Joy
Royster, Hallace Rector
Salpas, Spero
Sanders, George Edward, B.S.
Sapper, Herbert V L
Sauer, Francis Joseph
Schachter, Joseph Andrew
Schelm, George William
Schiff, Nathan Samuel
Schmidt, Elmer Jacob
Seletz, Abraham
Sered, Harry
Severson, James Melvin
Sexsmith, Edna Kathryne, B.A.
Short, Roy Davis
Shurtleff, Raymond Shryock
Silverstein, Willis Irving
Sladek, Edward Frank
Small, James Craig, B.S.
Smith, Edwin Jefferson, B.A.
Smith, Lloyd Emerson
Smith, Warren Braman, B.A.
Spiering, Arthur Kern
Stein, Michael
Stern, Jacob
Stern, Louis Henry
Stevenson, James
Stolfa, Ladislaw
Sutch, Armand Kredel
Sykes, Newman Marion, B.S.
Szwajkart, Adam Leo
Taub, Samuel Jack
Tanquary, John Hansford
Tharp, Herbert Milton
Tiedeman, Ian Davis
Tomlin, Russel
Tomsu, Charley Lewis
Toothaker, Joel Edwin
Tranter, Paul Webster
Vaughn, Edward Perry
Velitchcow, Methodi
Vrtiak, Emil
Waldmann, Louis Francis
Wagoner, Guy L
Walpe, Hyman S
Weaver, George Lynn
Wedge, Athol Horatio
Welden, Ned Amos
Whitmire, Clarence Leonard
Williams, Mary Edith, A.M.
Williamson, Earl Willbre
Wilson, Harry Hults
Wilson, Marcus Bryd
Wojniak, Frank
Wolf, Paul Jacob

Cle Elum, Washington
Salt Lake City, Utah
Springfield
Zumbro Falls, Minnesota
Chicago
Virginia, Minnesota
Chicago
Farmingdale
Akron, Ohio
Alexander City, Alabama
Lexington, Oklahoma
Chicago.
Srnnyside, Washington
Argo
Chicago
Champaign
Hartford, Connecticut
Chicago
Chicago
Denison, Iowa
New York City
Seymour, Wisconsin
Chicago
Milwaukee, Wisconsin
Deerfield, Wisconsin
Greenfield, Iowa
Whitchall
Cuba
Chicago
Chicago
Chambersburg, Pennsylvania
Belgrade, Minnesota
Marietta
Waukesha, W'isconsin
Fond du Lac, Wisconsin
Chicago
Chicago
Chicago
Chicago
Chicago
Chicago
Decatur, Alabana
Chicago
Chicago
Bellmont
Reasnor, Iowa
De Soto, Wisconsin
Easton
Renfrow, Oklahoma
Sandoval
Armour, South Dakota
Armenia, Turkey in Asia
Minneapolis, Minnesota
Bulgaria
Hungary
Council Bluffs, Iowa
Chicago
Antigo, Wisconsin
Waupun, Wisconsin
Wheaton
Waverly, Iowa
Evanston
Tuscola
Marshalltozu, Iowa
Huron, South Dakota
Chicago
Chicago

## Name

Achinelly, Oscar L.
Albers, William F

## Year

1
Alden, Ralph
$\frac{1}{3}$
Allen, Bernard R
Allgeier, J Harold
Anderson, Martin R
3
1
1

Arneson, Bert J
Baird, William G
Bashur, Abraham K
Bellan, Chester P
1
1

## Residence

La Plata, Argentine Republic
Chilton, Wisconsin
North Platte, Nebraska
Chicago
Chicago
Lynn Centcr
Chicago
Portland, Oregon
Oklahoma City, Oklahoma
McKeesfort, Pennsylvania
Chicago

Berens, Vincent I
Berman, Harold
Bernstein, Nathan
Best, Reginald B
Blaine, Luther I
Blair, Maurice I
Bonney, Thomas C
Bostik, E. Josepl1
Breyer, Austin S
Brown, Clyde
Chambers, Mrs. C C
Collins, Gerald Ralph
Condit, Harold H
Condron, Francis L
Cunningham, Norris L
Cusick, William
Dipple, Albert R
Dixon, Robert J
Drea, Arthur S
Dolson, John L
Erickson, Edwin O
Fellows, Mac C
Felz, John H
Fitzgerald, Edward V
Franzwa, Charles
Freeman, Charles Boyd
Frei, Clayton P
Frese, Francis G
Glazat, Carl E
Goldberg, Isadore
Gorham, Louis Andrew, Ph.G.
Gorman, Francis L
Hansen, Earl Edward
Harnick, H
Hewitt, Norman Oscar
Horiuchi, K D.D.S.
Houda, Emily
Humphrey, Robert I
Inde, Dean E
Jaros, Joseph E
Tarrett, Frank
Ielen, YTadimir
Tesser, Tacob
Johnson, Ernst G
Johnson, Earl E
Kadlec, Lillian
Ketterhagen, Alfred J
Koch, Lawrence M
Korsbrek, Oscar
Kousnetz, Louis B
Kowen, Samuel
Kozinski, Lucian C
Krost, Max Howard
Kubacki, Wauclau
Lasker, Herman
Lauter, Fred
Leach, Edward R
Lee, Carl S
Levinson, Rubin
Inincoln, Richard G
Litscher, Albert A
Loewenthal, Louis C
Logan, Harold Fench
Majts, Aage
Masters, Lisle W
McDonald, Clarence F
McCorncll, Charles J
McVey, Leo J
Meier, Louis
Meinhardi, John D
Mershimer, James D
Motlong, Chauncey E
Murphy, Lee Clair
Nemecek, Charles
Ogle, Harold D
Olson, William Dumass
Orloff, Louis
Ostrowski, Theodore
Owen, Jesse
Playman, Harold
Person, Allgot

Shakopee, Minnesota
Chicago
Chicago
Eianston
Douglas, Wyoming
Chicago
Aberdeen, South Dakota
Bellezille, Kansas
Chicago
Plant City, Florida
Chicago
Chicago
$V$ Crmillion, South Dakota
Chicago
Sanborn, New York
Bоwен
Chicago Heights
North Freedom, Wisconsin
Elroy, Wisconsin
Chicago
St. Joseph, Missouri
Charlotte, Michigan
Cottonwood, Minnesota
Coldwater, Michigan
Chicago
Mondovi, Wisconsin
Mondori, Wisconsin
Volga, South Dakota
Marquette, Michigan
Chicago
Grand Haven, Michigan
Chicago
Chicago
Chicaga
Menominee, Michigan
Chicago
Montreal, Canada
Kamidemizu, Japan
Chicago
Chicago
Warpty, Wisconsin
Chicago
Chicago
Prague, Bohemia
Chicago
Hažley, Minnesotc
Linwood, Nebraska
Aurora
Chicago
Burlington, Wisconsin
La Porte, Indiana
Wheaton, Minnesota
Chicago
Chicago
Chicago
Chicago
Chicago
Chicago
Chicago
Chicago
Mondovi, Wisconsin
Chicago
Chicago
For Lake, Wisconsin
Chicazo
Red Lodge, Montana
Fredcricksberg, Denmark
Angola, Indiana
Chicago
Gibson City
Chicago
Lincoln, Nebraska
Whitehall, Michigan
Chicago
Crete, Nebraska
Ruslyille
Chicago
Westrield, Wisconsin
Volga, South Dakota
Chicago
Chicago
Chicago
Steriens Point, Wisconsin
Chicago

Reckard, Harry
Reiland, Marjorie
Reiseman, Henry
Richter, Camille
Rosenthal, William
Rubin, Edward
Savage, Edmund H
Schiltz, Albert F
Schlussel, Noah
Sears, Victor H
Senty, Myron
Shalek, Victor
Shapiro, Fred H
Sherman, Robert I
Shlutz, Sidney
Skolnik, Herman H
Sippy, Burne O., A.B.
Smith, Pepper Wheeler
Starrett, Fred H
Stillerman, Jacob
Stubbs, James Walter
Tegtmeyer, George J
Teter, Harry Arthur
Thomas, Ashley T
Turner, William E
Upp, Roscoe W
Welch, Harold
White, Leslie George
Wilder, Robert E
Winsberg, Harry
Wood, Max T
Wood, Alfred Harold
Yeatman, Oscar B

Chicago
East Chicago, Indiana
Chicago
St. Joseph, Missouri
Chicago
Wheaton
Towa City, Iowa
Detroit, Michigan
Chicago
Arcadia, Wisconsin
Chicago
Chicago
Chicago
Chicago
Chicago
Chicago
Fort Toten, North Dakota
Hancock, Michigan
Chicago
Aurora
Chicago
Chicago
Faulkton, South Dakota
Wheatland, North Dakota
Hazana
Chicago
Golden
Elkhart, Indiana
Chicago
Charlotte, Michigan
Utica, New York
Huntsville, Alabama

## SCHOOL OF PHARMACY

| Name | Course* | Residence |
| :---: | :---: | :---: |
| Agdesteen, Oliver Toby | P 1 | Chicago |
| Albright, Mahlon Frank | ${ }_{P}^{P} \quad 2$ | Auburn, Indiana |
| Alstaedt, Benjamin William | $P 1$ | Chicago |
| Anderson, Ednah Blanche | PC 1 | Dow City, Iowa |
| Anderson, Otto | $P$ Pp | Chicago |
| Andrzelczyk, Vincent | $P \quad 2$ | Chicago |
| Antonello, Joseph | P sp | Chicago |
| Arneson, Wallace Gregory | $P \quad 1$ | Chicago |
| Aron, Fannie Lillian | $P 2$ | Chicago |
| Ayers, Leo | P sp | Chicago |
| Babbitt, Corydon Aephalia | $\begin{array}{ll}P & 1 \\ P\end{array}$ | Chicago |
| Bakkers, Arthur | $P 2$ | Chicago |
| Bakkers, Neff Kuyper | P 1 | Chicago |
| Barone, Christopher | ${ }_{P}^{P} \quad 2$ | Chicago |
| Baxa, Ladislav Edward | $P$ sp | Chicago |
| Beckert, LeRoy | $P$ sp | Chicago |
| Beckman, William | $P$ 2 | Chatsworth |
| Benedetti, Raymond | $P$ Pp | Chicago |
| Bidwell, Charles | $P 1$ | Albion, Indiana |
| Bily, Joseph Frank | $P$ Ppp | Chicago |
| Black, Waldo Knox | ${ }_{P}{ }^{1}$ | Chicago |
| Bland, Claude Edward | $P$ sp | Chicago |
| Bloch, William | $\begin{array}{ll}P & 1 \\ P\end{array}$ | Chicago |
| Bogard, Asher Holland | $P \quad 2$ | Olney |
| Borovik, Reuben Ray | $P 1$ | Chicago |
| Bradley, James Francis | ${ }_{P}^{P} \quad 2$ | Charleston |
| Brummall, Anna Belle | $P$ | Salisbury, Missouri |
| Butts, Joseph |  | Chicago |
| Calderon, Guillermo | P 1 | El Paso, Texas |
| Catlin, Herbert Muray | P 1 | Brookfield |
| Cech, Robert Frank | P sp | Chicago |
| Chochola, James Joseph | $\begin{array}{ll}P & 1 \\ P\end{array}$ | Chicago |
| Christiansen, Carl Bernhard | P 1 | Chicago |
| Claus, Robert | P 2 | Chicago |
| Cooban, Frank George, B.S. (Armour Institute) 1915 | P 1 | Chicago |
| Copeland, Thomas Bragg | $P \quad 2$ | Grand Junction, Colorado |
| Cortesi, Dante | $P 2$ | Cairo, Egypt |
| Crist, Raymond James | ${ }_{P}{ }^{P}$ | Chicago |
| Curlee, Raymond Anderson | $P 2$ | Ashley |
| Dahlman, Vernon John | $P$ sp | Chicago |
| Datz, Charles Percival | $P \quad 2$ | Chicago. |
| Davidson, Charles Elmer | $P \quad 2$ | St. Louis, Missouri |

*Abbreviations: P, Pharmacy; PC, Pharmaceutical Chemistry; 1, first year; 2, second year; sp , special.

Denson, Ernest Nichols
Dewey, Everett Willian
DiCosola, Anthony
Dillow, Russell Lowel
Downey, John Patrick
DuBroff, William
Dyniewicz, Hattie Adela
Dyniewicz, Josephine Marion
Easter, Joseph Henry
Erickson, Ernest
Erickson, Elmer
Feigl, Ferdinand John
Ferring, Alpbonze Peter
Florian, Tony Henry
Foreman, Daniel
Fox, Paul Mandal
Frederick, Albert Charles
Friedl, William John
Friedley, Andrew Carl
Fry, Leslie Sanborn
Furman, Earl Francis
Gasen, Harry
Giddings, Howard Donald
Goldhorn, Ernest
Goldman, Benjamin
Graham, Frank
Green, Leonard Ralph
Greenwood, Robert Lee
Guild, Grant
Haffner, Carl Francis
Hanna, Glenn Ensign
Hansen, Arthur Leon
Hayranek, Charles Joseph
Heidbreder, Grant Henry
Hill, Frank Wanless
Holden, Edwin Cyrus
Huhn, William
Jacks, Alan Wallace
Johannes, Fred Richard
Jones, William Leslie
Jordan, Clement
Kaminski, Richard Marshall
Kaplan, Samuel Salmon
Kartanas, Anthony George
Karel, Louis
Kirchner, Clemence Victor
Klein, Beulah
Kline, Raleigh William
Kostka, Walter John
Langel, Harry Charles
Langerman, Alexander
Latsis, Harry Hlia
Leone, John Edwin
Lindh, Carl Wilhelm Birger
Lofgren, David
Lowis, Benjamin
Lundgren, Oscar Ludvick
Mandel, Samuel
Marshall, Bruce Scott
Marsicano, Frank
Mawrence, Isracl
Mazzei, Orazio
Melvin, James Edwin
Menella, Vincent Robert
Miller, Carl Theodore
Miller, Thomas
Moss, Thomas Cole
Mott, William Davis
McCanse, Cecil C, B.S.
(Univ. of Missouri) 1909
McDonald, William James
McGinnis, Walten Thomas
Neumann, Herbert Leonard
Newar, Irving Julius
Nyberg, Carl Walter
Oliver, Richard Neil
Ortmann, Albert
Owens, Hubert Fred
Parker, Donald Lucas
Pelikan, Alice Eliska
Perez, Victor
Person, Frank Daniel
Perzik, William Henry

Lake Mills, Wisconsin
Chicago
Dongola
Chicago
Bellevue, Iozua
Chicago
Chicago
East St. Louis
Pontiac
Chicago
Nezv Vienna, Iowa
Chicago
Chicago
South Bend, Indiana
Chicago Heights
Chicago
Chicago
Lassen, Wisconsin
Lassen,
Chicago
Chicaso
Chicago
Carlinville
Herrin
Chicago
Geneseo
Bloomington
Chicago
Chicago
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Quincy
Chicago
Chicago
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Chicago
Peoria
Wapella
Chicago
Chicago
Chicago
DeKalb
Downer's Grove
Chicago
Chicago
Robinson
Cliicago
Chicago
Stockholm, Sweden
Chicago
Chicago
Highland Park
Chicago
Chicago
Melrose Park
Chicago
Chicago
Chicago
Chicago
Chicago
Chicago
Ottawa
Princeton, Kentucky
Columbia, Missouri
Murpliysboro
Rochelle
Chicago
Chicago
Clinton, Iowa
Chicago
Kankakee
Clinton
Vienna
Seyba, San Domingo, West Indies
Chicago
Chicago

Petronek, Charles Wesley
Pierce, Vernon Prescott
Plain, Homer Fielden
Pohlman, Panl Henry
Porter, Lillian
Post, Charles Ezra
Prutzman, Harold Claude
Quartetti, Leonard
Real, Dennis Bernard
Rey, Young
Ritzman, Harvey
Robinson, Garnsie H
Roman, Miguel Angel
Ruder, Rose J
Rylander, Reuben August Ferdinand
Schaefer, Arthur William
Scheiwe, William Albert
Schobert, Rudolph Johannes
Schreyer, Michael
Scogin, Joseph William
Schultz, Ernest Christian
Sedlacek, George
Seibert, Lyle Albert
Shapiro, Leo Harold
Sikucka, Jeanette Helen
Sikyta, Henry William
Silverman, Samuel
Simmons, Donald Fletcher
Slama, Joseph Frank
Slepicka, Irwin Miles
Smith, Francis Parke
Snyder, Dayle Albert
Spanier, William Charles
Stark, LeRoy T. D.
Steffen, Edward Diedrich
Stegmann, Jacob Christopher
Stein, Victor
Steinweg, Walter Charles
Still, Perrie Clayton
Templeton, James William
Thoroman, Ralph Rickey
Tscherney, Harry Joseph
Turnell, Edward Oscar
Turner, Henry Owen
Ude, Louis Edward
Underriner, Edwin Joseph
Vale, Leland LeMarr
Vahlteich, Hans Walter
Van Kempema, Richard
Vesely, James
Vlazny, John George
Vondracek, Albert Frank
von Steuben, Stephen
Voots, Joseph Gerhardt
Vovesny, Joseph Paul
Wallace, Lee Edward
Walz, August Anton
Ward, Burt Hamor
Weaver, Robie Holland
Weber, Paul Ernest
Werner, LeRoy Valentine Carl
Whitley, Walker Edward
Whitney, Guy Vernon
Wilhelm, Werner Henry
Wilson, Charles Harvey
Wilson, Ruth Frieda
Wokoun, Frank
Zalubowski, Anton
Zarobsky, Frank James
Zeitmann, Harry
Young, Eugene

| $\stackrel{P}{P}$ sp | Kankakee |
| :---: | :---: |
| $P 1$ | Chicago |
| $P$ Pp | Springfield |
| $P 1$ | Palatine |
| $P 2$ | Chicago |
| P 1 | Chicago |
| $P$ | Princeton |
| $P \quad 2$ | Chicago |
| $P$ sp | Moline |
| $P C$ sp | Soon Chun, Korea |
| $P \quad 2$ | Orangeville |
| $P$ | Rockford |
| $P$ sp | Santiago, San Domingo |
| $P 1$ | Chicago |
| $P 2$ | Joliet |
| $P$ sp | Galena |
| PC 1 | Crete |
| $P$ | Chicago |
| $P$ | Chicaso |
| $P$ sp | Wapella |
| P 2 | Columbus, Wisconsin |
| $P$ | Chicago |
| $P 1$ | Ashley |
| $P C 1$ | Chicago |
| $P 2$ | Chicago |
| $P 1$ | Chicago |
| P sp | Chicago |
| $P 1$ | Girard |
| $P$ sp | Cicero |
| $P C 1$ | Cicero |
| $P$ | Paris |
| $P$ | Astoria |
| $P$ | Chicago |
| $P$ | Chicago |
| $P$ | Whitefish, Montana |
| $P$ | Portoge, Wisconsin |
| $P$ | Chicago |
| $P$ | Chicago |
| $P 1$ | DeKalb |
| $P 2$ | Rockport, Missouri |
| $P \quad 2$ | Mt. Sterling |
| $P$ sp | Chicago |
| $P$ sp | Chicago |
| $P{ }^{P}$ | St. Louis, Missouri |
| $P C 1$ | Carmi |
| $P$ | Effingham |
| $P$ | Henry |
| P | Chicago |
| $P$ | Chicago |
| $P 1$ | Chicago |
| $P$ | Chicago |
| P 1 | Chicago |
| $P 1$ | Chicago |
| $P$ sp | Quincy |
| $P 1$ | Chicago |
| $P$ sp | Chicago |
| $P$ sp | Hartington, Nebraska |
| $P \quad 1$ | Toulon |
| $P 2$ | Muncie, Indiana |
| $P$ sp | Herscher |
| $P \quad 1$ | Milwaukee, Wisconsin |
| $P \quad 2$ | Waterford, Wisconsin |
| $P 2$ | Wenona |
| $P \quad 2$ | Chicago |
| $P 1$ | Pomona, California |
| $P C 1$ | Chicago |
| $P 2$ | Chicago |
| $P$ sp | Chicago |
| $P$ Ppp | Chicaso |
| $P$ sp | Chicago |
| $P 1$ | Flanigan |

Kankakes
Chicago
Pringiela.
Palatine
Chicago
Princeton
Chicago
Moline
Soon Chun, Korea
angeville
ockiord
Santiago, San Domingo
Joliet
Galena
Crete
Chicago
Wapella
Columbus, Wisconsin
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Ashley
Chicago
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ticago
Cicero
Paris
Astoria
Chicago
Whitefish, Montana
Wisconsin
Cicago
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Rockport, Missouri
It. Sterling
Chicago
St. Louis, Missouri
Carmi
Henry
Chicago
Chicago
Chicago
cago
Quincy

Hartington, Nebraska
Toulon
uncie, Indiana
Herscher
Milzaukee, Wisconsin
atertord, Wisconsin
enona
Chicago
Chicago
Chicago
Chicago
Chicago
Flanigan

# DEGREES CONFERRED 

## 1915

## THE UNDERGRADUATE COLLEGES

## Degrees of Bachelor of Arts, Bachelor of Literature, Bachelor of Science, and Bachelor of Music

## Conferred June 16, 1915

Louts Asa Abbott, Bachelor of Science (Agriculture*)
Mary Olena Adams, Bachelor of Arts (Liberal Arts)
William Calyin Adams, Bachelor of Science (Chemistry*)
Harry Francis Ainsworth. Bachelor of Science (Agriculture)
Hlarry Gregory Answorth, Bachelor of Science (Agriculture)
Laura Anna Alband, Bachelor of Arts (Liberal Arts)
Harold Cornelius Albin, Bachelor of Science (Agriculture)
Otho William Allen, Bachelor of Arts (Liberal Arts)
Andrew John Albert Anderson, Bachelor of Science (Civil Engineering)
Clarence Joseph Anderson, Bachelor of Arts (Liberal Arts*)
Irving Anderson, Bachelor of Science (Municipal and Sanitary Engineering)
Walker Whitcomb Anderson, Bachelor of Science (Architecture)
William French Anderson, Bachelor of Science (Agriculture)
Hans Henry Lewis Andresen, Bachelor of Science (Architecture)
John Asa Andrews, Bachelor of Science (Agriculture)
Michael Louis Angarola, Bachelor of Science (Civil Engineering)
Dorothy Maude Armington, Bachelor of Arts (Liberal Arts)
Phillips F Armour, Bachelor of Science (Liberal Arts)
Della Estelle Armstrong, Bachelor of Arts (Liberal Arts)
Lennox Francois Armstrong, Bachelor of Science (Mechanical Engineering)
Victor Scott Armstrong, Bachelor of Science (Science)
Walter Clark Armstrong, Bachelor of Science (Agriculture)
Edivard Laurence Atrins, Bachelor of Science (Agriculture)
Barton Slade Avery, Jr.. Bachelor of Science (Agriculture)
Harold Emery Austin, Bachelor of Science (Mechanical Engineering)
Alice Grace Axelson, Bachelor of Arts (Science)
Holland Robert Bacher, Bachelor of Science (Ceramic Engincering*)
Charles Henry Bade, Bachelor of Science (Architecture)
Alexis Matthew Bagusin, Bachelor of Arts (Liberal Arts)
John Willard Bailey, Bachelor of Science (Architecture)
La Force Bailey, Bachelor of Science (Architecture)
Alfred Michael Mack Baker, Ir., Bachelor of Science (Agriculture)
John Dudley Ball, Bachelor of Science (Electrical Engineering)
Frank Milton Bane, Bachelor of Science (Agriculture)
Harold Edward Barden. Bachelor of Science (Electrical Engineering)
Byrl Abbott Barker, Bachelor of Science (Agriculture)
Charles Pruden Darkman, Bachelor of Arts (Liberal Arts)
Somendra Chandra Ded Barman, Bachelor of Arts (Liberal Arts)
Allen Littler Barnes, Bachelor of Science (Architecture)
Nelle Barnes, Bachelor of Arts (Liheral Arts)
Robert Olney Barnes, Bachelor of Arts (Science)
August Matthew Barreau, Bachelor of Science (Architectural Engineering)
Edna Barringer, Bachelor of Arts (Liberal Arts)
Alexander Fraser Barron, Bachelor of Science (Mechanical Engincering)
John Percival Beall, Bachelor of Arts (Liberal Arts)
Ward Powers Peard, Bachelor of Science (Agriculture)
Martha Selma Beck, Bachelor of Arts (Liberal Arts)
Edwin Louis Beifuss, Bachelor of Science (Agriculture)
Emerson DeWitt Bell, Bachelor of Science (Electrical Engineering)
Mary Acrelia Bell, Bachelor of Arts, (Liberal Arts)
Arthur Jacob Benner, Bachelor of Arts (Science)
Wieliam Tacob Benner, Bachelor of Arts (Science)
William Harrison Bennett, Bachelor of Arts (Science)
Arthur Edward Eenson. Bachelor of Science (Architecture)
Frank Bergmann, Bachelor of Science (Architectural Engineering)
Pearl Anva Maria Bernhardt, Bachelor of Arts (Liberal Arts)
Harriett Josephine Berninger, Bachelor of Arts (Liberal Arts)
Charles Harry Berwald, Bachelor of Science (Electrical Engineering)
Vfra Beyer, Pachelor of Arts (Liberal Arts)
Harry Edward Bigler, Bachelor of Arts (Liberal Arts)
Artiler Barves Bingiams, Bachelor of Science (Agriculture)
*With thesis.

George French Bissel.l, Bachelor of Science (Ceramics*)
George Washingron Blake, Bachelor of Science (Civil Engineering)
Pliny Russell Blodgett, Bachelor of Science (Science)
Edith Elliott Boggess, Bachelor of Science (Agriculture)
MacDonald Charles Booze, Bachelor of Science (Ceramics*)
Canuto Octavio Borromeo, Bachelor of Science (Mechanical Engineering)
Loren Cushing Bow, Bachelor of Science (Ceramic Engineering*)
Hazel W Bowlus, Bachelor of Arts (Liheral Arts)
Harold Smith Bradley, Bachelor of Science (Architectural Engineering)
George Raymond Brannon, Bachelor of Science (Agriculture)
Leslie Orville Bricht, Bachelor of Science (Science)
William Sanford Brock, Bachelor of Science (Agriculture)
Nathan Bromberg, Bachelor of Science (Ceramic Engineering*)
Elizabeth Maude Brooks, Bachelor of Arts (Liberal Arts)
Fannie Maria Brooks, Bachelor of Arts (Liberal Arts)
Oscar Franklin Brooks, Bachelor of Science (Agriculture)
Elmer Alfred Brown, Bachelor of Science (Electrical Engineering)
Elmer Arthur Brown, Bachelor of Science (Electrical Engineering)
John Bernis Brown, Bachelor of Science (Chemistry*)
Pembroke Holcomb Brown, Bachelor of Arts (Liberal Arts*)
Waldo Reinhart Brown, Bachelor of Arts (Science)
Lloyd Warfield Brown, Bachelor of Science (Agriculture)
Everett Robert Brunskill. Bachelor of Science (Chemical Engineering*)
Ermane Gaylord Bucher, Bachelor of Science (Ceramics*)
Carl William Buckler, Bachelor of Arts (Science)
Roy Irving Buchanan, Bachelor of Science (Agriculture)
Katherine Margaret Buenger, Bachelor of Arts (Liberal Arts)
Maude Emily Bull, Bachelor of Science (Agriculture)
Frank Avery Bush, Bachelor of Science (Liberal Arts)
George Rowland Bưtler, Bachelor of Science (Civil Engineering)
Byrdie Blye Butzer, Bachelor of Arts (Liberal Arts)
Verna Viola Butzer, Bachelor of Arts (Liheral Arts)
Lloyd Raymond Caldwell, Bachelor of Science (Agriculture)
Lora Alice Canaday, Bachelor of Arts (Liberal Arts)
Arnold Wilmore Carlsen, Bachelor of Science (Architectural Engineering)
Mary Vance Carney, Bachelor of Arts, (Lihcral Arts)
Charles Kneeland Carpentrr, Bachelor of Science (Architecture)
Daniel Bernard Carroll, Bachelor of Arts (Science)
Alice Carter, Bachelor of Arts (Liberal Arts)
Lucile Carter, Bachelor of Science (Agriculture)
Joseph Bernard Casserly, Bachelor of Science (Agriculture)
William Harold Chambers, Bachelor of Science (Agriculture)
Hari Chand, Bachelor of Science (Electrical Engineering)
Edward Neal Chapman, Bachelor of Science (Chemical Engineering*)
Ralph Dwyer Cinfton Chapman, Bachelor of Arts (Liberal Arts)
Yun Tin Cheng, Bachelor of Arts (Liberal Arts*)
Glen Christy, Bachelor of Music*
Eimer Allen Claar, Bachelor of Arts (Liberal Arts)
Helen Beulah Clark, Bachelor of Arts (Liberal Arts)
Ird Reuben Cline, Bachelor of Science (Civil Engineering)
Ira Newton Clever, Bachelor of Science (Municipal and Sanitary Engineering)
David Clyman, Bachelor of Science (Architectural Engineering)
Mildred Leann Coburn, Bachelor of Arts (Liberal Arts*)
Charles Blake Cochran. Bachelor of Arts (Science)
Harry Frank Cogdali, Bachelor of Science (Agriculture)
Frank Maynard Colcord, Bachelor of Science (Agriculture)
Paul Wayne Coleman, Bachelot of Science (Agriculture)
Mary Elizabeth Collom, Bachelor of Arts (Liberal Arts)
Harold Edward Colson, Bachelor of Science (Agriculture)
Daniel Franklin Comstock, Bachelor of Arts (Liberal Arts)
Beatrice Virginia Copley, Bachelor of Arts (Liberal Arts)
Eula Ethelyn Cordell, Bachelor of Arts (Liberal Arts)
Seymour Corley, Bachelor of Science (Civil Engineering)
Cuester McElfresh Crain, Bachelor of Arts (Liberal Arts)
Chalmers Woodruff Crawford, Bachelor of Science (Agticulture)
Helen Lucile Crawford, Bachelor of Arts (Science)
Edward Woodin Creichton, Bachelor of Science (Agriculture)
Lucretia Cressey, Bachelor of Arts (Liberal Arts)
Edward Criss, Bachelor of Science (Agriculture)
Harold Lane Cummings, Bachelor of Arts (Liberal Arts)
Anna Elizabeth Daugherty, Bachelor of Arts (Liberal Arts)
Samuel Sylvester Davis, Bachelor of Science (Agriculture)
Helen Marie Dawson, Bachelor of Arts (Liberal Arts)
Homer Ward Deakman, Bachelor of Science (Civil Engineering)
Benjamin Harrison Decker, Bachelor of Science (Electrical Engineering)
William Charles Deiss, Bachelor of Science (Electrical Engineering)
Jack Erwin Demuth, Bachelor of Science (Civil Engineering)
Ciarence Gordon DeSwarte, Bachelor of Science (Electrical Enginecring)
Oscar Casper Detering, Bachelor of Arts (Liberal Arts)
Lulu Belle Dexter, Bachelor of Music*
Thomas Wilbur Dieckmann, Bachelor of Arts (Liberal Arts*)
Alice Margaret Dietzer, Bachelor of Arts (Liheral Arts)

[^103]Essel Ray Dillavou, Bachelor of Arts (Liberal Arts)
Ira Wilbur Dingledine, Bachelor of Arts (Science)
Bernhard Ernst George Dirks, Bachelor of Science (Architecture)
Earl Josepir Dix, Bachelor of Science (Electrical Engineering)
Verne Foster Dobbins, Bachelor of Science (Electrical Engineering)
Margaret Isabella Doherty, Bachelor of Music*
Ethel Mary Dole, Bachelor of Science (Agriculture)
Lillian Dora Dole, Bachelor of Arts (Science*)
Justin Aloysius Domas, Bachelor of Arts (Science)
Henry Dubin, Bachelor of Science (Architecture)
Sven Duner, Bachelor of Science (Agriculture)
Lawrence Henry Dunham, Bachelor of Science (Chemical Engineering*)
David Woods Dunlap, Bachelor of Science (Agriculture)
Elizabeth Moore Dunn, Bachelor of Arts, (Liberal Arts)
Marshall Simeon Dutton, Bachelor of Science (Municipal and Sanitary Engineering)
Henry Charles Eckstein, Bachelor of Arts (Science*)
Edith Edgar, Bachelor of Arts (Liberal Arts)
Alwin Clyde Eide, Bachelor of Science (Chemical Engineering*)
Mildred Roach Elder, Bachelor of Arts (Liberal Arts)
Aram Movses Eleazarian, Bachelor of Science (Electrical Engineering)
Edward Charles Elles, Bachelor of Arts (Liberal Arts)
Jeannette Morrison Engle, Bachelor of Arts (Liberal Arts)
Ruth Ernest, Bachelor of Arts (Science)
Walter Boynton Erwin, Bachelor of Arts (Liberal Arts)
Leo Eslick, Bachelor of Science (Mechanical Engineering)
Philip Hiram Everhart, Bachelor of Arts (Liberal Arts)
Frank Webster Farley, Eachelor of Science (Agriculture*)
Orena Farmer, Bachelor of Arts (Liberal Arts)
Fay Edward Faulkner, Bachelor of Arts (Science)
Guy Columbus Faurote, Bachelor of Science (Architecture)
Florence Fehrmann, Bachelor of Arts (Liberal Arts)
Kaimin Kay Feng, Bachelor of Science (Civil Engineering)
Clarence Milford Ferguson, Bachelor of Science (Agriculture)
Stella Belle Finney, Bachelor of Arts (Liberal Arts)
Julian Lounsbury Fish, Bachelor of Science (Agriculture)
Abigail Eliza Fisirer, Bachelor of Arts (Liberal Arts)
Harold Lee Flodin, Bachelor of Science (Mechanical Engineering)
Alden Knowlon Fogg, Bachelor of Science (Civil Engineering)
Gooey Yue Fong, Bachelor of Science (Electrical Engineering)
Everett Orren Fontaine, Bachelor of Arts (Liberal Arts)
Frank Alfred Forty, Bachelor of Science, (Electrical Engineering)
Donald DeVere Foster, Bachelor of Arts (Liberal Arts*)
Wiley Marion Fowler, Bachelor of Arts (Liberal Arts)
Disk Syivester Frayer, Bachelor of Science (Civil Engineering)
George Carlyle Frazer, Bachelor of Science (Agriculture)
Arthur Owen Frazier, Bachelor of Arts (Liberal Arts)
Hazel Mary Frye, Bachelor of Arts (Liberal Arts)
Elizabeth Genevieve Fuller, Bachelor of Arts (Liberal Arts*)
Harold Coulon Fuleer, Bachelor of Science (Architecture)
Clare Curtiss Garible, Bachelor of Arts (Liberal Arts)
Tohn Low Gardiner, Bachelor of Arts (Liberal Arts)
William Raymond Garten, Bachelor of Science (Science)
Edward Franklin Gehrig, Bachelor of Science (Mechanical Engineering)
Charles Francis Geiger, Bachelor of Science (Ceramic Engineering*)
Leslie Godfrey George, Bachelor of Arts (Liberal Arts)
Cifarles Rannelle Gibson, Bachelor of Science (Agriculture)
Mable Helen Gibson, Bachelor of Science (Agriculture)
George Thallon Gill, Bachelor of Science (Agriculture)
Leonard Nason Gilmore, Bachelor of Science (Agriculture)
Roy Thomas Glassco, Bachelor of Science (Agriculture)
Walter Earl Glover, Bachelor of Science (Architecture)
Eleainor Godfrey, Bachelor of Arts (Liberal Arts)
Irma Gretchen Goebel, Bachelor of Arts (Liberal Arts)
Roy Allen Goff, Bachelor of Science (Agriculture)
Waldo Emerson Golden, Bachelor of Arts (Science)
Wesley Barton Golden, Bachelor of Arts (Liberal Arts*)
Ellis Ralph Goldman, Bachelor of Science (Civil Engineering)
Arzapalo Ernesto Gomez, Bachelor of Science (Civil Engineering)
Vera Ople Gossett, Bachelor of Arts (Liberal Arts)
Elizabeth Ellen Grafam, Bachelor of Arts (Liberal Arts)
Perry Henry Graves, Bachelor of Arts (Liberal Arts)
Alta Green, Bachelor of Arts (Liberal Arts*)
Eulalie Green, Bachelor of Arts (Liberal Arts)
Ralph Green, Bachelor of Science (Civil Engincering)
Roland Everett Greenburg, Bachelor of Science (Mechanical Engineering)
Joseph Nathaniel Greene, Bachelor of Science (Agrictulture)
John Mitchell Griffin, Bachelor of Science (Agriculture)
Mildred Elizabeth Griffith, Bacbelor of Arts (Liberal Arts)
James Howard Griftner, Bachelor of Science (Mining Engineering)
George Durfee Griswold, Bachelor of Science (Mechanical Engineering)
Augustus Ifenry Grunewald, Jr., Bachelor of Science (Agriculture)
Lillian Irene Guffin, Bachelor of Arts (Liberal Arts)

[^104]Edith Gwinn, Bachelor of Arts (Liheral Arts)
Vernon William Hang, Bachelor of Science (Chemistry*)
Grorge William Hann, Bachelor of Arts (Science)
Arthur Hagener, Bachelor of Science (Civil Engineering)
William Stiles Haggott, Bachelor of Science (Electrical Engineering)
Lisle Gwynne Hall, Bachelor of Science (Agriculture)
Henry James Halterman, Bachelor of Science (Mechanical Engineering)
Gertrude Halushka, Bachelor of Arts (Liberal Arts*)
Andrew Baker Hammitt, Bachelor of Science (Architectural Engineering)
Marguerite Mary Hanford, Bachelor of Arts (Liberal Arts)
Hubert Henry Harris, Bachelor of Science (Agriculture)
Lois Myrtle Harris, Bachelor of Arts (Science)
Mandel H Harris, Bachelor of Science (Architecture)
Eugene Milton Harsch, Bachelor of Science (Agriculture)
Roland Emerson Hart, Bachelor of Science (Electrical Engineering)
Naoma R Hartrord, Bachelor of Arts, (Liberal Arts)
Roy Harrison Haslund, Bachelor of Science (Architecture)
Carl Havber, Bachelor of Science (Architecture)
Fred Albert Healy, Bachelor of Science (Agriculture)
Edith Mary Heath, Bachelor of Arts (Liberal Arts)
Trevor Morse Heath, Bachelor of Science (Agriculture)
John Franklin Hedgcock, Jr., Bachelor of Science (Agriculture)
John Harrison Hedgcock, Bachelor of Science (Agriculture)
Alfred Martin Heinzelmann, Bachelor of Science (Chemical Engineering*)
Linn Helander, Bachelor of Science (Mechanical Engineering)
Lillie Isabel Helgeland, Bachelor of Arts (Liberal Arts)
Chester Abram Hemphill, Bachelor of Science (Agriculture)
Mary Anne Henry, Bachelor of Arts (Liberal Arts)
Ralph Leroy Hermann, Bachelor of Science (Electrical Engineering)
James Burr Hickmann, Bachelor of Arts (Liberal Arts)
Louis John Hills, Bachelor of Science, (Municipal and Sanitary Engineering)
Robert Bruce Hinman, Bachelor of Science (Agriculture)
Clara Lillie Hirtzel, Bachelor of Arts (Liberal Arts)
Earl Wilkie Hitchcock, Bachelor of Science (Agriculture)
Agnes Virginia Hitt, Bachelor of Arts (Liberal Arts)
Katherine Hitt, Bachelor of Arts (Liberal Arts)
Frank A Horrner, Bachelor of Science (Science*)
Anna Cathryn Hoffert, Bachelor of Arts (Liberal Arts)
Arthur Christopher Hoffman, Bachelor of Science (Agriculture)
Nai Ching Ho, Bachelor of Arts (Liberal Arts)
Maurice Elon Hoit, Bachelor of Science (Agriculture)
Henry Walter Hollard, Bachelor of Science (Agriculture)
Noble Parker Hollister, Bachelor of Science (Agriculture)
Max Holmsburger, Jr., Bachelor of Science (Mechanical Engineering)
Clifford Firoved Hood, Bachelor of Science (Electrical Engineering)
William Hornal, Bachelor of Science (Agriculture)
Charles Dean Howe, Bachelor of Arts (Liberal Arts)
Marie Esda Hubbard, Bachelor of Arts (Liberal Arts)
Curtis Clay Hubbart, Bachelor of Science (Mining Engineering)
Arthur Herman Huisken, Bachelor of Science (Chemical Engineering*)
Sidney Marion Hull, Bachelor of Science (Chemistry*)
Guy Harold Husted, Bachelor of Science (Agriculture)
Leo Alfred Husted, Bachelor of Science (Agriculture)
Marjorie Hutchins, Bachelor of Music**
Noel Cariysle Ice, Bachelor of Arts (Liberal Arts)
Stanley Pferrer Irvin, Bachelor of Arts (Liberal Arts)
Thomas Ralph Isaacs, Bachelor of Science (Agriculture)
Mabel Clare Jackson, Bachelor of Arts (Liberal Arts)
Walter Herman Jacobsen, Bachelor of Arts (Liberal Arts*)
Ranjit Singh Jain, Bachelor of Science (Electrical Engineering)
Edward Allen James, Bachelor of Science (Mechanical Engineering)
Lenton Willis James, Bachelor of Science (Agriculture)
William Bancroft Jarvis, Bachelor of Arts (Liberal Arts)
Walter Wilson Jennings, Bachelor of Arts (Liberal Arts*)
Milton Owen Jensen, Bachelor of Arts (Liberal Arts)
Hubert Jessen, Bachelor of Science (Agriculture)
Harold Sucese Johnson, Bachelor of Science (Architecture)
Florence Ruby Johnson, Bachelor of Arts (Liberal Arts)
Clifford Crouch Jones, Bachelor of Science (Agriculture)
Milton Doerr Jones, Bachelor of Science (Electrical Engineering)
Paul Erastus Jones, Bachelor of Science (Architecture)
Jook Hing Jue, Bachelor of Arts (Liberal Arts)
Marjorie Marie June, Bachelor of Arts (Liberal Arts)
Ruth Amanda Kair, Bachelor of Arts (Liberal Arts)
Guy Wilford Karraker, Bachelor of Arts (Liberal Arts)
Frances Ford Keen, Bachelor of Arts (Liberal Arts)
Albert William Keese, Bachelor of Science (Ceramics*)
Florence Keller, Bachelor of Arts (Libcral Arts)
Amelia Lucinda Kellogg, Bachelor of Arts (Science*)
Lother Eugene Kennedy, Bachelor of Arts (Science)
Pearle Keene Kernall, Bachelor of Science (Agriculture)
Leslif Arthur Kibbe, Bachelor of Science (Architectural Engineering)
"With thesis.

Edward Luther King, Bachelor of Science (Agriculture)
Wayne Isaac Kirby, Bachelor of Arts (Science)
Helmuth Julius Kircher, Bachelor of Science (Agriculture)
Haddon Spurgeon Kirk, Bachelor of Arts (Liberal Arts*)
Archibald Farley Kirkland, Bachelor of Science (Architecture)
George Charles Klehm, Jr., Bachelor of Science (Floriculture*)
Lloyd Dunaway Knapp, Bachelor of Science (Civil Engineering)
Edward Franz Knemeyer, Bachelor of Science (Architecture)
Wilbert George Knoebel, Bachelor of Science (Architecture)
Joseph Ludwick Kobylanski, Bachelor of Science (Architectural Engineering)
Charles Edward Koch, Bachelor of Science (Mechanical Engineering)
Harry Charles Koch, Bachelor of Science (Mechanical Engineering)
Carrie Adelaide Kromer, Bachelor of Arts (Liberal Arts)
Otto Arthur Krueger, Bachelor of Science (Architectural Engineering)
Wilfred Henry Kuhn, Bachelor of Science (Civil Engineering)
George Lane Kyle, Bachelor of Science (Electrical Engineering)
John Samuel Lafferty, Bachelor of Science (Architectural Engineering)
Grace Etheridge La Frenz, Bachelor of Arts (Liberal Aits)
Lambert Linus Larson, Bachelor of Science (Chemical Engineering*)
Louis James Laskin, Bachelor of Science (Architecture)
Irma Ada Latzer, Bachelor of Arts (Liberal Arts)
Edward George Lauterbach, Bachelor of Science (Agriculture)
Mary Maria Lawson, Bachelor of Arts (Liberal Arts)
Bradley Cleaver Lawton, Bachelor of Arts (Liberal Arts)
Arthur Bowen Leavens. Bachelor of Science (Architectural Engineering)
Izora Lee, Bachelor of Science (Agriculture)
Gertrude Emma Lehmann, Bacheior of Arts (Liberal Arts)
Carl Helge Samuel Lekberg, Bachelor of Science (Electrical Engineering)
Gladys Adeline Leonard, Bachelor of Arts (Liberal Arts)
William Nathan Leonard, Bachelor of Science (Agriculture)
Arthur Charles Gustav Leverenz, Bachelor of Science (Mechanical Engineering)
Tu Hung Liang, Bachelor of Science (Agriculture)
Curtis Roy Light, Bachelor of Science (Civil Engineering)
Silas Carl Linbarger, Bachelor of Science (Ceramic Enginecring*)
George Isadore Lindberg, Bachelor of Science (Mechanical Engineering)
Grace Linder, Bachelor of Arts (Liberal Arts)
Ida Hubbard Lindley, Bachelor of Arts (Liberal Arts)
George Heath Lindsey, Bachelor of Science (Electrical Enginecring)
Hilah Jane Link, Bachelor of Arts (Liberal Arts)
Thomas Harold Lloyd, Bachelor of Science (Agriculture)
Fern Marguerite Loing, Bachelor of Arts (Liberal Arts)
Joseph Charles Longueville, Bachelor of Science (Science)
Frederick Gunard Lundgren, Bachelor of Science (Mechanical Engineering)
Roy Simeon Lundin, Bachelor of Science (Agriculture)
Robert Stookey Lutz, Bachelor of Science (Electrical Enginecring)
Louis Thornton Lyman, Bachelor of Science (Agriculture)
Grace Macbeth, Bachelor of Music*
Cifarles Hartman McCauley, Bachelor of Science (Architecture)
Carrie Lucile McCauley, Bachelor of Arts (Liberal Arts)
Harry Bruce MicClugage, Bachelor of Arts (Science*)
Glenn Wilimam McCuen, Bachelor of Science (Agriculture*)
Harry Weber McCulloch, Bachelor of Arts (Science)
Ora Mac McGhee, Bachelor of Science (Agriculture)
Edna Belle McKee, Bachelor of Arts (Liberal Arts)
John Latimer Mckeown, Bachelor of Science (Architectural Engineering)
George Burr McMillen, Bachelor of Arts (Liberal Arts*)
Mary Cecilia McNally, Bachelor of Arts (Liberal Arts)
Earle Steele McPherson, Bachelor of Science (Mechanical Engineering)
Nellie Frances McVeigh, Bachelor of Arts (Liberal Arts)
Helen Lovise Madden, Bachelor of Music*
August Mader, Bachelor of Science (Architectural Engineering)
Robert Carleton Maley, Bachelor of Science (Mechanical Engineering)
Henry Adam Lewis Marbach, Bachelor of Science (Civil Engineering)
Margaret Ann Marbold, Bachelor of Arts (Liberal Arts)
Sarah Ann Marks, Bachelor of Arts (Science)
Leo Daniel Marquis, Bachelor of Science (Architecture)
Frederick August Kuhs Marks, Bachelor of Science (Civil Engineering)
Ruti Keefer Matthews, Bachelor of Arts (Liberal Arts)
Glenn Marlow Matteson, Bachelor of Science (Agriculture)
John Dwigilt Mattison, Bachelor of Sciencc (Civil Engineering)
Edwin Whitaker Mattoon, Bachelor of Arts (Science*)
Margaret Mildred Meililop, Bachelor of Arts (Science)
Nathan Meltz, Bachelor of Science (Agriculture)
George Henry Mengel, Bachelor of Science (Chemistry*)
Ifarry George Menke, Bachelor of Science (Municipal and Sanitary Engineering)
Carl Atgeld Metz, Bachelor of Science (Civil Engineering)
John Harold Miller, Bachelor of Science (Electrical Engineering)
Ora Lucile Miller, Bachelor of Arts (Liberal Arts)
William Pitt Miller, Bachelor of Science (Agriculture)
Edna Varner Millizen, Bachelor of Arts (Liberal Arts)
Agnes Mabel Milne, Bachelor of Arts (Liberal Arts)
Grover Ira Mitchell, Bachelor of Science (Mechanical Engineering)
*With thesis.

[^105]*With thesis.

Joseph Fred Romine, Bachelor of Science (Agriculture)
Louis Rosset, Bachelor of Science (Electrical Engineering)
George Benjamin Ruby, Bachelor of Science (Chemical Engineering*)
Orlie Rue, Bachelor of Science (Mechanical Engineering)
Earle Underwood Rugg, Bachelor of Arts (Liheral Arts*)
Max Rukin, Bachelor of Arts (Liberal Arts*)
Don Cameron Rundles, Bachelor of Science (Agriculture)
John Clinton Rundles, Bachelor of Science (Agriculture)
Ira Leon Rush, Bachelor of Science (Architecture)
Frances Marie Rutenber, Bachelor of Arts (Liberal Arts)
Rowland William Ruth, Bachelor of Science (Mechanical Engineering)
Eugenia Elizabeth Rutherford, Bachelor of Arts (Liberal Arts)
Henry White Ryther, Bachelor of Science (Mechanical Engineering)
Ira Carl Sailer, Bachelor of Science (Agriculture)
George Washington Salisbury, Bachelor of Science (Agriculture)
Raphael Adelford Samuelson, Bachelor of Science (Electrical Engineering)
George Edward Sanders, Bachelor of Science (Science)
Q Nathan Saperston, Bachelor of Science (Electrical Engineering)
Marie Savage, Bachelor of Arts (Liberal Arts)
Henry Greeley Sawyer, Bachelor of Science (Chemical Engineering*)
Hymen Schetnitz, Bachelor of Arts (Liberal Arts)
Philip George Schiesswohl, Bachelor of Arts (Liberal Arts)
Daniel Charles Schneider, Bachelor of Science (Mechanical Engineering)
Eugene Schobinger, Bachelor of Science (Municipal and Sanitary Engineering)
Helen Katherine Schoepperle, Bachelor of Arts (Liberal Arts)
Edith Carolyn Schroeder, Bachelor of Arts (Liberal Arts)
Rudolph Webster Schucker, Bachelor of Science (Architecture)
Edward Albert Schwing, Bachelor of Science (Agriculture*)
Mildred Scroggin, Bachelor of Arts (Liberal Arts)
Katherine Seaman, Bachelor of Arts (Liberal Arts)
Nathan Coor Seidenberg, Bachelor of Arts (Liberal Arts)
Beulah Elizabeth Selsam, Bachelor of Arts (Liberal Arts*)
George Freeman Senneff, Bachelor of Science (Agriculture)
Ernest Wilford Seyster, Bachelor of Arts (Science)
Ellis Marcii Shaw, Bachelor of Science (Architectural Engineering)
Carl Lee Sherman, Bachelor of Science (Civil Engineering)
John P Shields, Bachelor of Science (Architectural Engineering)
Walter Scott Shively, Bachelor of Science (Mechanical Engineering)
Charles Harmon Shook, Bachelor of Science (Architectural Engineering)
Charles Wheeler Shook, Bachelor of Arts (Liberal Arts)
Terrill Dean Shonts, Bachelor of Arts (Liberal Arts*)
Arthur Robert Siebens, Bachelor of Science (Agriculture)
John Meade Silkman, Bachelor of Science (Mining Engineering)
Walter Henry Simon, Bachelor of Science (Architecture)
Clarence Edgar Sims, Bachelor of Science (Chemical Engineering*)
Harvey Frank Sitaddon, Bachelor of Science (Architecture)
Maynard Elmer Slater, Bachelor of Science (Agriculture*)
Elizabeth Morree Smith, Bachelor of Music*
Gladys Mae Smith, Bachelor of Arts (Liberal Arts)
George Walter Smith, Bachelor of Science (Architectural Engineering)
Paul Miller Smith, Bachelor of Science (Agriculture)
Stewart Tracy Smith, Bachelor of Science (Architectural Engineering)
Elizabeth Ellice Smoot, Bachelor of Music*
Helen Carpenter Snoox, Bachelor of Music*
John Donald Snook, Bachelor of Science (Chemical Engineering*)
Rafael Arcangel Soto, Bachelor of Arts (Liberal Arts)
Victor Elwin Spencer, Bachelor of Science (Agriculture)
Williais W Stapler, Bachelor of Science (Chemical Engineering*)
Selden Lewis Sterbins, Bachelor of Arts (Science)
Willian John Steinbreder, Bachelor of Arts (Science)
Herbert Angus Steinmayer, Bachelor of Arts (Liberal Arts)
Ferdinand Henry Steinmetz, Bachelor of Science (Agriculture)
Bert Ludens Sternberg, Bachelor of Science (Agriculture)
Vernon Thompson Stevens, Bachelor of Arts (Liberal Arts*)
Earle Henry Stewart, Bachelor of Science (Mechanical Engineering)
Henry Sylvester Stice, Bachelor of Arts (Science)
Ira S Stinson, Bachelor of Science (Municipal and Sanitary Engineering)
Blanche Stipp, Bachelor of Music*
Raymond deVries Stitt, Bachelor of Science (Electrical Engineering)
Gerald Darfield Stopp, Bachelor of Arts (Liberal Arts)
Earl Boyd Stout, Bachelor of Science (Mechanical Engineering)
Robert Leon Strang, Bachelor of Science (Agriculture)
Frank Sewall Stroherer, Bachelor of Arts (Liberal Arts)
Robert Ambrose Strong, Bachelor of Science (Mining Engineering); Bachelor of Arts (Science)
Bupord Matthews Stubblefield, Bachelor of Science (Chemistry*)
Aarl Rose Summers, Bachelor of Science (Electrical Engincering)
Marjorie Sutcliffe, Bachelor of Arts (Liberal Arts)
Edith Ann Swank, Bachelor of Arts (Liberal Arts)
Pepry Jerome Sweeney, Bachelor of Science (Electrical Engineering)
Mary Ethel Swick, Bachelor of Arts (Liberal Arts)
Russell Claude Swope, Bachelor of Arts (Liberal Arts)

[^106]Shiro Taketa, Bachelor of Science (Electrical Engineering)
Harold Arthur Talbert, Bachelor of Arts (Liberal Arts)
Charles Hawley Tapping, Bachelor of Science (Architectural Engineering)
Alexander Stephen Tarnoski, Bachelor of Science (Architectural Engineering)
Lillian Catherine Taylor, Bachelor of Science (Agriculture)
Milo Cornelius Taylor, Bachelor of Science (Civil Engineering)
DeWitt Manley Thatcher, Bachelor of Science (Agriculture)
James Dale Thom, Bachelor of Arts (Liberal Arts*)
Robert Ellsworth Thomas, Bachelor of Science (Civil Engineering)
Fleta Thompson, Bachelor of Arts (Liberal Arts)
Francis Thompson, Bachelor of Arts (Science)
Clara Louise Thorndike, Bachelor of Arts (Liberal Arts)
Laurence Emerson Thorne, Bachelor of Science (Agriculture)
Estella Lenore Thurston, Bachelor of Arts (Liberal Arts)
Henry Winfred Thurston, Jr., Bachelor of Science (Agriculture)
Leon Deming Tilton, Bachelor of Science (Agriculture)
Ethel Todd, Bachelor of Arts (Liberal Arts)
Charles Leslie Trowbridge, Bachelor of Science (Agriculture)
Mary Luella Trowbridge, Bachelor of Arts (Liberal Arts)
Anne Marie Turlay, Bachelor of Arts (Liberal Arts)
Bruce Richard Uphaus, Bachelor of Science (Mechanical Engineering)
William Laurance Vansant, Bachelor of Science (Mechanical Engineering)
Glenn Poland Vaughan, Bachelor of Arts (Liberal Arts)
Alexander Wagner, Bachelor of Arts (Liberal Arts)
William Andrew Wagner, Bachelor of Science (Civil Engineering)
James Butler Wainwright, Bachelor of Science (Mechanical Engineering)
Carle Capron Walker, Bachelor of Science (Agriculture)
John Sawyer Walker, Bachelor of Science (Architecture)
Dorothy Keziah Walkerly, Bachelor of Arts (Liberal Arts)
Frank Emil Walser, Bachelor of Arts (Liberal Arts)
Harvey Henry Walters, Bachelor of Science (Architecture)
Ralph Waldo Walworth, Bachelor of Science (Agriculture)
Mamie Lawrence Ward, Bachelor of Arts (Liberal Arts)
Earle Eugene Warner, Bachelor of Science (Electrical Engineering)
Charles Sidney Washburn, Bachelor of Science (Electrical Engineering)
Leslie Abram Waterbury, Bachelor of Science (Architectural Engineering)
Jane Coulson Watson, Bachelor of Arts (Liberal Arts)
George Wililam Watts, Bachelor of Science (Mechanical Engineering)
Helen Waller Webber, Bachelor of Arts (Liberal Arts)
Eva Sarah Weilepp, Bachelor of Arts (Liberal Arts)
Clyde Frederick Weingartner, Bachelor of Science (Architectural Engineering)
John Maurice Welch, Bachelor of Science (Chemical Engineering*)
Fred Sheaff Wells, Bachelor of Science (Mechanical Engineering)
Marjorie Cecilia Welsh, Bachelor of Arts (Liberal Arts)
Roger Thomas Welsh, Bachelor of Science (Agriculture)
Vera Gretchen Wessels, Bachelor of Arts (Liberal Arts)
Benjamin Wham, Bachelor of Arts (Liberal Arts)
Russell Claire Wheeler, Bachelor of Science (Mechanical Engineering)
Raymond Charles Whitaker, Bachelor of Science (Architecture)
Thomas Kenneth White, Bachelor of Science (Electrical Engineering)
James Chalmers Cameron Whitelaw, Bachelor of Science (Ceramic Engineering*)
Hortense Elaine Wickard, Bachelor of Arts (Liberal Arts)
Clarence Clinton Wiedling, Bachelor of Science (Electrical Engineering)
Elon Gilbert Wilkinson, Bachelor of Arts (Liberal Arts)
Jackson Heath Wilkinson, Bachelor of Science (Civil Engineering)
Lauka May Wille, Bachelor of Arts (Liberal Arts)
Edward Allen Williford, Bachelor of Science (Electrical Enginecring)
William Wenn Wilson, Bachelor of Science (Agriculture)
Charles Prior Winters, Bachelor of Arts (Liberal Arts)
George Orlando Wrth, Bachelor of Science (Municipal and Sanitary Engineering)
Viola Esther Wolfe, Bachelor of Arts (Liberal Arts)
Mabel Clara Womacks, Bachelor of Arts (Liberal Arts)
Harry Thomas Wood, Bachelor of Arts (Liberal Arts)
Henry Solomon Wolfe, Bachelor of Science (Agriculture)
Lenora Mary Worcester, Bachelor of Arts (Liberal Arts)
Newton Anthony Wright, Bachelor of Science (Agriculture)
Benjamin Harrison Wycoff, Bachelor of Science (Agriculture)
Ray Orion Wyland, Bachelor of Arts (Liberal Arts*)
Wallace Wyman, Bachelor of Science (Architecture)
James Fook Onn Yapp, Bachelor of Science (Civil Engineering)
Ruth Elizabeth Yapp, Bachelor of Arts (Liberal Arts)
Florence Teresa Yoch, Bachelor of Science (Agriculture)
Clyde Charles Younglove, Bachelor of Science (Architectural Engincering)
Fred Raymond Zahin, Bachelor of Science (Municipal and Sanitary Engineering)
Harry Meyer Zeter, Bachelor of Science (Agriculture)
William Walter Zieman, Bachelor of Science (Chemical Engineering*)
Anthony Urban Zimmerman, Bachelor of Science (Mechanical Engineering)
Roy Richard Zipprodt, Bachelor of Science (Architectural Engineering)
James Edward Zoilinger, Bachelor of Science (Electrical Engineering)
*With thesis.

# THE COLLEGE OF LAW <br> The Degree of Bachelor of Laws 

| Benjamin Franklin Anderson | Thurlow Girard Lewis |
| :---: | :---: |
| Ralph Linden Barlow | Ray Timothy Luney |
| Floyd Evanston Britton | Timothy Irle McKnight |
| Herbert William Bye | Moses Elmer Newell |
| Lyin Corbly | Charles Roy Patterson |
| Wesley Erett Cummins, A.B. | Glenn Ratcliff |
| Fred Aian DuHadway | Natran Cook Seidenberg |
| Rodney Champlin Glover | Isaac Siegel |
| Palmer Mackenzie Gunnell | Clarence Thomas Terril |
| Roland Eugene Leopold |  |

## The Degree of Doctor of Law

James Fearon Brown, A.b. 1913
Harry Ingalls Hannah, A.B. 1913

## THE LIBRARY SCHOOL

The Degree of Bachelor of Library Science
Minnie Joanna Bollman, A.B., University of Illinois, 1910
Mabel Louise Conat, A.B., Unizersity of Michigan, 1909
Fanny Dunlap, Ph.B., State Unizarsity of Iowa, 1905
Grace Adelaide England, A.B., Albion College, 1910
Antoinette Helen Goetz, A.B., State Umiocrsity of Ioun, 1906
Margaret May Herdman. A.B., Ünicersity of Illinois, 1910
Fansy Wilder Hill, A.B., Ünizersity of Illinois, 1910
Edith Hyde, A.B., Ohio State University, 1908
Katharine Lewis, A.B., Unizersity of Illinois, 1912
Rose Margaret Mather, A.B., U'niz'ersity of Illinois, 1905
Norma Lee Peck, A.B., Ottãa University, 1913
Alma Meriba Penrose, A.B., Obcrlin Collcge, 1901
Nellie Read Roberts, A.B., Uniecrsity of Iliinois, 1913
Mary Zeliaette Troy, A.B., University of Alabama, 1912
Members of the Class of 1885 who received certificates on graduation and upon whom is now conferred the degree of Bachelor of Literature.
(Mrs.) Bessie Wolf Owens Needham
Josephine M Zeller

## THE COLLEGE OF MEDICINE

## The Degree of Doctor of Medicine and Surgery

Samuel Jacob Alden
Clay Adler
Kari a Anderson
Stewart Harry Anderson
Senekertm Hovhannes Aratelian
Marcelino Asuzano
Alexander Hereert Barsett
Eranest Gaston Beatty
Agthli Betts
Lewis Leonard Brodsky
Phillip Harmon Broudo
Dean Cassites Brown
Earl Curtis Carr
Felicia Helen Cienciara
Lazaris Cohler
Tohn al Conway
Teofilo Pedro Corpus
Irwin Herbert Cutler
George Leslie Dailey
Tames Williamy Doughty
Ross Enménd Elvidge
George Michael Fitzgerald
Anthosy Carlo Formusa
Dimiter George Fournadieff
Czetwyod Marr Fraschere
Marey Hirsct Freilich
Dideey Cureton Frise, Ph.B.
Orlando Merrill Gochnaur
George Joseph Gordon
Clara Grace Gotrschalk
Michael Goy
Reuben Waddell Graham
Sayl Charies Greenwald
Frederick Hats

Eric Gosta Hakansson
Gerhard Frederick Hartwig
Gustav Goodman Herpe
Arthur William Hoaglund
Einar Hoff
Goldie Hoffman
Abrahayi Risel Hollender, Pb.B.
William David Hollagers
Charles Wikoff Jeffrey
Walter Lawrence Johnson
Alfred Edward Jones
Myron Kahn
Elbert Rife King
Samuel Arthur Kieger
Robert Gottrfied Klein
Leaf Cort Knight
Harry Furniss Lambert
George Milton Landeau
Floyd Burdick Langdon
Cyril James Larkin
Hie-Ding Lin, A.B., A.M.
Carl Williass Lutz
Horace Chauncey Lyaran
Elgene Henry McCaffrey
Bexjamin Vaughs McClanaraz
Robert Lee MacCormack
Eleanor Sophia Masslow
I. Wrence Hampson Mayers, A.b.

Walter Spaulding Mix
Morton Patrick Morse
Lester Irving Ofner
Claude Harris Ogden
Francis Pacack
Edwin Peterson

Charles Clifford Pinkerton
Charles Henry Reinhardt
Jesse Henry Rotir, A.B., M.S.
Pramatilanath Saha
Marcus Roy Satie
Frank Joseph Schick
Richard Frederick Schiele
Joseph Seilin
Marius David Senelick
Cleve Ridlon Senescall
Jeremy Josepf Sharp
Arthur Edwin Shell
Walter Scott Siewerth
Dean Stanley Smith
Hendy Albert Staib
William Frederick Stein
Simon Stern

Christopher Brown Stuart
Thomas John Sullivan, Jr.
Jacob Marion Sutherland
Bion Claude Syuerson
Edwin Robert Talbot
James Edward Thiell
Harry Emil Louis Timas
Albert Vasder Kloot
Mimran Avedis Varzeabedian, A.B.
Harry Henry Yolferding
Amanda Irene Wagoner
Tyomas Alfred Wayland
Marian A Weightman
Rolland Aretus Weich
Walter Fred Wiese
Alfred Artyur Willander
Walter Anthony Woolley

## THE COLLEGE OF DENTISTRY

## The Degree of Doctor of Dental Surgery

Michael Baumstein
Ernest J. P. Brogmus
Louis William Bortz
Milzor Wililam Deist
George W. Dierks
George Leonard Felcher
James Everett Fonda
Richard Maxwell Fullerton
Donald Muirhead Gallie
Samuel Herman Goodriend

Harold O. Hansen
Joinn Francis Hough
Edward John Krejci
Carl David Martin
Williak Hubert Schroeder
David A. Steineerg
Nate Sommerfield
William Ernst Werninghaus
Leland J. White

## THE SCHOOL OF PHARMACY

## The Degree of Graduate in Pharmacy <br> Conferred April 28, 1915, in Chicago

Theodore August Joseph Lecrband
Charles James Lesfo
Stephen Edward Malkewicz
Bates A Marriott
Philip Aloysius Masterson
Franklin Cifristopher Mueller
Frank Charles Niemeyer
Oswald Edward Fred Obermiller
Joseph Winfred Raycraft
Robert Charles Reed
Harold Franklin Seeger
Bayard Edwis Simmons
Ernest Lee Slinkard
Clifford Ross Spalding
August Ferdivand Stahl, Jr.,
Stewart Strain
Roy William Woelffer
Lawson Jacob Cooke (Class of 1913)
Fred Lefman Leib (Class of 1914)

Richard Joel Anderson
Samuel Leon Baker
Mife Robert Bianco
Frederick Evenson Boehm
Marshall Theodore Brekike
Walter Otto Buckrucker
Guy Brooks Davis
Ray Robbins Davis
Grover Oliver Drais
Harry Leo Eberly
Roy Fred Fraser
Victor Leo Geispitz
Louis Andrew Gorham
Louis Leo Maffner
Ralph Hawthorne
Michael Jacobson
George William Jindricif
Archie Kirkwood Johnson
Joseph John Kaxacek
Rudolph Henry Krebs

Lillian Vorsanger (Class of 1912)

The Degree of Pharmaceutical Chemist
Conferred June rr, r9I5, in Chicago
Joseph Pelc
Edward Palmer Scruggs

## THE GRADUATE SCHOOL

## Degrees of Master of Arts and Master of Science

Conferred June I6, 1915

William Albert Alerecht, A.B., 1911, B.S., 1914

Master of Science (Agronomy)
Louis Allen, A.B., 1913
Master of Arts (French)
Andrew John Albery Anderson, B.S.
(Lewis Institute) 1913
Master of Science (Civil Engineering)
Albert Babbitt, A.b.
(Pennsylvania State College) 1914
Master of Arts (Mathematics)

Courtland Walter Bade, E.E.
(Technicum Mitiweida) 1914
Master of Science (Electrical Engineering)
Julia Minietta Barber, A.B., 1913 Master of Arts (English)
Clarence Barbre, B.S., 1914 Master of Science (Organic Analysis)
George Wilson Beattie, A.B.
(Ripon College) 1901; B.S., 1914
Master of Arts (Education)

Albert James Beatty, A.B.
(Knox College) 1900
Master of Arts (Education)
Mary Lavenia Beck, B.S.
(Coe College) 1908
Master of Arts (English)
Jefferson Hall Belt. B.S., 1912
Master of Science (Electrical Engineering)
Arthur Norton Bennett, B.S., 1907
Master of Science (Chemistry)
Ira John Berkema, A.B., 1910
Master of Arts (English)
John David Bond, A.B.
(University of Tennessee) 1909
Master of Arts (Mathematics)
Joseph Marvin Braham, B.S.
(University of Idalio) 1914
Master of Science (Physical Chemistry)
Silas Alonzo Braley, A.B.
(Morningside College) 1913
Master of Science (Industrial Chemistry)
Henry Buellesfield, A.B., 1906
Master of Arts (Education)
Ernest Edward Charlton, A.B. (Grinnell College) 1913
Master of Science (Industrial Chemistry)
Homer Eldon Chenoweth, A.B., 1913
Master of Arts (Zoology)
Clifton Wirt Clark, A.B., 1913
Master of Arts (Economic Geology)
Arthur Samuel Colby, B.S.
(New Hanipshire College) 1911
Master of Science (Pomology)
Esther Margaret Colvin, A.B. (Albion College) 1914
Master of Arts (English)
Delmar Gross Cooke, A.B., 1912
Master of Arts (English)
Sylvan Jay Crooker, B.S. (Carleton College) 1914 Master of Science (Physics)
Floy Fenton Cutler, A.B. (Hedding Collegc) 1911 Master of Arts (German)
Juantita Elizabeth Darrah, A.B., 1913
Master of Science (Chemistry)
Ruth Kay Davis, A.B.
(Greenville College) 1911
Master of Arts (Classics)
Harold Houghton Dunn, B.S., 1908
Master of Science (Electrical' Engineering)
Elmer Tryon Ebersol, A.B., 1902
Master of Science (Agronomy)
Erma Lytle Elliott, A.B.
(Illinois Woman's College) 1914
Master of Arts (Mathematics)
Leo Weiss Elston. A.B., 1913; B.S. (Rutgers College) 1914 Master of Science (Horticulture)
Emery C Farver, A.B. (Otterbein University) 1914 Master of Arts (Mathematics)
Leslie William Faulinner, B.S., 1914 Master of Science (Electrical Engineering)
Citarles Stever Fazel, A.B. (Fairmount Collere) 1914 Master of Arts (Physics)
John I Fernholz, A.B. (Indiana University) 1914 Master of Arts (Political Science)
Fern Lynton Fisher, A.b. (James Millikin Unviversity) 1914 Master of Arts (German)
Amelia Loutse Gay, A.B. Master of Arts (English)
Eugene Maximilian Karl Geiling, A.B. (University of the Cape of Good Hope) 1911 Master of Science (Chemistry)
James Henry Greene, B.S., 1908
Master of Science (Animal Husbandry)
Clare Elmer Griffin, A.B. (Albion College) 1914
Master of Arts (Economics)

Wesley Wallace Hanford, B.S.
(Wesleyan University) 1913
Master of Science (Sanitary Chemistry)
Frank Blatr Hanson, A.b.
(George Washington University) 1913
Master of Arts (Zoology)
Charles Leroy Harlan, A.B.
(Indiana University) 1912
Master of Arts (Education)
Jerome Read Head, A.B.
(University of Wisconsin) 1914
Master of Arts (English)
Arthur Floyd Heck, B.S., 1913
Master of Science (Agronomy)
Ruth Marie Heffernan, A.B.
(Illinois IV esleyan University) 1914
Master of Arts (English)
Harry Virl Heimburger. A.B.
(De Pauw University) 1911
Master of Arts (Zoology)
Axel Magnus Hjort, A.B., 1914
Master of Science (Organic Chemistry)
Ruth Elizabeth Hodsdon, A.B.
(Oberlin College) 1913
Master of Arts (History)
Chuan-Ying Hsu, A.B.
(Nanking University) 1905
Master of Arts (Railway Administration)
Tsung Han Hsu, A.B., 1914
Master of Arts (Geology)
Arlandus Leon Jerdan, B.S.
(Alabana Polytechnic Institute) 1913; B.S.
(University of Missouri) 1914
Master of Science (Animal Husbandry)
Minna Ernestine Jeweld, A.B.
(Colorado Coliege) 1914
Mastcr of Arts (Zoology)
Luther Eugzne Kennedy
Master of Arts (Geology)
James Kesseer, A.B.
(Indiana University) 1908
Master of Arts (French)
James Ernest Kindred, A.B.
(Tufts College) 1914
Master of Arts (Zoology)
Harry Cleveland Kremers, A.B.
(Hope College) 1913
Master of Science (Inorganic Chemistry)
Ma-li Liang-Tze Lee, A.B.
(Iowa Wesleyan College) 1914
Master of Arts (Education)
Harold Deak Leslie, A.B.
(Ohio State University) 1914
Master of Arts (Economics)
Elzy Vern McCollough, A.B.
(Tarkio College) 1908
Master of Arts (Economics)
Carl Stone McKellogg, A.B.
(Oberlin College) 1914
Master of Arts (Chemistry)
Henry Theodore McKinney, A.B., 1913
Master of Arts (Education)
William Asbury Manuel, A.B.
(De Pauw University) 1912
Master of Science (Industrial Chemistry)
Alice Emma Meier, A.b.
(Northwestern College) 1914
Master of Arts (German)
Olive Fiedelle Miller, A.B., 1914
Master of Arts (French)
Gunbayu Mizoguchi, B.S., 1914
Master of Science (Electrical Engineering)
Iulian Montgomery, C.E.,
(Grayison College) 1908
B.S., (University of Texas) 1912

Master of Science (Theoretical and Applied Mechanics)
Odessa Madge Myers, A.B., 1914
Master of Arts (Classics)
Merle Louis Nebel, B.S., 1913
Master of Science (Mining Engineering)
Alma Jessie Neill, A.B., 1913
Master of Arts (Physiology)

Edward Frederick Nickoley, A.B., 1893 Master of Arts (Economics)
Emma May Rhoads Nickoley, A.B., 1899 Master of Arts (English)
Yousabu Ogawa, B.S.
(University of California) 1914
Master of Arts (Architecture)
Ruth Elizabeth Okey, B.S. (Monmouth College) 1914 Master of Science (Chemistry)
Raymond William Owens, E.S., 1914
Master of Science (Electrical Engineering)
Olive Allen Paine, A.B., 1914
Master of Arts (Education)
Franklin Charles Palm, A.B.
(Oberlin College) 1914
Master of Arts (History)
Leslie Arthur Pinkney, A.B.
(Wheaton College) 1910
Master of Arts (Physics)
Robert Bedford Pogue, B.M.E.
(State University of Kentucky) 1913 Master of Science (Railway Engineering)
William Sing-Chong Pung, B.S., 1914 Master of Science, (Railway Engineering)
Charles Christian Rees, A.B. (Wabash College) 1913 Master of Arts (Botany)
Ernest Alexander Reid, B.S., 1914
Master of Science (Electrical Engineering)
Frank Erwin Richart, B.S., 1914
Master of Science (Civil Engineering)
Clarence Samuel Ross, A.B., 1913 Master of Arts (Geology)
John Carl Ross, A.B. (South African Collcge) 1911
Master of Science (Chemistry)
Floyd Elba Rowland, B.S.
(Oregon Agricultural College) 1907 A.B., 1914

Master of Arts (Chemistry)
Charles Elliotte Sargent,
Master of Science (Mechanical Engineering)
Emil Ferdinand Scharman, A.B., 1914 Master of Arts (German)
Fred $B$ Seely, B.S.
(Worcester Polytechnic Institute) 1907
Master of Science (Theoretical and Applied Mechanics)
Charles Timothy Senay, B.S.
Master of Arts (Zoology)
John Lawrence Sinonich, B.S., 1914 Master of Science (Electrical Engineering)
Glenn Seymour Skinier, A.P. (Kansas Mantal Training School) 1913 Master of Arts (Organic Chemistry)
Lilly Stiegelmeier, B.S. (Illinois Wesleyan University) 1912 Master of Arts (History)
Frederick Curtis Swanson, A.B., 1914 Master of Arts (History)
Wen Tsing Tao, A.B.
(Nanking Unizersity) 1914
Master of Arts (Political Science)

Everett Haryey Taylor, A.B., 1913
Master of Science (Chemistry)
Scott Cifamplin Taylor, B.S., 1913
Master of Science (Industrial Chemistry)
Henry Daniel TerKeurst, A.B.
(Hope College) 1914
Master of Arts (Education)
Raymer Wexdell Tinsley, A.B.
(University of Kentucky)' 1912
Master of Arts (German)
Ralpi Waldo Tippet, A.B.
(Laturence Coilege) 1913
Master of Arts (Chemistry)
Robert Edgar Turley, Jr., B.S., 1913
Master of Science (Theoretical and Applied Mechanics)
Hubert Michael Turner, B.S., 1910
Master of Science (Electrical Engineering)
Howard DeWitt Valentine, B.S., 1913 Master of Science (Chemistry)
Mark Albert Yan Doren, A.B., 1914
Master of Arts (English)
Devi Dyal Virmant, A.B.
(Stanford University) 1913
Master of Science (Chemistry)
Gordon Watrins, A.B.
(Uniacrsity of Monataia) 1914
Master of Arts (Sociology)
Henry Joseph Weiland, B.S.
(University of Rochester) 1913
Master of Science (Chemistry)
Grace Adaline Wells, B.S.
(Knox College) 1913
Master of Science (Zoology)
Lars Alvin Welo, B.S.
(North Dakota Agricultural College) 1911
Master of Science (Physics)
Leila Olive White, A.B.
(Rockford College) 1914
Master of Arts (History)
Edward Wichers, A.B.
(Hope College)'1913
Master of Science (Inorganic Chemistry)
Neva Beryl Wiley, A.B.
(Illinois Woman's College) 1909
Master of Arts (History)
Susan Kathryn Williams, A.B.
(Carthage College) 1914
Master of Arts (Classics)
Lola Elsie Wilson, A.B.
(Honover College) 1912
Master of Arts (Classics)
Herbert Augustus Winkelmann, B.S.
(North-Westeril College) 1914
Master of Science (Chemistry)
Esther Grace Wiseman, A.b.
(Shurtleff College) 1914
Master of Arts (English)
Esther Young, A.B.
(Miami University) 1914
Master of Arts (Botany)
Henry Charies Zeis, A.B., 1913
Master of Arts (Mathematics)

## Professional Degrees in Engineering

John Dudley Ball, B.S., 1907, Electrical Engineer
Rodney Linton Bell, B.S., 1909, Civil Engineer
Mortimer Burnhiam Cleveland. B.S.. 1908, Master of Architecture
Townsend Foster Dodd, B.S., 1907, Electrical Engineer
Raymond Clark Pierce, B.S., 1908 , Civil Engincer
Percy McClure Richards. B.S., 1909, Electrical Engincer
Charles Elliot Sargent, B.S., 1886, Mechanical Engineer
Seymour Standish, B.S., 1910, Civil Engineer

## Degree of Doctor of Philosophy

Demetrius Ion Andronescu, Diploma of Capacity in Agronomy (Rommanian College of Agriculturc) 1906; M.S., 1914 (Agronomy)
Thesis: The Physiology of the Pollen of Zea Mays with Soecial Regard to Vitality
Albert John Becker, B.S., M.E. (University of Michigan) 1903, 1907
Thesis: The Strength and Stiffness of Steel under Bi-axial Loading

Henry Alfred Burd, B.S. (Illinois Wesleyan Unizersity) 1910; A.M., 1911 (English)
Thesis: Joseph Ritson: A Critical Biography
William Leonidas Burlison, B.S. (Oklahoma Agricultural and Mechanical College) 1905; M.S., 1908 (Agronomy)

Thesis: Availibility of Mineral Phosphates for Plant Nutrition
Harry Peacy Corson, B.S. (New Hampslive College) 1910; M.S., 1912 (Chemistry)
Thesis: Manganese in Water Supplies
Oscar Edward Harder, A.B., A.M., (University of Oklahoma) 1910, 1911 (Industrial Chemistry)
Thesis: Alloys of Chromium, Copper, and Nickel
Charles Elmer Holley, A.B., A.M., 1912, 1913 (Education)
Thesis: The Relationship bctween Persistance in School and Home Conditions
Joseph Whitney Howard, A.B. (Shurtleff College) 1912; A.M., 1913 (Chemistry)
Thesis: The Rearrangement of Alkyl Anilines
Lloyd Theodore Jones, A.B., A.M. (Lake Forest College) 1909, 1910; M.S., 1913 (Physics)
Thesis: An Experimental Verification of the Law of Variation of Mass with Velocity for Cathode Rays
Oliver Kamm, B.S., M.S., 1911, 1913 (Chemistry)
Thesis: The Structure of the Dihydro - B - Napthoic Acids and the Correlation of Ionization and Structure in Unsaturated Acids
Waliace Macfarlane, B.S. (Uniuersity of Utah) 1910; M.S., 1913 (Agronomy)
Thesis: The Influence of Calcium and Magnesium on Plant Growths
Harold Hanson Mitchell, A.B., M.S., 1909, 1913 (Chemistry)
Thesis: Feeding Experiments on the Substitution of Proteins by Definite Mixtures of Isolated Amino Acids
Edna Mosher, B.S. (Cornell Uniz'ersity) 1908; M.S., 1913 (Entomology)
Thesis: A Classification of the Lepidoptera Based on Characters of the Pupa
Fred Weaver Muncie, A.B. (Wabash College) 1910; M.S., 1913 (Organic Chemistry
Thesis: The Effect of Large Applications of Commercial Fertilizers upon Carnations
George Leo Peltier, A.B. (University of Wisconsin) 1910; A.M. (Washington University) 1912 (Botany)
Thesis: Parasitic Rhizoctonias in America
Harold Ordway RugG, B.S., (Dartmouth College) 1908; C.E. (Thayer School, Dartmouth) 1909 (Education)
Thesis: Descriptive Geometry and Mental Discipline
George Rutledge, A.B., A.M., 1910, 1913 (Mathematics)
Thesis: The Number of Abelian Subgroups of Groups whose Orders are the Powers of Primes
Charles Leslie Stewart, A.B. (Illinois Wesleyan University) 1911; A.M., 1912 (Economics)
Thesis: Land Tenure in the United States with Special Reference to Illinois
Minnie Elizabeth Watson, A.B. (Olivet College) 1909; M.S., 1913 (Zoology)
Thesis: Studies on Eugregarines Including Descriptions of Seventeen New Species and a Synopsis of the Eugregarine Records from the Myriapoda, Cleoptra, and Orthoptera of the World
Morris Mifler Wells, B.S. (University of Chicago) 1912 (Zoology)
Thesis: The Relation of Fishes to Ions in their Natural Environment
Philip Quincy Wrigit, A.B. (Lombard College) 1912; A.M. 1913 (Political Science)
Thesis: The Means by which the Obligations of International Law are Enforced by the Law of the United States
Frant Archibald Wyatt, B.S. (Agricultural College of Utah) 1910; M.S., 1913 (Agronomy)
Thesis: The Influence of Calcium and Magnesium Compounds on Plant Growth
Lewis Emanuel Young, B.S. (Pennsylvania State College) 1901; E.M. (Iows State Collega) 1904 (Economics)
Thesis: American Experience in Taxing Mines and Mineral Landp

## FELLOWS AND SCHOLARS IN THE GRADUATE SCHOOL

1915-16

William Albert Albrecht, Scholar in Agronomy (Nominee of the College of Agriculture)
Otho William Allen, Scholar in Romance Languages (Nominee of the College of Liberal Arts and Sciences)
Harry Austerdau, Scholar in Philosophy (Nominee of Lake Forest College)
Harry Armstrong, Scholar in Philosophy
A J Albert Anderson, Fellow in Theoretical and Applied Mechanics
Theodore Rolly Ball, Fellow in Chemistry
Harry T Booth, Scholar in Physics
St. Elmo Brady, Fellow in Chemistry
Laurence Vreeland Burton, Traveling Fellow in Bacteriology
Edwin M A Chandler, Fellow in Chemistry
Fred Emerson Clark, Fellow in Economics
Helen Clark, Fellow in Psychology
Delarar Coore, Fellow in English
Arthur Reuben Cooper, Fellow in Zoology
Sylvan Jay Crooker, Fellow in Physics
William Henry Cullusf, Scholar in Mathematics
Levette Jay Davidson, Scholar in English (Nominee of Eureka College)
Niels Henriksen Debel, Fellow in Political Science
Lillian Dora Dole, Scholar in Zoology
Jasper Owen Draffin, Research Fellow in Theoretical and Applied Mechanics (Engineering Experiment Station)
Edgar Wallace Engle, Fellow in Chemistry
Harry Rhinelandt Fritz, Research Fellow in Electrical Engineering (Engineering Experiment Station)
Philip Garman, Fellow in Entomology
Clare Elmer Griffin, Fellow in Economics
Frederick Howland Guild, Fellow in Political Science
Olive Harris, Scholar in German (Nominee of Hedding College)
Clarence Hebbert, Fellow in Mathematics
Ruta Higley, Fellow in Zoology
Jacob Arnold Hofto, Fellow in History
Temple Hollcroft, Fellow in Mathematics
Walter Wilson Jennings, Scholar int History
Minna Ernestine Jewele, Fellow in Zoology
Joseph Henry Johnston, Fellow in Education
William Garfield Kammlade, Scholar in Animal Husbandry
Walter Arthur Gatward, Research Fellow in Electrical Engineering (Engineering Experiment Station)
Morris Johnson Kernall, Fellow in Zoology
J Lyonel King, Scholar in Entomology
Frank Allen Kirkpatrick, Research Fellow in Ceramics (Engineering Experiment Station)
Ernest Michael Rudolph Lamkey, Fellow in Botany
Louis Larson, Research Fellow in Theoretical and Applied Mechanics (Engineering Experiment Station)
Lester Clyde Lichty, Research Fellow in Mcchanical Engineering (Engineering Experiment Station)
Ralph Harlan Linkins, Fellow in Zoology
William Penn Lukens, Research Fellow in Mechanical Engineering (Engineering Experiment Station
Kathryn Maddock, Scholar in Economics (Nominee of Rockford College)
Carl Shipp Marvel, Scholar in Chemistry (Nominee of Illinois Wesleyan Unizersity)
Effie Marguerite Morgan, Scholar in English (Nominee of James Millikin University)
Forrest Hamilton Murray, Scholar in Nathematics
Louis Aubrey Mylius, Research Fellow in Mining Engineering (Engineering Experiment Station)
Merle Louis Nebel, Fellow in Geology
Julius Edward Nordby, Scholar in Animal Husbandry
Ethel Louise O'Connor. Scholar in German
Margaret Oimsted, Scholar in Classics (Nominee of Augustana College)
Benito Rene Ordonez, Research Fellow in Railway Electrical Engincering (Engineering Experiment Station)
Franklin Charles Palm, Fellow in History
Edwin Kenney Parker, Scholar in Entomology
Newton Lyman Partridge, Fellow in Horticulture
Daniel Frederick Pasmore, Fellow in German
Alvar Peterson, Fellow in Entomology
Lewis Bradford Ripley, Scholar in Entomology
Frederick Arthur Russell, Fellow in Economics

Robebt Royal Russell, Fellow in History
Ethel Elvestine Sabin, Fellow in Philosophy
Helen Katherine Schoepperle, Fellow in History
Clarence Schole, Fellow in Chemistry
Harriet Scofield, Scholar in Mathematics (Nominee of Carthage College)
Eleanor Frances Seiler, Scholar in Physics
Edith Irens Sendenburgh, Scholar in Englich
Ernest James Smith, Scholar in Political Science
Merin Grant Smith, Scholar in Mathematics (Nominee of Greenville College)
George Washimgton Spindier, Teaching Fellow in Germanic Languages
Wayse Edson Stevens, Fellow in History
Charles Jacob Stowell, Fellow in Economics
Horace Wesley Stunkard, Fellow in Zoology
Merie Arteut Sweney, Scholar in English
Stetfan Fujito Tasabe, Research Fellow in Physics (Engineering Experiment Station)
Richard Laurence Templin, Research Fellow in Theoretical and Applied Mechanics (Engineering Experiment Station)
Mary Lovella Trowbridge. Scholar in Classics
Bervice Wait, Scholar in Household Science
Camilio Weiss, Research Fellow in Civil Engineering (Engineering Experiment Station)
Harold Malcolm Westergaard, Fellow in Theoretical and Applied Mechanics
Evergtt Gillham Iousg, Research Fellow in Railway Engineering (Engineering Experiment Station)

## The Francis John Plym Fellowship in Architecture

Alexander Rudolph Brandier, 1913

# UNIVERSITY HONORS 

## Awarded by the Faculty of the University

1914-15

## HONORS AT COMMENCEMENT

(June, 1915)

## College of Liberal Arts and Sciences <br> THE DEGREE OF A.B. WITH HONORS

| Mildred Lean Coburn, in German Elizabeth Genevieve Fulier, in English Alta Green, in English |  |
| :---: | :---: |
|  |  |
| Gertruds Halushia, in History |  |
| Walter Wilson Jennings, in History |  |
| Hadden Spurgeon Kirk, in History |  |
|  |  |
| FINAL HONORS |  |
| (Courses of the former College of Science) |  |
| Mary Elizabete Collom | Carrie Lucile McColley |
| Lillian Dora Dole | Margaret Mildred Mehlhop |
| Charles Francis Geiger | Forrest Hamilton Murray |
| Vera Ople Gossett | Roe Niver |
| Lois Myrtle Harris | Edith Anva Swank |
| Frank A Hoerner | Ruth Elizabeth Young |
| SPECIAL HONORS |  |
| Amblin Lucinda Kellogg, in Botany Everett Robert Brunskill, in Chemical Engineering |  |
|  |  |
| Charles Francis Geiger, in Ceramic Engineering |  |
| Frank A Hoerner, in Psychology |  |
| Sidney Marion Hull, in Chemistry |  |
| Silas Carl Linbarger, in Ceramic Engineering |  |
| Edwin Whitaer Mattoon, in Zoologyatics |  |
|  |  |
| College of Engineering |  |
| FINAL HONORS |  |
| Harold Embry Austin | Frederick August Kums Marx |
| Irl Reuben Cling Jois Harold Milier |  |
| Henry Dubin Peter Jacob Nilsen |  |
| Aiden Knowlton Fogg Frederick William Panhoist |  |
| Frane Alpred Forty | Harry Barrett Rogers |
| Ralph Green Walter Henry Simon |  |
| Artiur Hagener Perry terome Sweeny |  |
| Roy Harrison Haslund dilo Cozselius Taylor |  |
| Max Holmburger, Ir. George William Watts |  |
| Edward Allen James Edward Allen Williford |  |
| SPECIAL HONORS |  |
| Alden Knowlion FoggRalph GresnEdward Alles JamesPeter Jacob Nilsen |  |
|  |  |
|  |  |
|  |  |
| College of Agriculture |  |
| FINAL HONORS |  |
| Chalmers Woodrtfy Crawford Meien Sinclair Morrison |  |
| Ethel Mary Dole ${ }_{\text {Julian }}^{\text {Lounsbury }}$ Fish Masmard Elager Slater |  |
|  |  |
| Noble Parker Hollister Latrence Emerson Thorns |  |
| Izora Lee ${ }_{\text {Natean }}^{\text {decte }}$ ( Carle Capron Waltrr |  |
|  |  |

# SPECIAL HONORS <br> Maynard Elmer Slater 

College of Law
FINAL HONORS
Wesley Erett Cummins
Glenn Ratcliffe

Library School<br>FINAL HONORS<br>Mabel Louise Conat

## School of Music

FINAL HONORS
Helen Louise Madden
PRELIMINARY HONORS
(October, 1915)

## College of Liberal Arts and Sciences

Beulah Irene Agnew
John Kenneth Barber Helen Louise Buchen fulius Cohen
Walter Stephen Frazier Erna Claire Goldschmidt Elizabeth Pursel Hackley Richard George Heeschen Helen Marie Kirkpatrick Adolph Walter Landstrom

Bessie Lowry
Mavde Irene Marks
Cora Leone Merritt
Thaddeus Lemert Montgomery
Lois Philbrick
Mary Lucile Shay
Milton Gans Silver
Marion Virginia Weiss
Walter Valentine Wirth

## College of Commerce and Business Administration

Hazel Evrlyn Brunson
James Forsythe McCloud

Scott McNulta
Helen Jackson Williams

## College of Engineering

Charles Wesley Anderson
Dan Babcock
Paul Becker
Tze Li Chang
Charles M Clark
George Otto Consoer
Cilarles McKinley Ettinger
Harold Norton Felton
Thomas Fraser
Harold Greenifill
Carl Albert Gustafson
Walter August Himmelreicher
Hirosif Horimura
Alfred Cifang Lee
John Taylor Lewis

Sarail Agg
Joirn Harold Armstrong
Matilda May Baechler
Helen Marie Barrows
Marry Leonard Carlson
Earl Thomas Davis
Ierald Bratt Fites Anthony Ready Gould Albert William Harz Laura Clark Holmes Frank William Jones Cecil Clyde Mileeson

Roy Moore Lueder
William Herman Minkema
Heriert Edward Mueller
Dwight Reed Norris
Percy Wright Ott
Ralpif Marion Overton
Glen Edward Potter
Rudolph Rain
Paul Aebert Raibourn
Tohn Hueert Rameer
Maurice Johnson Reed
Harvey Russell Richardson
Humpineys Siegmund
Lutifer Franklin Simpson
Thomas Elmer Stockdale

College of Agriculture
Leonard Osgood Mitchell
Reuben Waler Peterson
Benjamin Harrison Questel
Willard Parmenter Ranney
Warren Mcclellan Richmond
Ferdinand John Schleifer
Amelia Marie Sloan
Ailsie Stevenson
Clement Eddy Trout
Manierre Barlow Ware
Daniel Edwin Warren
Marion Fingsley White

## College of Law

Craig Van Meter
Benjamin Wham
University Honors ..... 543
School of MusicLaura Dole
PRIZESB'nai B'rith Prize(First Prize for Upperclassmen)Isaac Siegel(Freshman Prize)Anita Libaran
The Bryan Prize EssayDenna Frank Fleming
The Phi Beta Kappa Prize
Walter Wilson Jennings
Llewellyn Prize in Architectural Engineering
Stewart Tracy Smith
American Institute of Architects MedalBernard Ernst George Dirks
Scarab Medal in Architecture
Glbn Herbert Thomas

## MILITARY HONORS

## COMMISSIONS AS BREVET CAPTAINS, ILLINOIS NATIONAL GUARD, ISSUED BY THE GOVERNOR IN 1915

Joserf N Greene
Augustus H Grunewald
Walter C Armstrong
Edward C Elles
Ernest H Pool
Clifford H Hood
Gerald D Stopp
Benjamin H Decker
Wesley K Norpis
Laurence E Thorne
Ralph L Hermann Tieorge H Butler
Donald C Scheele
Geokge D Griswold
Roe Niver
Loren C Bow

Maurice E Hoit
Irl R Cline
Claresce a Nebel
Lloyd D Knape
Aucust M Barreau
Lawrence H Duxham
Eugene R P Rall
Roy R Zipprodt
Akthur H Huisken
Maynard E Slater
Jofin H Miller
Edward A James
Clovis W Lincoln
G w Haan
j C Hostetlez

# REPORTED TO THE ADJUTANT GENERAL, UNITED STATES ARMY, AS DISTINGUISHED CADETS 

Joseph N Greenr
Augustus H Grunrwald
Walter C Armstrong
Edward C Elles
Joseph C Hostetler
Ernest H Pool
Clifford F Hood
Gerald D Stopp
Benjamin H Decker
Wesley K Norris
James E Fetherston

Laurence E Thozns
Ralph L Hermair
Cegrge H Butler
Donali C Scheele
George D Griswold
Roe Niver
lorev C Row
Maurice E Hoit
Cifarles L Ritts
Yre R Cline
Clarence A Nebel

ROSTER OF OFFICERS AND NON-COMMISSIONED OFFICERS OF THE UNIVERSITY CORPS OF CADETS, 1914-15

BRIGADE
Colonel E Shelby, Commanding Brigade
Major R R Thomas, Brigede Adjutant

## FIRST REGIMENT



## First Battalion

| Major | O. J. Troster |
| :---: | :---: |
| 1 st Lieutenant and Adjutant. | Lewis |
| 2nd Lieutenant and Quartermast | S. Hamilton |
| Sergeant Major | W. H. Browne |
| Company $A$ | Company B |
| Captain E. C. O. Beatty | Captain K. Bell |
| 1st Lieutenant, W. F. Campbell | 1 st Lieutenant, W. O. Nelson |
| 2nd Lieutenant, L. W. Chalcraft | 2nd Lieutenant, D. Babcock |
| lst Sergeant, O. G. Brain | 1st Sergeant, F. D. Ball |
| Q. M. Sergeant, J. H. Bell | Q. M. Sergeant, P. Berryman |


| Sergeants, | Company A <br> W. J. Aleoek <br> G. H. Deúchler <br> M. B. Hatland <br> K. C. Kruegar <br> A. Parr <br> R. Sladek <br> S. E. Walworth | Sergeants, | Company $B$ <br> P. J. Ariderson <br> G. F. Dráper <br> J. J. Láacy <br> A. R. Pastel <br> F. II. Smith <br> D. Watford <br> N. C. Ranney |
| :---: | :---: | :---: | :---: |
| Captain, | A. Company $C$ | Cantain, | R. Company ${ }^{\text {P. Brown }}$ |
| 1st Lieutenant, | L. H. Gift | 1st Lieutenant, | A. M. Adams |
| 2nd Lieutenant, | I. B. Countrynan | 2nd Lieutenant, | R. L. Swindler |
| 1 st Sergeant, | C. C. Brooks | 1 1st Serzeant, | 1I. R. Ide |
| Q. M. Sergeant, | R. H. Briggs A Eichbers | Q. M. Sergeant, | L. K. Cecil <br> I. H. Euston |
| Sergeants, | A. . Eichberg |  | J. H. Euston <br> D. W. Hickey |
|  | R. C. Patton |  | R. S. Mitcluell |
|  | C. E. Snell |  | R. M. Paul |
|  | R. Watson |  | F. Somers <br> H. II. White |
|  | R. E. Andtews |  | C. V. Sacton |
|  |  |  | $\mathrm{T}_{\mathbf{H}} \mathrm{P} \dot{\mathrm{O}}$ Stith |

## Second Battalion

| Maj |  |  | S. Mason |
| :---: | :---: | :---: | :---: |
| 1st Lieutenant a | nd AOdjutant |  | R. II. Lawrence |
| 2nd Lieutenant | and Quartermaster |  | R. E. Netcott |
| Sergeant Major |  | . ${ }^{\text {, }}$ | R. A. Burton |
|  | Company $E$ |  | Company $F$ |
| Captain, | L: S. Morrill | Captain, | D. W. Crane |
| 1st Lieutenant, | H. O. Siegmund | 1 st Licutenant, | C. R. Gross |
| 2nd Lieutenant, | $\mathrm{G}_{5} \mathrm{H}$. Thomas | 2nd Lieutenant, | S. B. Trelease |
| 1 st Sergeant, | W. E. Cleveland | 1st Sergeant, | F. Kalthoft |
| Q. M. Sergeant, | H. T. Clapp | Q. M. Sergeant, | J. M. Gost |
| Sergeants, | D. A. Armstrong | Sergeants, | H. M. Armstrong |
|  | F. L. Fields |  | C. J. Fisher |
|  | D. Horwich |  | R. F. Howe |
|  | C. Lively |  | L. Lolmmari |
|  | A. R. Meore |  | W. H. Moore |
|  | F. H. Pearson |  | C. I. Spangler |
|  | L. Williams |  | W. M. Willitts |
|  | R. Stevens |  | E. E. Lelman |
|  | Company G |  | Company H |
| Captain, | C. I. North | Captain, | J. H. Gage |
| 1 st Lieutenant, | A. R. Keagy | 1 st Lieutenant, | J. E. Ott |
| 2nd Lieutenant, | R. J. Craigmile | 2nd Lieutenant, | C. J. Gruhl |
| 1st Sergeant, | G. A. Sowers | 1 st Sergeant, | D. R. Gooch |
| Q. M. Sergeant, | E. W. Bailey | O. M. Sergeant, | R. Freark |
| Sergeants, | C. V. Fishier | Sergeants, | I. C. Gill |
|  | H. A. Huisken |  | H. E. Barber |
|  | H. Love |  | F. H. Fisher |
|  | L. A. Moore |  | 1F. Lundgren |
|  | 1. Phillips |  | L. Phillis |
|  | L. A. Wilson |  | G. P. Winin |
|  |  |  | J. G. Clark |

Third Battalion


| Captain, | Company 1 <br> E. Pihigatd | Captain, | H. ${ }_{\text {Company }} \mathrm{P}$. Gricson |
| :---: | :---: | :---: | :---: |
| 1st Lieutenant, | J. H. Powers | 1st lieutenant, | L. F. Simpson |
| 2nd Lieutenant, | C. W. Borton | 2nd Lieutenant, | M. R. Finley |
| 1st Sergeant, | A. Lee | 1 st Sergeant, | F. N. Vaugh |
| O. M. Sergeant, | W. F. Coolidge | Q. M. Sergeant, | R. Chamberlain |
| Sergeants, | O. C. Beatty | Scrgeants, | R. E. Foulke |
|  | R. N. Foster | ,rant, | E. T. Janssen |
|  | A. H. Ingwers |  | D. I. Lyons |
|  | E. Morsich |  | G. W. Munns |
|  | B. M. Lyoris |  | J. K. Strong |
|  | A. W. Pickett |  | H: H. Worner |
|  | 11. G. Strathern |  |  |
|  | L. A. Denison |  |  |


| Captain, | Company L <br> M. C. Johnson | Captain, | Company M <br> D. F. Heath |
| :---: | :---: | :---: | :---: |
| 1st Lieutenant, | E. S. Axline | 1 st Lieutenant, | R. H. Engle |
| 2 nd Lieutenant, | F. H. Geiler | 2nd Lieutenant, | E. H. Gay |
| 1 st Sergeant, | J. M. Gray | ${ }_{0}$ 1st Sergeant, | R. B. Coolidge |
| Q. M. Sergeant, | L. W. Griffiths | S. M. Sergeant, | J. C. Larson |
| sergeants, | E. Mcevers |  | T. T. Frison |
|  | R. B. Murphy |  | E. R. McKeever |
|  | N. Taylor |  | S. E. Murray |
|  | A. Wuerker |  | G. Ranney |
|  | A. B. Robertson |  | W. Thielman |
|  |  |  | W. P. Stall |

## SECOND REGIMENT



First Battalion

| Major.......... |  |
| :---: | :---: |
| 1st Lieutenant a | nd Adjutant...... |
| 2nd Lieutenant | and Quartermaster |
|  |  |
|  | Company $A$ |
| Captain, | W. W. Shelden |
| 1 st Licutenant, | R. L. McKown |
| 2nd Lieutenant, | C. R. Gideon |
| 1st Sergeant, | I. W. Turnquist |
| Q. M. Sergeant, | J. B. Johnson |
| Sergeants, | W. H. Bosworth |
|  | McK. Gardner |
|  | R. H. Taylor |
|  | D. McNish |
|  | J. If. Ainsworth |
|  | E. A. Stiritz |
|  | B. C. Schweitzer |

R. Steinmeyer

1st Lieutenant and Adjutant.............................................. T. T. McE.voy
2nd Lieutenant and Quartermaster ....................................... C. W. Smith
Sergeant Major ............ Company $A$
Cantain, W. W. Shelden
1 st Licutenant, R. L. McKown Lieutenant, sergeant, Sergeants, . Turnquist W. H. Bosworth McK. Gardner H. Taylor I. IF. Ainsworth
B. C. Schweitzer
C. R. Anderson

Company $C$

| Captain, | W. H. Hough |
| :--- | :--- |
| 1st Lieutenant, | H. R. Ferguson |
| 2nd Licutenant, | H. N. Johnson |
| 1st Sergeant, | M. H. Pterson |
| Q. N. Sergeant, | H. P. Owen |
| Sergeants, | W. B. Hostetler |
|  | F. M. Keyes |
|  | R. H. Mallory |
|  | G. W. Nachtrieb |
|  | M. C. Rhodes |
|  | P. Tracy |
|  | A. G. Butler |
|  | E. Carries |


| Captain, | Compary $B$ <br> L. R. Lumley |
| :---: | :---: |
| 1 st Lieutenant, | J. R. Lindsey |
| 2nd Lieutenant, | G. C. Smith |
| 1 st Sergeant, | W. Van Cleave |
| Q. M. Sergeant, | J. S. McCarroll |
| Sergeants, | E. L. Nelson |
|  | V. A. Kerr |
|  | H. E. Musichelderfer |
|  | H. Reichelderfer |
|  | R. Born |
|  | B. Bleuer |

Captain. $\quad$ Company $D$
1st Lieutenant, H. W. Moor
2nd Lieutenant, C. E. Trout
1st Sergeant, H. T. Miller
Q. M. Sergeant, H. Vial

Sergeants, C. M. Campbell
E. R. Goodman
J. C. Neely
L. E. Trickle
L. Corrie
J. H. Connor

## Second Battalion



|  | Company G |  |
| :--- | :--- | :--- |
| Captain, | R. D. Barnes | Company H |
| 1st Lieutenant, | C. C. Citizen | Captain, |
| 2nd Lieutenant, | C. W. Reese |  |
| 1st Sergeant, | E. Mritt | M. Pickett |

Third Battalion


|  | Company I |
| :--- | :--- |
| Captain, | H. W. MacKechnie |
| 1st Lieutenant, | H. L. Husson |
| 2nd Lieutenant, | L. W. Hines |
| 1st Sergeant, | H. J. Bluhm |
| Q. M. Sergeant, | H. S. Olesen |
| Sergeants, | O. M. Clemm |
|  | E. H. Hackley |
|  | E. Kober |
|  | H. E. Matson |
|  | L. I. Selzer |
|  | G. Townsan |
|  | V. Griffith |


| Captain, | Company K |
| :--- | :--- |
| A. G. Stone |  |
| 1st Lieutenant, | Donald Swain |
| 2nd Lieutenant, | Carl G. Howard |
| 1st Sergeant, | M. Cuskaden |
| Q. M. Sergeant, | L. Kayser |
| Sergeants, | H. T. Meek |
|  | H. W. Ostrom |
|  | H. Senseman |
|  | W. Volk |
|  | L. Hest |
|  | M. M. Hart |



Signal Corps

| Captain, | H. A. Smith |
| :--- | :--- |
| 1st Lieutenant, | J. W. Smith |
| 1st Lieutenant, | B. W. Clarke |
| 1st Lieutenant, | H. Schreiner |
| 1st Sergcant, | H. Kirk |
| Sergeants, | W. B. Barber |
|  | C. T. Jessen |
|  | G. C. Mapes |
|  | I. B. Olin |
|  | C. M. Roberts |
|  | D. Webb |
| Corporals, | P. A. Raibourn |
|  | R. Brooks |
|  | J. B. Felmley |
|  | G. S. Thompson |

## Engineer Corps

| Captain, | C. G. Jennings |
| :--- | :--- |
| 1st Lieutenant, | G. A. Geib |
| 2nd Lieutenant, | K. B. Bush |
| 1st Sergeant, | V. Pechia |
| Q. M. Sergeant, | A. C. Wilson |
| Sergeants, | E. R. Petzing |
|  | K. A. Miller |
|  | C. H. Clarahan |

## Hospital Corps

Captain, W. R. Fischer
1st Lieutenant,
1st Sergeant,
Sergeants,
J. F. Kohl
H. E. Diller
C. C. Irick
H. Otto
P. G. Kreider
C. C. Malier
L. C. Ray
H. F. Heller

## ANNUAL COMPETITIVE DRILLS-1915

Winger University Gold Medal .............................................. M. Sgt. W. F. Campbell Winner Hazelton Gold Medal. Private O. G. Brain

Infantry
University Bronze Medals
(Sophomore Competitive Drill)
Company A, 1st Battalion, University Regiment


| Captain. | G. D. Griswold | Privates, | K. Braunsdorf |
| :---: | :---: | :---: | :---: |
| 1 st Lieutenant, | E. C. O. Beatty |  | O. W. Burgess |
| 2nd Lieutenant, | J. G. Eppinger |  | F. M. Campbell |
| 1 st Sergeant, | D. T. Swain |  | H. Hovey |
| Q. M. Sergeant, | J. O. Schmitz |  | I. Hultman |
| Sergeants, | R. E. Dippell |  | F. S. Jannatto |
|  | L. C. Heckler |  | L. Jarmulsky |
|  | H. P. Thurlow |  | A. L. Kline |
|  | LH. B. Bramlet |  | P. L. Kranel |
|  | R. L. McKown |  | F. J. Lampert |
|  | C. B. Rowe |  | A. Livingston |
| Corporals, | J. W. Washburn |  | S. McCarroll |
|  | D. C. Goudy |  | W. McGrath |
|  | H. J. Craigmile |  | D. McNish |
|  | S. C. Hopkins |  | R. Melin |
| Lance Corporals, | F. Kalthoff |  | F. Mills |
|  | G. Sowers |  | E. R. Moburg |
|  | H. Reichelderfer |  | H. H. Morris |
|  | R. E. Weinshenker |  | S. E. Murray |
| Privates, | O. W. Archer |  | H. Musch |
|  | F. B. Barber |  | R. C. Newman |
|  | O. C. Beatty |  | J. B. Prince |
|  | P. Berryman |  | F. C. Redig |
|  | L. W. Borah |  | A. Robertson |

[^107]| A. Clametz | A. Schifflin |
| :--- | :--- |
| J. Cline | H. M. Stensel |
| W. Corrie | J. K. Strong |
| J. A. Crismore | H. Tuckey |
| G. Deuchler | H. F. Vaughn |
| C. Powell | B. F. Vocks |
| C. Fisher | S. C. Wilkins |
| R. Gerling | F. VonAck |
| H. Goodell | D. Williams |
| E. P. Guernsey | D. Wright |
| H. Haldeman |  |

Artillery
University Bronze Medals


## Battalion Competitive

Third Battalion, 1st Infantry-Major E. H. Pool, Conmanding

## Artillery Competitive

First Gun Detachment-Sergeant L. L. Davis
Members Match
University of Illinois Rifle Club, National Rifle Association-R. M. Kamm

# SUMMARY OF OFFICERS 

BY COLLEGES AND SCHOOLS
1915-1916
OFFICERS OF INSTRUCTION


# SUMMARY OF OFFICERS 

## BY COLLEGES AND SCHOOLS

1915-1916

| $\underset{\text { Lecturems }}{\text { Sprcial }}$ |  | Instructors |  | Assistants |  | Graduate Assistants |  | Student Assistants |  | Men | Totals Wom. | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Men | Wom. | Men | Wom. | Men | Wom. | Men | Wom. | Men | Wom. |  |  |  |
| 1 | .. | 41 | 9 | 74 | 13 | 25 | 5 | 8 | 1 | 243 | 29 | 272 |
| 2 | .. | 6 | .. | 4 | .. | .. | .. | .. | .. | 21 | .. | 21 |
| 1 | . | 34 |  | 17 | . | . | . | .. | . | 113 | .. | 113 |
| . | - | 16 | 7 | 32 | 3 | - | - | . | . | 104 | 16 | 120 |
| . | . | 5 | 3 | . | . | . | . | . | . | 7 | 4 | 11 |
| - | . | . | . | . | . | . | - | . | . | 7 | . | 7 |
| - | 1 | . | 1 | .. | 1 | .. | - | . | . | 2 | 5 | 7 |
| . | .. | . | . | . | . | . | - | 9 | . | 11 | . | 11 |
| . | . | 2 | 4 | 2 | 2 | . | . | . | . | 8 | 7 | 15 |
| 4 | 1 | 104 | 24 | 129 | 19 | 25 | 5 | 17 | 1 | 516 | 61 | 577 |
| 3 | . | 61 | 2 | 18 | 3 | . | . | 5 | . | 143 | 7 | 150 |
| 2 |  | 10 | .. | 2 | . | . | .. | 2 | . | 28 | .. | 28 |
| 1 | . | 3 | . | . | . | . | . | . | .. | 7 | . | 7 |
| 6 | . | 74 | 2 | 20 | 3 | .. | .. | 7 | .. | 178 | 7 | 185 |
| 10 | 1 | 178 | 26 | 149 | 22 | 25 | 5 | 24 | 1 | 694 | 68 | 762 |
|  |  |  |  |  |  |  |  |  |  | 52 | 3 | 55 |
|  |  |  |  |  |  |  |  |  |  | 6 | 42 | 48 |
|  |  |  |  |  |  |  |  |  |  | 752 | 113 | 865 |
|  |  |  |  |  |  |  |  |  |  | 41 | 3 | 44 |
|  | ... |  |  |  |  | . | ... |  |  | 711 | 110 | 821 |

## SUMMARY OF STUDENTS 1915-1916

| College andCourse $\quad \overbrace{\text { Men }}^{\text {Woms. Total }}$ |  |  | Men Wom. Total |  |  | Men Wom. Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LIBERAL ARTS AND SCIENCES |  |  |  |  |  |  |  |  |
| General .............. 69 | 82 | 151 | 66 | 86 | 152 | 107 | 103 | 210 |
| Medical Preparatory ... 2 |  | 2 | 11 | 1 | 12 | 29 | 2 | 31 |
| Household Science.. | 40 | 40 |  | 48 | 48 |  | 54 | 54 |
| Chemistry ............ 9 |  | 9 | 9 | 1 | 10 | 12 | 1 | 13 |
| Cheinical Engineering. . 10 |  | 10 | 19 | ... | 19 | 25 | ... | 25 |
| Totals ....... 90 | 122 | 212 | 105 | 136 | 241 | 173 | 160 | 333 |
| Commerce and Business Administration ........ 62 | 1 | 63 | 86 | 3 | 89 | 133 | 6 | 139 |
| ENGINEERING |  |  |  |  |  |  |  |  |
| Architecture ......... 28 | 1 | 29 | 35 | 1 | 36 | 26 |  | 26 |
| Architectural Eng.... 37 |  | 37 | 44 |  | 44 | 42 | ... | 42 |
| Ceramic Engineering... 8 |  | 8 | 23 | ... | 23 | 19 | ... | 19 |
| Civil Engineering ..... 33 |  | 33 | 46 | ... | 46 | 47 | ... | 47 |
| Electrical Engineering. 37 | $\cdots$ | 37 | 62 | ... | 62 | 62 | ... | 62 |
| Mechanical Engineering 39 | ... | 39 | 52 | ... | 52 | 50 | ... | 50 |
| Mining Engineering... 2 | ... | 2 | 10 | . | 10 | 6 | ... | 6 |
| Mun, and San. Eng.... 5 |  | 5 | 9 | $\ldots$ | 9 | 4 | ... | 4 |
| Railway Civil Eng.... 4 |  | 4 | 4 | $\ldots$ | 4 | 4 | ... | 4 |
| Railway Electr. Eng... 3 |  |  | 7 | . | 7 | 2 |  | 2 |
| Railway Mech. Eng.... 2 | ... | 2 | 2 | . | 2 | 2 | $\ldots$ | 2 |
| Totals ....... 198 | 1 | 199 | 294 | 1 | 295 | 264 |  | 264 |
| AGRICULTURE |  |  |  |  |  |  |  |  |
| General .............. 162 | 8 | 170 | 224 | 2 | 226 | 223 | 6 | 229 |
| Household Science. | 19 | 19 | ... | 41 | 41 | ... | 19 | 19 |
| Totals ....... 162 | 27 | 189 | 224 | 43 | 267 | 223 | 25 | 248 |
| MUSIC . ................. 2 | 7 | 9 |  | 6 | 6 | 1 | 11 | 12 |
| Totals $\underset{\text { Urbergraduates at }}{\text { Unana }}$ | 158 | 672 | 709 | 189 | 898 | 794 | 202 | 996 |
| LAW |  |  | 18 | ... | 18 | 31 |  | 31 |
| LIBRARY SCHOOL |  |  |  |  |  | 1 | 13 | 14 |
| Totals, Undergraduates and Professional Schools at Urbana......................... |  |  |  |  |  |  |  |  |
| GRADUATE SCHOOL <br> Totals at Urbana, Winter Session |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| SUMMER SESSION, 1915 |  |  |  |  |  |  |  |  |
| Undergraduates ... Graduate Students |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Total, Summer Session |  |  |  |  |  |  |  |  |
| Totals at Urbana, to February 23, 1916...................................................... . |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| DENTISTRY (Chicago) |  |  | 33 | 1 | 34 | 26 |  | 26 |
| PHARMACY (Chicago) |  |  |  |  |  |  |  |  |
| Ph.G. Curriculum |  |  |  |  |  | 52 | 3 | 55 |
| Ph.C. Curriculum |  |  |  |  |  | 5 |  | 5 |
| Total Pharmacy |  |  |  |  |  | 57 | 3 | 60 |
| Total in Cimiago........................................................................................ . . . |  |  |  |  |  |  |  |  |
| Total in U'iniversity to February 23, 1916. |  |  |  |  |  |  |  |  |
| Duplicates to be Deducted |  |  |  |  |  |  |  |  |
| Summer Session Undergraduates returned for Winter Ses |  |  |  |  |  |  |  |  |
| Summer Session Graduate Students returned for Winter SeOher duplicate registrations............................. |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Total duplicates |  |  |  |  |  |  |  |  |
| NET TOTAL, to February 23, 1916......................................................... |  |  |  |  |  |  |  |  |

## SUMMARY OF STUDENTS

 1915-1916| Men | Freshmen Wom. | Total | Men | Specials <br> Wom | Total | $\overparen{M e n}$ | Totals Wom. | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 267 | - 239 | 506 | 9 | 6 | 15 | 518 | 516 | 1034 |
| 60 | 4 | 64 | ... | ... | ... | 102 | 7 | 109 |
| . | 111 | 111 | . $\cdot$. | ... | ... | ... | 253 | 253 |
| 23 | ... | 23 |  | . . | . | 53 | 2 | 55 |
| 44 | ... | 44 | . | . | $\cdots$ | 98 | $\ldots$ | 98 |
| 393 | 354 | 747 | 9 | 6 | 15 | 771 | 778 | 1549 |
| 275 | 11 | 286 | 3 | 1 | 4 | 559 | 22 | 581 |
| 65 | 1 | 66 | ... | 1 | 1 | 154 | 4 | 158 |
| 54 | ... | 54 | ... | ... | . . | 177 | ... | 177 |
| 19 | ... | 19 | , | . $\cdot$ | - | 69 | $\cdots$ | 69 |
| 66 | ... | 66 | 1 | . | 1 | 193 | $\cdots$ | 193 |
| 106 | ... | 106 | . | $\cdots \cdot$ | ... | 267 | $\cdots$ | 267 |
| 108 | $\cdots$ | 108 | $\cdots$ | $\cdots$ | $\cdots$ | 249 | ... | 249 |
| 12 | ... | 12 | . . . | ... | ... | 30 | ... | 30 |
| 7 | . $\cdot$ | 7 | ... | $\cdots$ | $\cdots$ | 25 | $\cdots$ | 25 |
| 7 | ... | 7 | . . | $\cdots$ | ... | 19 | ... | 19 |
| 5 | . . . | 5 | $\cdots$ | . $\cdot$ | . $\cdot$ | 17 | ... | 17 |
| 5 | . | 5 | . | ... | . | 11 | . . | 11 |
| 454 | 1 | 455 | 1 | 1 | 2 | 1,211 | 4 | 1,215 |
| 442 | 17 | 459 | 22 | 4 | 26 | 1073 | 37 | 1110 |
| $\ldots$ | 39 | 39 | . | 3 | 3 | ... | 121 | 121 |
| 442 | 56 | 498 | 22 | 7 | 29 | 1073 | 158 | 1231 |
| 1 | 36 | 37 | 5 | 17 | 22 | 9 | 77 | 86 |
| 1567 | 458 | 2025 | 37 | 31 | 68 | 3623 | 1039 | 4662 |
| 38 | ... | 38 | 1 | ... | 1 | 88 | . $\cdot$ | 88 |
| 3 | 26 | 29 | $\ldots$ | $\ldots$ | ... | 4 | 39 | 43 |
| ... | . $\cdot$ | . $\cdot$ | $\ldots$ | . $\cdot$ | . | 3715 | 1078 | 4793 |
|  |  |  |  | . . . |  | 401 | 76 | 477 |
|  | . |  |  |  | . | 4116 | 1154 | 5270 |
|  |  |  |  | ...... |  | 560 | 358 | 918 |
|  |  |  |  | . |  | 87 | 23 | 110 |
|  |  |  |  |  |  | $\overline{647}$ | 381 | 1028 |
|  |  |  |  | . |  | 4763 | 1535 | 6298 |
|  | First Year |  |  | Specials |  |  |  |  |
| 43 |  | 47 | 1 | . . | 1 | 210 | 16 | 226 |
| 64 | 4 | 68 | $\ldots$ | - | $\ldots$ | 123 | 5 | 128 |
| 85 | 5 | 90 | 38 |  | 38 | 175 | 8 | 183 |
| 4 | 2 | 6 | 1 | $\ldots$ | 1 | 10 | 2 | 12 |
| 89 | 7 | 96 | 39 | ... | 39 | 185 | 10 | 195 |
|  |  |  |  | . ..... |  | 518 | 31 | 549 |
|  |  |  | ..... | . . . . . . . | .... | 5281 | 1566 | 6847 |
|  |  |  |  |  |  | 244 | 100 | 344 |
|  |  |  |  | . |  | 46 | 7 | 53 |
|  |  |  |  |  |  | 18 | 5 | 23 |
|  |  |  |  |  |  | $\underline{308}$ | 112 | 420 |
|  | . ........... | . . . . . . | . | . $\cdot$....... |  | 4973 | 1454 | 6427 |

## SUMMARY OF DEGREES

Degrees in the Graduate School
A.M. ..... 69
M.S. ..... 48
C.E ..... 3
E.E. ..... 3
M.E. ..... 1
M.Arch ..... 1
Ph.D. ..... 23
Total ..... 148
Baccalaureate Degrees
A.B., College of Liberal Arts and Sciences ..... 253
B.L., College of Liberal Arts and Sciences* ..... 2
B.S., College of Liberal Arts and Sciences ..... 35
B.S., College of Engineering ..... 195
B.S., College of Agriculture ..... 136
B.Mus., School of Music ..... 10
Total ..... 631
Degrees in Law
LL.B. ..... 19
J.D. ..... 2
Total ..... 21
Degrees in Library Science B.L.S. ..... 14
Total, Colleges and Schools in Urbana ..... 814
Degrees in Medicine
B.S. ..... 4
M.D. ..... 102
Total ..... 106
Degrees in Dentistry D.D.S. ..... 19
Degrees in Pharmacy
Ph.G. ..... 40
Ph.C. ..... 4
Total ..... 44
Total, Departments in Chicagu ..... 169
TOTAL, ALL DEPARTMENTS ..... 983
-Degrees conferred on former students; see page 534.

## INTERCOLLEGIATE DEBATERS

1914-1915

In the I.M.I. Debating League<br>Against Minnesota<br>Earl Cranston Ewert Herbert Clarence Helm Ralpe Ebner Himstedt<br>Against Iowa<br>Frank Clifton Slater Vernon Thompson Stevens Benjamin Whale<br>\section*{In the Midwest Debating League}<br>Against Wisconsin<br>Edward Bean Hayes<br>Grorge Washington Bristow Ralpe Ebner Himstedt<br>Against Michigan<br>Donald Ashway Grossman Herbert William Bye Frank Bonner Leonard, Jr.<br>\section*{Representative in the Northern Oratorical League}<br>Ralpe Ebner Himstedt<br>Representative in the Illinois Peace Contest<br>Gerald Darfield Stopp

## DIRECTORY OF ALUMNI ASSOCIATIONS

## GENERAL ALUMNI ASSOCIATION

To foster a spirit of loyalty and fraternity among the graduates and former students of the University of Illinois and to effect united action in promoting the welfare of the University. President: W. A. Heath, '83, Live Stock Exchange National Bank, Chicago, Ill. Secretary-Treasurer: Franklin W. Scott, '01, 703 Michigan avenue, Urbana, Ill.

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President: Dr. F. D. Moore, '99, 30 North Michigan avenue, Chicago
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    San Francisco: The Golden Gate Alumni Association of the University of Illinois
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        Secretary-Treasurer: E!la Barber, '84, 2121 Shattuck avenue, Berkeley
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                California
        President: Frank L. Drev, '04, 1154 N. Mentor avenue, Pasadena
        Secretary: Ernest Ingold,'09, 335 S. Hill street, Los Angeles
Colorado
    University of Illinois Club of Colorado
        President: Frank L. Birney, '81, }309\mathrm{ Ideal block, Denver
        Secretary-Treasurer: Dr. T.'J. Fenton, '06, Denver
District of Columbia
    WashingtoN: University of Illinois Club of Washington
        Secretary: W. O.Gordon, '11, Bureau of Animal Husbandry, Dept. of Agriculture,
            Washington, D. C.
Idaho
    The Illini Club of Idaho
        President: C. F. Pike
        Secretary: F. N. Ropp, '08, Federal bldg., Boise
Illinois
    Aurora: Aurora Illini Club
        President: M. A. Kendall. '07, }715\mathrm{ Garfield blvd.
        Secretary-Treasurer: W. B. Greene, '08, care Stephens-Adamson Co.
    Belleville: The Iilini Club of Belleville
        President: L. N. Perrin,'07, Penn bldg.
        Secretary: C. R. Ogle, '13,617 E. B street
    Centralia: Centralia Illini Club
    President: Charles Wham,'12
    Champaign: Champaign County Illini Club
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    Chicago: The Illini Club of Chicago
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        University of Illinois Alumnæ Association of Chicago
            President: Mabel Hopkins Hubbard, '01, 1409 Iowa street, Oak Park
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        President: W. J. Carey, '06, 718 W. Marietta street
        Secretary-Treasurer: J.' L.'McLaughlin, '09, 502 Powers bldg.
    Freeport: Freeport Illini Club
        President: George Schmelze, ex-10, 447 Lincoln ave.
        Secretary: R. M. Seeley, ex-16,44 Lincoln ave.
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La Salle County: La Salle County Illini Club
    President: D. G. Cairns,'02, 633 Congress street, Ottawa
    Secretary-Treasurer: J. R. Fornof, '10, 804 S. Park street, Streator
Peoria: Peoria Illini Club
    President: Irwin Fuller, '10, 415 Woolner bldg.
    Secretary: E. V. Champion, '12, }549\mathrm{ Woolner bldg.
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    President: E. G. Brands,'11, care of Rockford Morning Star
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    Secretary-Treasurer: James M. Johnston, '09, Moline
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    Indianapolis: Indianapolis Illini Club
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Lowa
    Des Moines: Des Moines Illini Club
    President and Acting Secretary: L. S. Ross, '89, 1308 Twenty-seventh strect
Massachusetts
    Boston:.New England Illini Club
    President: C. H. Blackall, '77, 20 Beacon street, Boston
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Michigan
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    Minneapolis and St. Paul: Illini Club of the Northwest
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        Secretary: D. C. Ketchum, '99, }518\mathrm{ New York Life bldg., Kansas City
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        President: E. S. Keene, '90, 1028 Seventh street, N.
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Pennsylvania
    Pittsburgh: University of Illinois Club of Pittsburgh
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Tennessee
    Memphis: Memphis Illini Club
        President: D. M. Palmer, ex-'05, 213 N. Watkins street
        Secretary: L. D. Knapp,'15, 839 Rayner street
Texas
    Houston: Houston Illini Club
    President: H. E. Ratcliffe, ex-'03, 520 Beatty bldg.
    Secretary-Treasurer: F. W. Weston, '10, care of Houston Structural Steel Co.
    Palacios: Gulf Coast Alumni Club
        President and Acting Secretary: Mary Williamson Elder, '87
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Inter-Mountain Alumni Association of the University of Illinois
President: Wesley E. King, '97, 116 U street, Salt Lake City
Secretary: W. H. Gregory, 406 Utah Savings \& Trust bldg., Salt Lake City
Washington
Puget Sound Association of the alumni and former students of the University of Illinois President: H. H. Harwood, '13, 1445 Lakeside avenue, Seattle
Secretary-Treasurer: Amanda Westhold, '03, 4548 Fourteenth avenue, N. E., Seattle
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Secretary: Raymond Roark, '11, care of the University of Wisconsin
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## LOCAL ASSOCIATIONS IN FOREIGN COUNTRIES

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University of Illinois Association of India
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Japan
Illini Club of Japan
President: S. Shiga, '93, Tokyo Technical School, Tokyo
Secretary: G. Fujimura,' '11, Agricultural Experiment Station, Taihoku, Formosa

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UNIVERSITY OF ILLINOIS-URBANA


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[^0]:    -The Senate is composed of all University officers of full professorial rank and all others in charge of independent departments of instruction. The order is that of seniority. For index of names, see page 559. fOn leave.

[^1]:    ${ }^{\circ}$ On leave.

[^2]:    * Detail ended January 22, 1916.

[^3]:    - Detail effective January 22, 1916.

[^4]:    -Resigned, November 30, 1915.

[^5]:    *Resigned, December 1, 1915.

[^6]:    * Resigned, October 15, 1915.

[^7]:    George Marsi Higgins, B.S., Graduate Assistant in Zoology Henry Rhodes Lee, A.B., Graduate Assistant in Chemistry Thomas Byrd Magath, M.S., Graduate Assistant in Zoology Anna Sophie Rogers, A.M., Graduate Assistant in Psycholagy

[^8]:    - First Semester.

[^9]:    - Resigned, October 15, 1915.
    $\dagger$ Resigned, December 31, 1915.

[^10]:    *Including the State Laboratory collection.

[^11]:    * A unit is the amount of work represented by the pursuit of one preparatory subject, with the equivalent of five forty-minute recitations a week, through 36 weeks; or, in other words, the work of 180 recitation periods of forty minutes each, or the equivalent in laboratory or other practise.

[^12]:    'Sre fontincte, page 73.

[^13]:    ${ }^{1}$ The subjects named in List $C$ must be tauglt in accordance with specifications which are set forth in the High School Manual. Furtlier information may be had on application to the Higl? School Visitor.
    'In giving credits for manual training the University specifies that the work is to be done by competent teachers, as determined by inspection, and that credit shall not exceed one unit for 360 forty-minute periods of work, including the necessary drawing and shop work.
    ${ }^{8}$ See footnote, page 73.

[^14]:    *Three units may be offered in history, made up from the following: Ancient history to 800 A. D., 1 unit; medieval and modern history, 1 unit; English history, $2 / 2$ unit or 1 unit; American history, $1 / 2$ unit or 1 unit.
    $\dagger$ Notebook required for 1 unit; not required for $1 / 2$ unit.
    $\$$ Notebook required.

[^15]:    *Notebook required.
    $\dagger$ Three units may be offered in history. made up from the following: Ancient history to 800 A. D., 1 unit; medieval and modern history, 1 unit; English history, $1 / 2$ unit or 1 unit; American history, $5 / 2$ unit or 1 unit.
    $\pm$ Notebonk reguired for 1 unit; not required for $5 / 2$ unit.

[^16]:    *See requirements for graduation in the various colleges.

[^17]:    For scholarships in the College of Law, see page 218.
    For scholarships in the Summer Session, see page 212.
    For fellowships and graduate scholarships, see under Graduate School page 194.

[^18]:    *Additional equipment costing $\$ 6.75$ must be purchased.

[^19]:    *Students of law and music, special students, and conditioned students must make needed changes in the amount given for "semester fees."

[^20]:    *Those students who show by examination a proficiency in composition sufficieat to qualify them for Rhetoric 2 may be excused from Rhetoric 1. See page 79.

[^21]:    ${ }^{1}$ For the definition of the major in this subject, see below, page 303.
    ${ }^{2}$ For the definition of the major in English, see below, page 324.
    A major in French must include 24 hours in addition to French 1a-1b.
    ${ }^{4}$ A major in German must include 24 hours in addition to German 1 and 3.
    spor the definition of the major in this subject, see page 302.

[^22]:    *See special examination in Rhetoric 1, page 79.
    ${ }^{1}$ English $10-11$ is open only to freshmen who have presented the minimum amount of English required for admission. See the description of this course, page 324.
    ${ }^{2}$ The figure immediately following the subject is the number of the course (see page 257; the figure in parenthesis indicates the number of credit hours to be secured in the course each semester.
    ${ }^{3}$ Either semester.
    'May be taken in either semester, but not in both.
    ${ }^{\text {P Prerequisite: }}$ Mathematics 4 (Trigonometry) which may be taken at the same time.
    -Prerequisite: Entrance credit in Physics, and Chemistry 1 or 1 a.

[^23]:    ${ }_{2}{ }^{1}$ Semester hours, For definition see page 259.
    ${ }^{2}$ If Chemistry la is taken, a 2 -hour elective must be added, with the approval of the adviser.
    ${ }^{3}$ Attention is called to the fact that high school physics is a prerequisite for Household Science 1.

[^24]:    ${ }^{1}$ Semester hours. For definition see page 259.
    ${ }_{2}$ If Chemistry ia is taken, a 2-lıour elective inust be added, witll the approval of the adviser.
    ${ }^{3}$ Attention is called to the fact that high school physics is a prerequisite for Household Science 1.
    ${ }^{\text {*C }}$ Choice depends $u$ pon whether the student wishes to emplasize the sciences or economics as a minor.

[^25]:    ${ }^{1}$ Semester hours. For definition see page 259.

[^26]:    ${ }^{1}$ Semester hours. For definition see page 259

[^27]:    ${ }^{1}$ Semester hours. For definition see page 259.
    *Students electing Option $B$ must register in Math. 7.

[^28]:    ${ }^{1}$ Semester hours. For definition see page 259.

[^29]:    ${ }^{1}$ Semester hours. For definition see page 259.

[^30]:    ${ }^{1}$ Semester hours. For definition see page 259.

[^31]:    ${ }^{1}$ Semester hours. For definition see page 259.

[^32]:    ${ }^{1}$ Semester hours. For definition see page 259.

[^33]:    TThe School of Railway Engineering and Administration (page 205) offers, in addition to the three curriculums named here, curriculums in railway transportation and railway administration under the direction of the College of Commerce and Business Administration. See pages 152-154 above.

[^34]:    *See also School of Railway Engineering and Administration, page 205.

[^35]:    ${ }^{1}$ Semester hours. For definition see page 259.
    ${ }^{2}$ The numbers refer to courses in the Description of Courses, page 257.
    ${ }^{2}$ Students who have had chemistry in the high school equivalent to Chemistry 1 b will register in Chemistry Ia.

[^36]:    ${ }^{1}$ Semester hours. For definition see page 259.
    ${ }^{2}$ The numbers refer to courses in the Description of Courses, page 257.
    *Any approved non-technical course requiring sophomore standing. See printed list of approved non-technical electives, page 164.

[^37]:    ${ }^{1}$ Semester hours. For definition see page 259.
    ${ }^{2}$ The numbers refer to courses in the Description of Courses, page 257.
    *Only students having high grades may elect a thesis.

[^38]:    'Semester hours. For definition see page 259.
    ${ }^{2}$ The numbers refer to courses in the Description of Courses, page 257.

    - Only students having high grades may elect a thesis.

[^39]:    ${ }^{1}$ Semester hours. For definition sce page 259.
    ${ }^{2}$ The numbers refer to courses in the Description of Courses, page 257.

[^40]:    ${ }^{2}$ Semester hours. For definition see page 259.
    ${ }^{2}$ The numbers refer to courses in the Description of Courses, page 257.

[^41]:    ${ }^{1}$ Semester hours. For definition see page 259.
    ${ }^{2}$ The numbers refer to courses in the Description of Courses, page 257.

    * Only students having high grades may elect a thesis.

[^42]:    ${ }^{1}$ Semester hours. For definition see page 259.
    ${ }^{2}$ The numbers refer to courses in the Description of Courses, page 257.

[^43]:    ${ }^{1}$ Semester hours. For definition see page 259.
    Those students who show by examination a proficiency in composition sufficient to qualify them for Rhetoric 2 may be excused from Rhetoric 1. See page 79.

[^44]:    ${ }^{1}$ Semester hours. For definition see page 259.
    Those students who show by examination a proficiency in composition sufficient to qualify them for Rhetoric 2 may be excused from Rlietoric 1. See page 79.

[^45]:    - If physics has not been offered far entrance, its equivalent should be elected.

[^46]:    Chem. 1 or 1a-Inorganic Chemistry.. 5 or 3
    Modern Language............................... 8
    Plysics ........................................... . . 10

[^47]:    ${ }^{1}$ Semester hours. For definition see page 259.

    - Students taking the professional course are required to register in Horticulture 39 each semester.

[^48]:    *Students taking the Curriculum for Teachers may take Animal Husbandry 30 for one-half semester and receive $21 / 2$ credits therefor.

[^49]:    *No other will be accepted by the Dean.

[^50]:    *The figures after each subject indicate the minimum number of lecture or recitation hours a week which the student should devote to that subject throughout one college year.

[^51]:    ${ }^{1}$ Semester hours. For definition see page 259.

[^52]:    ${ }^{1}$ Semester hours. For definition, see page 259.

[^53]:    ${ }^{1}$ Semester hours. For definition sce page 259.
    -Those students who show by examination a proficiency in composition sufficient to qualify them for Rhetoric 2 may be excused from Rhetoric 1. See page 79.

[^54]:    ${ }^{1}$ Semester hours. For definition see page 259.

[^55]:    * A unit is the amount of work represented by the pursuit of one preparatory subject, with the equivalent of five forty-minute recitations a week, through 36 weeks; or in other words, the work of 180 recitation periods of forty minutes each, or the equivalent in laboratory or other practise. In general, two hours in laboratory, shop, or drawing room are considered equivalent to one hour of recitation.
    $\dagger$ A semester hour is a class period of one hour a week for one semester, or the equivalent in laboratory, shop, or drawing room.

[^56]:    *The first and second semesters are indicated by the Roman numerals I and II, respectively. A portion of a semester is indicated by the words in parenthesis following the semester numeral. Unless otherwise specifically stated, the Arabic numerals indicate the number of one-hour periods a week in each subject.

[^57]:    *This subject will be presented in the senior year for the year 1915-16 only.

[^58]:    * A unit is the amount of work represented by the pursuit of one high-school subject for one year of 36 weeks, with five forty-minute recitations each week, or the equivalent in laboratory or other practise.

[^59]:    *The first number indicates the total number of hours in a course; the number after the hyphen indicates the number of exercises a week; the Roman numerals I, II indicate the first and second semesters, and the final numbers $1,2,3$ indicate respectively the freshman, junior, and senior years. Thus, 112-7; I; 2 means that the course includes 112 hours, 7 a week, given during the first semester of the junior year.

[^60]:    - First Semester.
    $\dagger$ Second Semester

[^61]:    *In registering for a course with variable credit hours, a student must put down on his study list, not the possible hours, as shown here, but the number of hours for which ha intends to take the course; e. g., not $2-5$, but 2 , or 3 , or 4 , or 5 .

[^62]:    * A required inspection trip to certain soil experiment fields or farms will be arranged in May or early June, in connection with courses 12 and 12 a . This trip will cost about $\$ 10$ on the part of the student.
    †Tn registering for a course with variable credit hours, a student must put down on his study list, not the possible hours, as shown here, but the number of hours for which he intends to take the course; e. 8. , not $2-5$, but 2 , or 3 , or 4 , or 5 .

[^63]:    - In registering for a course with variable credit hours, a student must put down on his study list, not the possible hours, as shown here, but the number of hours for which he intends to take the course; e. g., not $2-5$, but 2 , or 3 , or 4 , or 5 .

[^64]:    *In registering for a course with variable credit hours, a student must put down on his study list, not the possible hours, as shown here, but the number of hours for which he intends to take the course; e. g., not $2-5$, but 2 , or 3 , or 4 , or 5 .

[^65]:    * In registering for a course with variable credit hours, a student must put down on his study-list, not the possible hours, as shown here, but the number of hours for which the intends to take the course; e. g., not $2-5$, but 2 , or 3 , or 4 , or 5 .

[^66]:    * In registering for a course with variable credit hours, a student must put down on his study-list, not the possible hours, as shown here, but the number of hours for which he intends to take the course; e. g., not $1-2$, but 1 , or 2 .

[^67]:    * In registering for a course with variable credit hours, a student must put down on his study-list, not the possible hours, as shown here, but the number of hours for which he intends to take the course; e. g., not $3-5$, but 3 , or 4 , or 5 .

[^68]:    - In registering for a course with variable credit hours, a student must put down on his study-list, not the possible hours, as shown here, but the number of hours for which he intends to take the course; e. g., not $2-5$, but 2 , or 3 , or 4 , or 5 .

[^69]:    -Resigned, December 1, 1915.

[^70]:    - Deceased, January 3, 1916.

[^71]:    * In registering for a course with variable credit hours, a student must put down on his study-list, not the possible hours, as shown here, but the number of hours for which he intends to take the course; e. g., not $2-5$, but 2 , or 3 , or 4 , or 5 .
    $\dagger$ Certain required inspection trips will be arranged in connection with courses 6 and 7. Students registered in these courses should take into consideration the expense involved, which will approximate $\$ 15.00$ for each course.

[^72]:    - In registering for a course with variable credit hours, a studcnt must put down on his study-list, not the possible hours, as shown here, but the number of hours for which he intends to take the course; e. g., not $2-5$, but 2 , or 3 , or 4 , or 5 .

[^73]:    $\dagger$ In registering for a course with variable credit hours, a student must put down on his study list, not the possible hours, as shown here, but the number of hours for which he intends to take the course; e. K., not $2-5$, but 2 , or 3 , or 4 , or 5 .

[^74]:    *On leave of absence.

[^75]:    S 1. Elements of Drafting.-For description see General Engineering Drawing 1. (4). Mr. Crane
    S 2. Descriptive Geometry.-For description see General Engineering Drawing 2. (4).

    Mr. Cbane

[^76]:    - In registering for a course with variable credit hours, a student must put down on his study-list, not the possible hours, as shown here, but the number of hours for which he intends to take the course; e. g., not $2-5$, but 2 , or 3 , or 4 , or 5 .

[^77]:    * Students who show by examination a proficiency in composition sufficient to qualify them for Rhetoric 2 may be excused from the first semester's work. The examination for those desirous of meeting this qualification will be given at \% p. m., September 18 , in room 228 N. H.

[^78]:    *In registering for a course with variable credit hours, a student must put down on his study-list, not the possible hours, as shown here, but the number of hours for which he intends to take the course; e. g., not $2-5$, but 2 , or 3 , or 4 , or 5 .

[^79]:    $\dagger$.In registering for a course with variable credit hours, a student must put down on his study-list, not the possible hours, as shown here, but the number of hours for which he intends to take the course; e. g., not $2-5$, but 2 , or 3 , or 4 , or 5 .

[^80]:    * In registering for a course with variable credit hours, a student must put down on his study-list, not the possible hours, as shown here, but the number of hours for which he intends to take the course; e. g., not 2.5 , but 2 , or 3 , or 4 , or 5 .

[^81]:    *In registering for a course with variable credit hours, a student must put down on his study-list, not the possible hours, as shown here, but the number of hours for which he intends to take the course; e. g., not $2-5$, but 2 , or 3 , or 4 , or 5 .

[^82]:    * In registering for a course with variable credit hours, a student must put down on his study-list, not the possible hours, as shown here, but the number of hours for which he inteads to take the course; e. g., not $2-5$, but 2 , or 3 , or 4 , or 5 .

[^83]:    *Millinery for those taking Household Science 11 is, given from 10 to 12 o'clock on Saturday the second semester, and sewing from 10 to 12 o'clork the first semester.

[^84]:    - In registering for a course with variable credit hours, a student must put down on his study-list, not the possible hours, as shown here, but the number of hours for which he intends to take the course: e. g., not $1-4$, but $I$, or 2 , or 3 , or 4 .

[^85]:    *Resigned, November 30, 1915.

[^86]:    *Credit only toward the degree of Bachelor of Music.

[^87]:    - In registering for a course with variable credit hours, a student must put down on his study-list, not the possible hours, as shown here, but the number of hours for which he intends to take the course; e. g., not $2-5$, but 2 , or 3 , or 4 , or 5 .

[^88]:    * In registering for a course with variable credit hours, a student must put down on his study-list, not the possible hours, as shown here, but the number of hours for which he intends to take the course; e. g., not $2-5$, but 2 , or 3 , or 4 , or 5 .

[^89]:    *On leave.

[^90]:    * In registering for a course with variable credit hours, a student must put down on his study-list, not the possible hours, as shown here, but the number of hours for which he intends to take the course; e. g., not $2-5$, but 2 , or 3 , or 4 , or 5 .

[^91]:    In registering for a course with variable credit hours, a student must put down on his study-list, not the possible hours, as shown here, but the number of hours for which ha intends to take the course; e. g., not $2-5$, but 2 , or 3 , or 4 , or 5 .

[^92]:    * Mr. Wilson, of Hancock County, is employed locally as county adviser, but is not on the Smith-Lever fund.

[^93]:    The Station Staff includes only those scientific workers who have been recommended by the President and appointed by the Board of Trustees.
    $\dagger$ Retired September 1, 1915. Deceased September 6, 1915.

[^94]:    * Absent on leare.

[^95]:    *Absent on leave.

[^96]:    ${ }^{*}$ Resigned, November 30, 1915.

[^97]:    *Resigned, December 1, 1915.

[^98]:    *Resigned, November 30, 1915.

[^99]:    *Degrees were conferred by the Uniyersity of Illinois unless otherwise specified. Two degrees from the same institution are indicated thus: A.B., A.M., 1909, 1911. $\dagger$ Attendance during both the Summer Session of 1915 and the regular Session of 1915-16 is indicated by SS in parenthesis; during the Summer Session only, by SS. $\ddagger$ Candidate for professional degree in engineering.

[^100]:    *Deceased Jan. 3, 1916
    $\ddagger$ Candidate for professional degree in engineering.

[^101]:    $\ddagger$ Candidate for professional degree in engineering.

[^102]:    *Computed October 1, 1915

[^103]:    *With thesis.

[^104]:    *With thesis.

[^105]:    Albert Riceardson Montague, Bachelor of Science (Civil Engineering)
    Hrrbert Jackson Moore, Bachelor of Science (Agriculture)
    Cefester Arthur Morgan, Bachelor of Science (Mining Engineering)
    William Algernon Kingsmill Morkel, Bachelor of Science (Agriculture)
    Ralph Leonard Morreli, Bachelor of Science (Civil Engineering)
    Vebnon Leslie Morris, Bachelor of Science (Architectural Engineering)
    Edward Henry Morrissey, Bachelor of Arts (Liberal Arts)
    Hrlen Sinclair Morrison, Bachelor of Science (Agriculture)
    Join Hamilron Morse, Bachelor of Arts (Liberal Arts)
    Gladys Ione Moss, Bachelor of Arts (Liberal Arts)
    Renzo Edmond Muckelroy, Bachelor of Science (Agriculture)
    Forrest Hamilton Murray, Bachelor of Arts (Science*)
    Rachel Flossie Myers, Bachelor of Arts (Liberal Arts)
    Clarence Arthur Nebel, Bachelor of Science (Agriculture)
    Idris Nelson, Bachelor of Science (Ceramics*)
    Milton Nels Nelson, Bachelor of Arts (Liberal Arts)
    Ralph Augustus Nelson, Bachelor of Science (Chemical Engineering*)
    Florence Edith Neville, Bachelor of Arts (Science)
    Walter Lester Nichols, Bachelor of Science (Civil Engineering)
    Peter Jacob Nilsen, Bachelor of Science (Electrical Engineering)
    Carl Ragnar Nilsson, Bachelor of Science (Mechanical Engineering)
    Roe Niver, Bachelor of Arts (Science*)
    Emilie Marie Noack, Bachelor of Arts (Liberal Arts)
    Wesley Kayler Norris, Bachelor of Science (Civil Engineering)
    Proctor Albert Nowlen, Bachelor of Science (Agriculture)
    Arthur Allen Odell, Bachelor of Arts (Liberal Arts)
    Irene Balfour Olin, Bachelor of Arts (Liberal Arts)
    Anna Margaret Orsen, Bachelor of Arts (Science)
    Harry Christian Olseng, Bachelor of Science (Agriculture)
    Robert Harold Olson, Bachelor of Science (Architectural Engineering)
    Menry Aki Panhoe, Bachelor of Science (Civil Engineering)
    Frederick William Panhorst, Bachelor of Science (Civil Engineering)
    Raymond Webr Parker, Bachelor of Science (Electrical Engineering)
    Warren Kinder Parker, Bachelor of Science (Agriculture)
    Wilma Gay Parks, Bachelor of Arts (Science)
    Norman Bond Patten, Jr., Bachelor of Science (Architectural Engineering)
    Wileur Otis Pendarvis, Bachelor of Arts (Liberal Arts)
    Marion Louise Percival, Bachelor of Arts (Liberal Arts)
    Margaret Campbell Perry, Bachelor of Arts (Liberal Arts)
    Ralph Grover Perry, Bachelor of Science (Mining Engineering)
    Horace Howard Phelps, Bachelor of Science (Agriculture)
    George Hyde Pike, Bachelor of Arts (Liberal Arts*)
    Louis Clovis Pinault, Bachelor of Science (Architecture)
    John Joseph Pitts, Jr., Bachelor of Science (Agriculture)
    Ernest Howard Pool, Bachelor of Arts (Liberal Arts)
    Lawrence Arthur Pope, Bachelor of Science (Electrical Engineering)
    Frederick William Postel, Bachelor of Arts (Liberal Arts)
    Emery Vern Potier, Bachelor of Science (Electrical Engineering)
    Fred Richmond Powers, Bachelor of Science (Agriculture)
    Ada Roberta Pugh, Bachelor of Arts (Liberal Arts)
    Raymond Harry Purdy, Bachelor of Science (Architecture)
    emama Stine Pursley, Bachelor of Arts (Liberal Arts)
    Frank Whitcomb Pusey, Bachelor of Science (Agriculture*)
    Rudolph Radabaugi, Bachelor of Science (Science)
    Eugene Robert Paul Ball, Bachelor of Science (Civil Engineering)
    Thouas David Randall, Bachelor of Science (Civil Erginecring)
    John Holly Rapp, Bachelor of Arts (Liberal Arts)
    Willard Cole Rappleye, Bachelor of Arts (Science)
    William OWEn Rathfon, Bachelor of Science (Ceramic Engineering*)
    Bankim Chandra Ray, Bachelor of Science (Electrical Engineering)
    Hugh Light Ray, Bachelor of Science (Mechanical Engineering)
    Allan Burnes Rayburn, Bachelor of Science (Agriculture)
    William Thomas Reace, Bachelor of Science (Electrical Enginecring)
    Gratia Jewett Reed, Bachelor of Arts (Liberal Arts)
    Charles Henry Refling, Bachelor of Science (Agriculture)
    Mollie Reid, Bachelor of Arts (Liberal Arts)
    Julia Elizabeth Renner, Bachelor of Arts (Liberal Arts)
    Guy Benjamin Reno, Bachelor of Arts (Liberal Arts)
    Edna Kerr Rentchler, Bachelor of Arts (Science)
    Chleo James Jared Rhea, Bachelor of Science (Railway Electrical Engineering)
    Louis Ribback, Bachelor of Science (Agriculture)
    Donald Bert Rich, Bachelor of Science (Agriculture)
    Lenore Richards, Bachelor of Arts (Liberal Arts)
    PERCY McClure Richards, Bachelor of Science (Electrical Engineering)
    Frank B Richardson, Jr.,Bachelor of Science (Agriculture)
    Juanita Bonnie Richardson, Bachelor of Science (Agriculture)
    George Kerns Richmond, Bachelor of Arts (Liberal Arts)
    Dorothy Sue Rinaker, Bachelor of Arts (Liberal Arts)
    Royal Wane Ritchey, Bachelor of Science (Agriculture)
    Nannie Baxter Rives, Bachelor of Arts (Liberal Arts)
    Ruth Robbins, Bachelor of Arts (Liberal Arts)
    Harry Barrett Rogers, Bachelor of Science (Civil Engineering)

[^106]:    *With thesiq.

[^107]:    "Sophomores, bronze medals. Freshmen, bronze pins.

