

CORNELL UNIVERSITY OFFICIAL PUBLICATION

VOLUME X

NUMBER 2

NEW YORK STATE
COLLEGE OF AGRICULTURE
—
SUPPLEMENTARY
ANNOUNCEMENT OF SECOND
THIRD AND SUMMER
TERMS—191~~8~~9

DECEMBER 15, 1918
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ITHACA, NEW YORK

CALENDAR

Second Term, 1918-19

Dec. 30	Monday,	Registration.
Dec. 30	Monday, 1 p. m.	Instruction begins.
Feb. 14	Friday,	Instruction ends in winter courses.
Feb. 10-14		Farmers' Week.
Mar. 22	Saturday, 1 p. m.	Instruction ends.

Third Term, 1918-19

Mar. 31	Monday,	Registration.
Mar. 31	Monday, 1 p. m.	Instruction begins.
June 18	Wednesday, 6 p. m.	Instruction ends.

Summer Term, 1919

(Probable dates)

July 5	Saturday,	Registration.
July 7	Monday, 8 a. m.	Instruction begins.
Sept. 25	Friday, 6 p. m.	Instruction ends.

First Term, 1919-20

Sept. 29-Oct. 1		Registration.
Oct. 2	Thursday,	Instruction begins.

CORRECTIONS AND ADDITIONS

DATES OF THE SUMMER TERM, 1919

June 24	Tuesday,	Registration.
June 25	Wednesday,	Instruction begins.
July 4	Friday,	Holiday.
Sept. 13	Saturday,	Instruction ends.

BOTANY

6a. **Advanced Field Course in Taxonomy.** Summer term, credit four hours. Prerequisite course 6 or its equivalent. Laboratory and field work, W, 8-1, 2-5. Remainder of work at times optional with the student. Laboratory fee, \$3; deposit, \$2.

6b. **Taxonomy of the Higher Plants.** Summer term, credit four hours. Prerequisite course 1 or its equivalent. Lecture by appointment. Roberts Hall 292. Laboratory, T Th, 2-5. Agronomy Building, Botanical Laboratory. Remainder of the work at times optional with the student. Laboratory fee, \$3; deposit, \$2.

This course is not equivalent to course 6 which is more comprehensive.

7. **Weeds and Weed Seeds.** Summer term, credit two hours. Prerequisite course 1 or its equivalent. Lecture and laboratory by appointment. Agronomy Building, Botanical Laboratory. Laboratory fee, \$1.50.

9a. **Histology.** Summer term, credit four hours. Prerequisite course 1 or its equivalent. Lecture, F, 8. Laboratory, T Th, 8-10.30, F, 9-11.30. Agronomy Building, Botanical Laboratory. Laboratory fee, \$4.

This course is not equivalent to course 9 which is more comprehensive.

18. **Research in General Botany, Histology, and Taxonomy.** Summer term, credit not less than three hours. The laboratory fee depends on the nature of the work.

19. **Seminary in Taxonomy, Morphology, Cytology, and Histology.** Summer term. Required of graduate students in the Department. Hours and place to be arranged.

20. Offered in the summer term also. Lectures and recitations in that term, M W F, 10.

31. Offered in the summer term also.

33. **Research, Plant Physiology.** Summer term, credit for major or minor, otherwise not less than four hours. Prerequisite training in botany, chemistry, and physiology. Agronomy Building 101.

DAIRY INDUSTRY

6. Practice, two of the following periods: T, 2-4.30, Th, 2-4.30, S, 8-10.30, S, 10.30-1. Students must consult the department before registering.

8. Practice sections as announced only if sufficient students register.

10. Repeated in the third term.

15. Not given.

ENTOMOLOGY, LIMNOLOGY, AND ORNITHOLOGY

- 4. Laboratory fee, 50 cents per credit hour.
- 12. Lecture, F, 9, in the summer term. Laboratory fee, \$3 each term.
- 20. Lectures, T Th, 11. Roberts Hall 302.

FARM CROPS

Courses 2 and 7 will be given if five or more graduate students register for them.

2. **Farm Crops, Advanced Course.** Summer term, credit three hours. Prerequisite course 1. Lectures, M T W, 11. Poultry Building 175.

7. **Taxonomy of Cereals.** Summer term, credit one hour. T, 2-5 Poultry Building 175.

Division of Vegetable Crops

One or two courses will be given in the summer term if there is sufficient demand. Confer with Professor Thompson.

FARM MANAGEMENT

- 5. Second and third terms, Th, 4.30-6.
- 8. Not given in the third term, transferred to summer session.

FLORICULTURE

- 6. Not given in the summer term.
- 13. Not given in the summer term.

FORESTRY

- 1. Place changed to Forestry 118.
- 9. Place changed to Forestry 122.
- 11. Place changed to Forestry 122.
- 13. Lectures, T Th, 12. Time of practice to be arranged.
- 18. Place changed to Forestry 122.

HOME ECONOMICS

- 3. Morning practice section changed to M W F, 8-11.
- 5a. Lecture, T, 8
- 5d. **School Lunch Supervision.** Third term, credit two hours. Open only to seniors who are preparing to teach. Lecture, S, 8. Practice, hours to be arranged. Home Economics Building.
- 6. Third term. Lectures and recitations, T, 9, Th, 11-1. Practice, T, 10-1, Th, 8-11, or T Th, 2-5.
- 8. Lecture, M, 12. Practice, T Th, 2-5, or WF, 10-1. Laboratory fee, \$2.
- 13a. Lectures, T F, 10. Place to be announced.
- 15. Course 2a or its equivalent is prerequisite.
- 15a. Not offered in the third term.
- 15b. Lecture, Th, 8. Meets in Home Economics 305.
- 16. Third term, credit three hours. Lecture, T, 9. Practice, T Th, 10:1. Estimated expense, \$8 to \$10. Laboratory fee, \$3.

18. Registration limited to twenty students. Required of students specializing in clothing and textiles.

18a. Chemistry 83 is prerequisite.

21c. Laboratory fee, \$6.

22. Not given in the third term.

METEOROLOGY

1. Place of laboratory practice to be announced.

2. Place of laboratory practice to be announced.

POMOLOGY

10. Not given in the summer term.

12. Offered in summer term also.

RURAL ECONOMY

7. Place changed to Forestry Building.

12. Place changed to Forestry Building.

14. Place changed to Forestry Building.

16. Meets in Agronomy 192.

RURAL EDUCATION

1. Not given in the summer term.

2. Third and summer terms, daily except S, 8.

3. Third term laboratory, M, 2-4.30 and S, 8-10.30. Summer term laboratory, W, 2-4.30.

4. Not offered in the summer term.

Credit in third term two hours. Lectures, M W, 11. Reference to laboratory fee should be omitted.

11. **Administrative and Supervisory Uses of Educational Measurements.** Summer term, credit three hours. M W F, 2. Farm Management Building.

This course is devoted to a study of the means and methods of accurately measuring the results of education. Products which can be subjected to such treatment are summarized and the treatment appropriate to each is determined. Sufficient technical knowledge of statistics for general use is provided by formal study and by treatment of actual data. The course presents a detailed study of the uses which administrators, supervisors and teachers may take of exact measurements including a critical examination of published results.

14. Summer term, credit three hours. M W F, 11. Open to graduate students. Caldwell Hall 282.

This course is designed for those preparing for teacher training work in college departments of agricultural education. It deals with the study of college and high school curricula in agriculture with respect to the technical preparation of teachers of secondary agriculture, the professional needs of the high school teacher of agriculture, practice teaching, graduate needs

to be met by such departments, and the content of special methods courses in agricultural education.

18. **State and County School Administration and Supervision.** Summer term, credit four hours M T Th F, 9. Farm Management Building.

A systematic study of the educational problems confronting state, county, and township or district administrators and supervisors. Present tendencies in education are critically examined to determine the vital problems of administration and supervision. State laws and regulations, recent reports and surveys, and current periodicals are studied to ascertain practices in states representing different types of organization and administration. Taxation, distribution of funds, buildings and their equipment, control of text books, courses of study, certification of teachers, improvement of teachers in service, records and reports are illustrative of topics for investigation. Aims or objectives are considered in the light of educational and social conditions and criteria are sought by which results may be appraised. An evaluation of the points of attack where progress is most likely or most needed concludes the course.

20. **Administration and Supervision of Vocational Agriculture.** Third or summer term, credit two or three hours. Prerequisite first term of course 18 or the equivalent. Open to graduate students only. Lectures, M T Th F, 4. Caldwell Hall 143.

This course is specially designed for persons fitting themselves for state supervision of agricultural education. It treats: administration and supervision of agricultural education under the Smith Hughes Act; state legislation relating to agricultural education; comparative study of types of schools. Visits to schools in New York and adjacent states are required as a part of the course.

RURAL ENGINEERING

2a. **Farm Power Machinery.** Third term, credit four hours. Prerequisites as in course 2. Lectures, W F, 8. Caldwell Hall 100. Practice, Th or F, 2-5, and by appointment during half day periods. Rural Engineering Building.

The course will include practice in the care and operation of farm tractors. Laboratory fee, \$3.

20. Given in summer term also, with but one laboratory section, M, 2-5.

30. **Farm Structures.** Summer term, credit three hours. Prerequisite Drawing 1 or its equivalent. Lecture, T, 12. Caldwell Hall 143. Drafting periods, two by appointment. Caldwell Hall 400.

41. **Farm Shop Work.** Summer term, credit three hours. Lecture, S, S. practice, S, 9-1 and one period by appointment. Farm Shop.

RURAL ORGANIZATION

1. Offered in the summer term if a sufficient number apply. The lectures will then be at 9.

SOIL TECHNOLOGY

1. Laboratory fee, \$1.50.

NEW YORK STATE COLLEGE OF AGRICULTURE

This supplementary announcement lists all the courses offered in the College of Agriculture during the second, third, and summer terms, 1919. New courses are briefly described, for all others reference may be made to the regular announcement, copies of which are available at the Secretary's office.

AGRICULTURAL CHEMISTRY

83. **Agricultural Organic Chemistry.** Second term, credit three hours. Continued from first term. Prerequisite Chemistry 1. Lectures, M W F, 12. Caldwell Hall 100.

84. **Agricultural Organic Chemistry, Laboratory Course.** Second term, credit two hours. Continued from first term. Prerequisite Chemistry 6. T Th, 2-5. Caldwell Hall 250.

85. **Agricultural Chemistry.** Second term, credit three hours. Prerequisite course 83. Lectures, M W F, 11. Place to be arranged.

85a. **Agricultural Chemistry, Laboratory Course.** Second term, credit two hours. Prerequisite Chemistry 6 and course 84. T Th, 2-5. Caldwell Hall 250.

86. **Agricultural Chemistry, Advanced Course.** Third term, credit three hours. Prerequisite course 85a. Lectures, M W F, 11. Place to be arranged.

87. **Agricultural Chemistry, Laboratory Course.** Third term, credit three hours. Prerequisite courses 84 and 85a. T Th, 2-5.30. Caldwell Hall 250.

88. **Agricultural Chemistry, Advanced Course.** Third term, credit three hours. Prerequisite course 85 or 92. Lectures, M T W, 10. Caldwell Hall 100.

89. **Agricultural Chemistry, Laboratory Course.** Third term, credit three hours. Prerequisite courses 84, 85a, and 93. T Th, 2-5.30. Caldwell Hall 250.

90. **Advanced Agricultural Analysis.** Second or third term, credit three or more hours. Prerequisite courses 87 and 89. Hours and place, to be arranged.

92. **Household Chemistry.** Third term, credit two hours. Prerequisite course 83. Lectures, M W, 12. Caldwell Hall 100.

93. **Household Chemistry, Laboratory Course.** Third term, credit two hours. Prerequisite Chemistry 6 and course 83. Laboratory, M W, 8-11, or T Th, 2-5. Caldwell Hall 250.

ANIMAL HUSBANDRY

Students intending to specialize in animal husbandry are advised to register for courses 1 and 2 before taking the more advanced courses.

2. **Principles of Animal Breeding.** Second term, credit three hours. Lectures, T Th, 9. Practice, F, 2-4.30. Animal Husbandry Building A and Judging Pavilion.

5. **The Horse.** Third term, credit four hours. Lectures, M W F, 11. Animal Husbandry Building A. Practice, T, 2-5. Judging Pavilion.

10. **Dairy Cattle.** Third term, credit four hours. Lectures, M W, 9. Practice, W, 2-3.30, by appointment; also, daily attendance at the barns for practice in feeding and stable management for three weeks, in groups as assigned. Animal Husbandry Building A, Judging Pavilion, barns, and stables.

12. **Meat and Meat Products.** Second or third term, credit three hours. Registration by appointment and limited to forty. Lecture, M, 8. Practice in two sections, M Th, 2-4.30, W F, 2-4.30, or T, 2-4.30, and S, 8-10.30. Animal Husbandry Building B and Meat Laboratory.

13. **Beef Cattle, Sheep, and Swine, Advanced Course.** Second term, credit two hours. Prerequisite course 11. Lectures, T Th, 11. Animal Husbandry Building B.

15. **Principles of Feeding, Advanced Course.** Second term, credit three hours. Prerequisite course 1 and Veterinary Physiology 12. Lectures, M W F, 9. Animal Husbandry Building.

17. **Advanced Stock Judging.** Third term, credit one hour. Hours by appointment.

18. **Seminar.** Second and third terms, without credit. Monday afternoon.

20. **General Elementary Course in Animal Husbandry.** Second and third terms, credit three hours a term. For students in the New York State Veterinary College only. Lectures, M W, 10. Practice, W, 11-1. Animal Husbandry Building.

BOTANY

1. **General Botany.** Second and third terms, credit three hours a term. Lectures, T Th, 10. Dairy Building 222. Laboratory, one period of two and one-half hours. Agronomy Building. Laboratory sections are limited to twenty students each. All students other than freshmen must consult the Department in regard to laboratory appointments before registering for the course. Laboratory fee, \$1.75 a term.

1a. **General Botany.** (For new students entering at the beginning of the second term.) Second term, credit five hours. Lectures, M W F, 9. Roberts Hall 292. Laboratory, two periods of two and one-half hours each. Agronomy Building. Students must consult the Department for assignment to laboratory sections. In the third term students will register in course 1. Laboratory fee, \$3; deposit fee, \$2.

5. **Grasses.** Second term, credit three hours. Prerequisite course 1 or its equivalent. Lecture and laboratory, by appointment. Agronomy Building, Botanical Laboratory. Laboratory fee, \$2.

6. **Taxonomy of the Higher Plants.** Second and third terms, credit three hours a term. Prerequisite course 1 or its equivalent. Lecture, by appointment. Laboratory, T Th, 2-5. Agronomy Building, Botanical Laboratory. Laboratory fee, \$2 a term; deposit fee, \$2 third term.

9. **Histology.** Second term, credit four hours. Prerequisite course 1 or its equivalent. Lecture, Th, 8. Agronomy Building 203. Laboratory, M Th, 9-11.30, S, 8-10.30. Laboratory fee, \$3.

10. **Cytology.** Second and third terms, credit three hours a term. Prerequisite course 1 or its equivalent. Lecture, M or W, 9. Laboratory, M W, 10.30-1. Agronomy Building, Botanical Laboratory. Laboratory fee, \$3 a term.

12. **Comparative Morphology of Algae.** Second and third terms, credit two hours the second term and four hours the third term. Prerequisite course

1 or its equivalent. Second term: lecture, F, 8; laboratory, F, 10-1. Third term: lecture and laboratory periods to be arranged. Laboratory fee, \$2 second term; \$3 third term.

13b. **Comparative Morphology of the Pteridophytes.** Second term, credit three hours. Prerequisite course 1 or its equivalent and course 13a. Lecture, T, 9. Laboratory, T Th, 10.30-1. Agronomy Building, Botanical Laboratory. Laboratory fee, \$2.50.

14. **Comparative Morphology of Spermatophytes.** Third term, credit four hours. Prerequisite course 1 or its equivalent, and courses 13a and 13b. Lectures, T Th, 9. Laboratory, T Th, 10.30-1. Agronomy Building, Botanical Laboratory. Laboratory fee, \$3.

20. **Plant Physiology.** Second or third term, credit six hours. Lectures and recitations, T Th S, 10. Agronomy Building 192. Laboratory, M W F, 2-4.30. Agronomy Building 21. Laboratory fee, \$4; breakage fee, \$2.

21. **Plant Physiology, Advanced Lecture Course.** Second term, credit three hours. Lectures and conferences three hours a week, time to be arranged.

22. **Plant Physiology, Advanced Laboratory Course.** Second term, credit three hours. M W F, 2-5. Agronomy Building 21. Laboratory fee, \$5; breakage deposit, \$2.

31. **Plant Physiology Seminary.** Second and third terms. F, 11.

DAIRY INDUSTRY

The following courses will be given provided there is sufficient demand for them.

1. **Milk Composition and Tests.** Second or third term, credit three hours. For regular students only. Students must consult the Department in regard to laboratory assignments before registering for the course. Lectures, T S, 11. Dairy Building 222. Practice, W, 2-4.30, or S, 8-10.30. Dairy Building 232. Laboratory deposit, \$3, part returnable.

2. **Butter.** Second or third term, credit three hours. Must be preceded or accompanied by course 1. For regular students only. Lecture, F, 8. Dairy Building 222. Practice, M, W, or Th, by appointment. Dairy Building. Laboratory deposit, \$4, part returnable.

3. **Cheese.** Second term, credit four hours. Prerequisite course 1, should be preceded or accompanied by course 8. Lectures, recitations, and assigned readings, Th, 8. Dairy Building 222. Practice, M, W, or Th, 12-6. Cheese Laboratory. Laboratory deposit, \$2.50, part returnable.

4. **Bacteriology, Elementary Course.** Second term, credit four hours. For regular students only, except by special permission. Lecture, M, 8. Dairy Building 222. Practice, M W F, 2-5. Dairy Building 122. Laboratory deposit, \$4, part returnable.

6. **Market Milk and Milk Inspection.** Third term, credit four hours. Must be preceded or accompanied by course 1; should be preceded or accompanied by courses 4 and 8. Lectures, W F, 12. Dairy Building 222. Practice, T, 2-4.30, and S, 8-10.30, or Th, 2-4.30, and S, 10.30-1. Dairy Building. Laboratory deposit, \$3, part returnable.

7. **Testing and Composition of Dairy Products, Advanced Course.** Second or third term, credit two hours. Prerequisite course 1; should be preceded by Chemistry 6; not open to first- and second-year students except by special permission. T Th, 2-5. Dairy Building 202. Laboratory deposit, \$5, part returnable.

8. **Dairy Bacteriology.** Third term, credit four hours. Must be preceded or accompanied by course 1, and preceded by course 4 or its equivalent; open to regular students only. Lecture, Th, 11. Dairy Building 222. Practice, M W F, 2-5, or M, 9-12, and W F, 8-11. Dairy Building 122. Laboratory deposit, \$4, part returnable.

9. **Butter, Advanced Course.** Third term, credit two hours. Must be preceded by a good record in course 2. Lecture, Th, 12. Dairy Building 222. Practice, one long period each week by appointment, with occasional lectures during the laboratory period. Dairy Building. Laboratory deposit, \$4, part returnable.

10. **Fancy Cheese.** Second term, credit two hours. Prerequisite courses 1 and 3. Practice, by arrangement. Dairy Building 132. Laboratory deposit, \$2, part returnable.

11. **Ice Cream.** Third term, credit two hours. Prerequisite course 1. Lecture, M, 8. Dairy Building 222. Practice, M, 2-4.30, or Th, 8-10.30. Dairy Building E 122. Laboratory deposit, \$2, part returnable.

13. **Research.** Second or third term, credit one or more hours, by arrangement. For advanced students. Practice, hours by appointment. Dairy Building. Laboratory deposit, \$2 for each credit hour, part returnable.

15. **Bacteriology for the Home.** Third term, credit three hours. Lecture, S, 12. Home Economics Building 245. Practice, T Th, 2-5. Dairy Building 122. Laboratory deposit, \$4, part returnable.

19. **Cheddar Cheese, Advanced Course.** Third term, credit two hours. Prerequisite a good record in course 3. Lectures and outside reading in connection with laboratory work. Practice, one long period each week, by arrangement. Cheese Laboratory. Laboratory deposit, \$2, part returnable.

DRAWING

1. **Mechanical Drawing.** Second or third term, credit four hours. Students must register for not less than four hours. Lectures during practice. Practice, M W, 2-4.30, or T Th, 2-4.30. The remaining practice periods by appointment. Dairy Building 341.

2. **Free-hand Drawing.** Second or third term, credit two or more hours a term. Students must register for not less than two hours in either term. Lectures during practice. Practice by appointment. Second term, daily except S, 8-1 and 2-4.30, S, 8-1. Third term, daily, 8-1. Dairy Building 371.

2a. **Free-hand Drawing and Outdoor Sketching.** Summer term, credit two or more hours. Prerequisite course 2 or its equivalent. Students must register for not less than two hours. Lectures during practice. Practice by appointment, T W Th F, 8-1, T W Th, 2-5. Dairy Building 371.

3. **Free-hand Drawing, Advanced Course.** Second or third term, credit two or more hours. Prerequisite course 2 or its equivalent. Students must

register for not less than two hours. Lectures during practice. Practice by appointment. Second term, daily except S, 8-1 and 2-4.30, S, 8-1. Third term, daily, 8-1. Dairy Building 371.

4. **Perspective.** Second and third terms, credit two hours a term. Prerequisite course 2 or its equivalent, and descriptive geometry. For students in landscape art. Lecture, W, 9. Drafting period, S, 8-1. Dairy Building 341.

5. **Pictures and Their Making.** Second term, without credit. Lecture, T, 12. Landscape Art Building lecture room.

ENTOMOLOGY, LIMNOLOGY, AND ORNITHOLOGY

Biology

1. **General Biology.** Third term, credit three hours. Lectures, T Th, 11, Roberts Hall 131. Botany 1 and Zoology 1 or the equivalent must precede or accompany this course. Practice, W F S, 8-10.30 or 10.30-1, or daily except S, 2-4.30. Roberts Hall 302. Laboratory fee, \$2.

1a. **General Biology.** Second term, credit three hours. Lectures, T Th, 11, Roberts Hall 392. Practice, W or S, 8-10.30, or T, W, or F, 2-4.30. Roberts Hall 302. Laboratory fee, \$2.

Introductory Entomology

1. See Biology, course 1.

2. **The Ecology of Insects.** Summer term, credit three hours. Lectures, W F, 8. Roberts Hall 392. Practical exercises, largely field work, W, 10-12.30, and another by appointment.

3. **General Entomology.** Second or summer term, credit three hours. Prerequisite course 1 or Zoology 1. Lectures, second term, W F, 9. Roberts Hall 392. Practical exercise, Th or F, 2-4.30. Lectures, summer term, M W, 9. Roberts Hall 392. Practical exercise, T, 2-4.30. Laboratory fee, \$1.50.

3a. **General Economic Entomology.** Third or summer term, credit three hours. Prerequisite course 3. Lectures, third term, W F, 9. Roberts Hall 392. Practical exercise, Th or F, 2-4.30. Lectures, summer term, T Th, 9. Roberts Hall 392. Practical exercise, W, 2-4.30. Laboratory fee, \$1.50.

4. **Elementary Morphology of Insects.** Second, third, or summer term, credit two or four hours. Hours by appointment. Roberts Hall 391. Laboratory fee, \$2.

5. **Elementary Systematic Entomology.** Second, third, or summer term, credit three hours. Prerequisite course 4. Hours by appointment. Roberts Hall 391. Laboratory fee, \$1.50.

Systematic Entomology

10. **Entomotaxy.** Summer term, credit three hours. Laboratory and field work, T W, 2-5, Th, 9-12. Roberts Hall 301. Laboratory fee, \$3.

12. **Taxonomy of Insects.** Throughout the year, credit four hours a term. Prerequisite courses 3, 4, 5, 11, 14, and 20, and preferably 10. Lecture, F, 8. Roberts Hall 392. Laboratory, F, 10-1, and two other periods of three hours each to be arranged.

D. Lepidoptera. Second term, 1918-19.

E. Diptera. Third term, 1918-19.

F. Neuropteroids. Summer term, 1919.

19. **Research in Systematic Entomology.** Throughout the year, credit three or more hours a term. Prerequisite courses 3, 10, 11, 14, 20, and one term of course 12. Laboratory hours by arrangement. Robert Hall 301. Laboratory fee, 50 cents a credit hour.

Insect Morphology

20. **Morphology and Development of Insects.** Second and third terms, credit two hours a term. Prerequisite courses 3 (first term), 4, and 5. Lectures, T Th, 10. Laboratory work to accompany or follow this course is offered under course 21. Roberts Hall 392.

21. **Histology of Insects.** Second and third terms, credit three or more hours a term. Prerequisite courses 3 (first term), 4, 5, and 20. Laboratory open daily except S, 8-5. Roberts Hall 392. Laboratory fee, \$1.50 a credit hour.

29. **Research in Morphology of Insects.** Throughout the year, credit three or more hours a term. Prerequisite courses 3, 4, and 5. Laboratory open daily except S, 8-5, S, 8-1. Roberts Hall 391.

Economic Entomology

31. **Relations of Insects to Disease.** Second term, credit two hours. Prerequisite first term of course 3 or 30. Lecture, T, 8. Roberts Hall 392. Practical exercise, M, 2-4.30. Laboratory fee, \$2.

40. **Advanced Economic Entomology and Insectary Methods.** Third term, credit three hours. Open only to seniors. Lecture, T, 9. Seminary, T, 2-4.30. Insectary. Laboratory fee, \$2.50.

41. **Forest Insects.** Third term, credit two hours. Prerequisite first term of course 3. Lectures, T Th, 11. Roberts Hall 392.

49. **Research in Economic Entomology.** Throughout the year, credit three or more hours a term. Prerequisite courses 3, 3a, 4, and 5. Laboratory and field work by appointment.

Limnology

50. **General Limnology.** Third or summer term, credit four hours. Open only to students who have taken or are taking courses 1 and 3, or the equivalent. Lecture, Th, 8. Roberts Hall 392. Laboratory, M, 2-4.30, Th, 2-4.30, and one period by appointment. Roberts Hall 492. Laboratory fee, \$2.50.

51. **Aquiculture.** Third term, credit two hours. Lectures, M W, 12. Roberts Hall 392.

52. **Fish Culture.** Throughout the year, credit one or two hours a term. Must be preceded or accompanied by course 51. W F, 2-4.30. Biological Field Station and Experimental Hatching Station. Laboratory fee, \$1.50 a credit hour.

53. **Plancton.** Third term, credit one hour. Prerequisite permission to register. Laboratory, F, 2-4.30. Roberts Hall 492. Laboratory fee, \$1.50.

58. **Research in Aquiculture.** Throughout the year, credit three or more hours a term. Prerequisite courses 50, 51, and 52. Laboratory and field work by appointment.

59. **Research in Limnology.** Throughout the year, credit three or more hours a term. Prerequisite course 50 or its equivalent. Laboratory and field work by appointment. Roberts Hall 492 and Biological Field Station.

Seminary

Seminary. Throughout the year. M, 4.30-5.30. Roberts Hall 392.

Ornithology

6. **Field Ornithology.** Third term, credit four hours. Lectures, T Th, 11. McGraw Hall 5. Field work and laboratory, T Th, 2-4.30, or M W, 2-4.30. Laboratory fee, \$2.

11. **Economic Ornithology and Mammalogy.** Second term, credit four hours. Should be preceded by Zoology 5; presupposes an elementary knowledge of botany and entomology. Lectures, T Th, 11. McGraw Hall 5. Laboratory and field work, T Th, 2-4.30. Laboratory fee, \$2.

EXTENSION TEACHING

2. **Extension Work.** Second term, credit two hours. Continuation of course 1, with particular attention to parliamentary law. Lectures and practice, W F, 10, M F, 11, or T Th, 10. Roberts Hall 131. Criticism by appointment, daily, 8-1.

3. **Extension Work.** Third term, credit two hours. Prerequisite course 2, of which course 3 is a continuation, with emphasis on extemporaneous speaking. Lectures and practice, W F, 10, M F, 11, or T Th, 10. Roberts Hall 131. Criticism by appointment, daily, 8-1.

THE NATURAL HISTORY OF THE FARM

1. **The Natural History of the Farm.** Second or third term, credit one hour. One field trip a week. Sections by appointment. Fee, \$2.

FARM CROPS

1. **Cereals.** Second term, credit four hours. To be preceded or accompanied by Soils 1 and Botany 1. Lectures, M W F, 10. Poultry Building 375. Laboratory, M or T, 2-4.30. Students must consult the Department regarding laboratory appointments. Poultry Building 350. Laboratory fee, \$2.

1a. **Forage Crops.** Third term, credit three hours. To be preceded by course 1. Lectures, M W, 10. Poultry Building 375. Laboratory, M, 2-4.30. Poultry Building 350. Laboratory fee, \$1.

4. **Special Cash Crops.** Second term, credit three hours. To be preceded or accompanied by course 1 and Botany 1. Lectures, T Th, 11. Poultry Building 175. Laboratory, Th or F, 2-4.30. Poultry Building 175. Laboratory fee, \$2.

Division of Vegetable Gardening

11. **Principles of Vegetable Gardening.** Second term, credit three hours. Prerequisite Botany 1, must be preceded or accompanied by Soils 1. Lectures, M W, 11. Poultry Building 325. Laboratory, W, 2-4.30. Poultry Building, vegetable greenhouses, and East Ithaca gardens. Laboratory fee, \$2.

12. **Commercial Vegetable Gardening.** Third term, credit four hours. Prerequisite course 1. Lectures, M W F, 9. Poultry Building. Laboratory, F, 2-4.30. Poultry Building, vegetable greenhouses, and East Ithaca gardens. Laboratory fee, \$2.

13. **Home Vegetable Gardening.** Second term, credit three hours. Lectures, T Th, 9. Poultry Building 325. Practice, Th, 2-4.30. Poultry Building 350 and vegetable greenhouses. Laboratory fee, \$2.

Summer term, 1919. The Department will repeat during the summer term any course for which there is sufficient demand.

FARM MANAGEMENT

2. **Farm Management.** Second and third terms, credit four hours a term. Open to juniors and seniors who have passed the farm practice examination. Should be preceded or accompanied by course 1, economics, and as many as possible of the subjects dealing with the production of crops and animals. Lectures, M W F, 10. Dairy Building 222. One laboratory period a week. Students must report to the Department for assignment to laboratory sections. Laboratory fee, \$1.50 a term.

4. **Types of Farming in the United States.** Third term, credit three hours. (Given only if a sufficient number apply.) Laboratory, Th, 2-4.30. Farm Management Building 102.

5. **Seminar.** Second term, credit one hour. Time and other details to be arranged.

8. **Teachers' Course.** Summer term, credit four to six hours. Given only if a sufficient number apply by April 1, 1919.

9. **Research.** Throughout the year, credit one or more hours a term. Hours by appointment.

FARM PRACTICE

1. **Farm Practice.** Second and third terms, without credit toward graduation. Hour and place by appointment.

FLORICULTURE

1. **Principles and Methods of Greenhouse Practice.** Second or third term, credit three hours. Lectures, T Th, 10. Floriculture Building. Practice, W, 2-4.30. Greenhouses. Laboratory fee, \$2.50.

2. **Greenhouse Construction.** Second term, credit three hours. Lecture, M, 11. Floriculture Building. Practice, W Th, 2-4.30. Forestry Building 8. Laboratory fee, \$1.

3. **Commercial Floriculture.** Second term, credit four hours. Prerequisite courses 1 and 2, Botany 1 and 20, and Soils 1. Lectures and recitations, M W F, 10. Floriculture Building. Practice, F, 2-4.30. Greenhouses. Laboratory fee, \$2.

4. **Commercial Floriculture.** Third or summer term, credit four hours. Prerequisite course 3. Lectures and recitations, M W F, 10. Floriculture Building. Practice, F, 2-4.30. Greenhouses. Laboratory fee, \$2.

6. **Floral Arrangement.** Second, third, or summer term, credit one hour. Registration is limited to fifteen students. Lectures, demonstration, and practice, S, 10.30-1. Greenhouses. Laboratory fee, \$3.50.

7. **Conservatory Plants.** Second term, credit two hours. Prerequisite course 1. Lectures and demonstrations, T Th, 11. Floriculture Building. Fee, \$1.

8. **Garden Flowers.** Second, third, or summer term, credit three hours. Prerequisite Botany 1; Botany 8 recommended. Lectures, T Th, 9. Floriculture Building. Practice, T or Th, 2-4.30. Greenhouses and gardens. Laboratory fee, \$2.

8a. **Grouping and Arrangement of Annuals and Herbaceous Perennials.** Second, third, or summer term, credit two hours. Prerequisite course 8. Lecture, S, 9. Practice, S, 10-12.30. Forestry Building 8. Laboratory fee, \$2.

9. **Amateur Floriculture.** Second, third, or summer term, credit three hours. Lectures, W F, 11. Floriculture Building. Practice, M, 2-4.30. Greenhouses. Laboratory fee, \$2.

12. **Investigation in Floriculture.** Second, third, or summer term, credit one, two, or three hours a term. Prerequisite courses 1, 3, and 4, and permission to register. Consultation by appointment.

13. **Seminary.** Second, third, or summer term. One hour a term. Required of advanced students who elect course 12, and of all graduate students. F, 9. Floriculture Building.

FORESTRY

Courses intended primarily for students who do not expect to make forestry their major work. Standing as professional forestry students may not be gained by taking courses 1-5

1. **The Farm Woodlot.** Third term, credit two hours. Lecture, M, 9. Forestry Building 122. Practice, M, 2-4.30. Forestry Building 126. Laboratory fee, 50 cents.

2. **Elements of Forestry: Mensuration and Management.** Third term, credit three hours. Lectures, T Th, 9. Forestry Building 122. Practice, T, 2-4.30. Forestry Building 118. Laboratory fee, \$1.

5. **Conservation of Natural Resources.** Third term, credit two hours. Lectures, T Th, 10. Forestry Building 122.

Courses intended both for professional forestry students and for students in other lines

6. **The Field of Forestry.** Second term, credit three hours. Lectures, M W F, 10. Forestry Building 122.

7. **Timber Treatment.** Second term, credit three hours. Lectures, T Th, 9. Forestry Building 122. Practice, Th, 2-4.30. Forestry Building 118.

The natural and artificial drying and seasoning of wood; kiln drying; wood preservation; methods of treating, with chemical preservatives, timber for farm and commercial uses.

Courses intended primarily for professional forestry students

Professional forestry students should not elect courses 1, 2, 3, and 4, as the following required professional courses cover the same ground in greater detail.

The announcement here of courses 9, 11, 14, and 15 for the summer term of 1918-19, is provisional only, being contingent upon the number of professional forestry students who are enrolled in the Department during the third term.

9. **Forest Utilization.** Summer term, credit four hours. First part of term in Ithaca; remainder of term on a forest tract. Lectures, M W F, 11. Forestry Building 126. Practice in logging camps and in mills the latter part of the term.

11. **Forest Mensuration.** Summer term, credit five hours. First part of term in Ithaca; remainder of the term in special field work. Lectures, M T W, 8. Forestry Building 126. Practice, M, 2-4.30. Forestry Building 118. Laboratory fee, \$1.50.

13. **Timber Trees and Forest Regions.** Third term, credit three hours. Lectures, M W, 12. Forestry Building 122. Practice, F, 2-4.30. Forestry Building 118. Laboratory fee, \$1.

14. **Silviculture: Forest Ecology.** First six weeks of summer term, credit three hours. Open only to professional forestry students. Prerequisite course 13 and Botany 2 or their equivalents. Lectures, M T W Th F, 10. Forestry Building 122. Practice, W, 2-4.30, S, 8-1. Forestry Building 118. Laboratory fee, 50 cents.

15. **Silviculture: Natural Reproduction and Care of the Forest.** Beginning the seventh week of the summer term, credit three hours. Prerequisite courses 13 and 14. Lectures and practice to be arranged. Laboratory fee, 50 cents.

18. **Forest Protection.** Third term, credit three hours. Lectures, M W F, 9. Forestry Building 126.

19. **Forest Policy, Forest Law, and History of Forestry.** Third term, credit three hours. Lectures, M W F, 11. Forestry Building 122.

Courses 18 and 19 are offered provisionally, contingent upon the return to the University in the spring of 1919 of professional forestry students who have had the necessary prerequisites.

Courses intended primarily for graduates

The Department of Forestry is prepared to offer graduate work in forestry to students who have the necessary qualifications. Such students should consult the Department in regard thereto.

24. **Research.** Throughout the year. Three or more hours a term. Hours by appointment.

HOME ECONOMICS

2a. **Elementary Sewing and Handicraft.** Second term, credit one hour. This course or its equivalent is required of all students in home economics. Registration limited to twenty in each section. Practice, T or Th, 10-1, or S, 9-12. Home Economics Building 300 and 415. Estimated expense, \$5. Laboratory fee, \$2.

2b. **Elementary Cookery.** Third term, credit one hour. This course or its equivalent is required of all students in home economics. Practice, M, 2-5, one section, or S, 9-12, two sections. Registration limited to twenty in each section. Laboratory fee, \$2.

3. **Introductory Course in Foods.** Second and third terms, credit four hours a term. Required of all students in home economics. Lecture, F, 11. Home Economics Building 245. Practice, M W F, 2-5, two sections, or T Th S, 10-1, one section. Laboratory fee, \$10 a term, part returnable.

5. **Institution Management: Equipment and Organization.** Second and third terms, credit one hour a term. Open to seniors only, and required of all seniors specializing in dietetics and institution management. This course must be taken with 5a and 5b. A trip to Buffalo is required in connection with courses 5, 5a, and 5b, the estimated expense of which is \$20. Lecture, M, 9.

5a. **Institution Marketing.** Second and third terms, credit one hour a term. Open only to seniors, and required of all seniors specializing in dietetics or institution management. To be taken with courses 5 and 5b. Lecture, W, 8.

5b. **Lunch Room Management.** Second and third terms, credit two hours a term. Open only to seniors, and required of all seniors specializing in dietetics and institution management. Each student is required to arrange for a period of six hours for one day each week, to be arranged with Miss Sanford before final schedule is made out. To be taken with courses 5 and 5a. Laboratory fee, \$1 a term.

6. **Dietetics.** Second and third terms, credit four hours a term. Lectures and recitations, T, 9, Th, 8-10. Home Economics Building 100. Practice, T Th, 10-1, two sections, or T Th, 2-5, one section. Laboratory fee, \$7 a term.

8. **Design.** Second and third terms, credit three hours a term. Should be taken in the junior year. Lecture, M, 11. Home Economics Building 245. Practice, M W, 2-5, or W F, 10-1. Laboratory fee, \$4 a term.

9. **Design, Advanced Course.** Third term, credit two hours. Prerequisite course 8. Practice, hours by arrangement. Home Economics Building 415. Laboratory fee, \$3.

10. **The House.** Second term, credit two hours. Should be accompanied by course 8. Required of students in home economics. Should be taken in the junior year. Lecture, W, 9. Home Economics Building 245. Practice, T, Th, or F, 2-5. Home Economics Building 415. Laboratory fee, \$1.

12. **Woman and the Family.** Second term, credit three hours. Lectures, T Th S, 12. Home Economics Building 100.

13a. **Welfare Supervision of Women in Industry.** Third term, credit three hours. Prerequisite course 13. Lectures, T F, 11. Laboratory, M, 2-5. Home Economics Building 100.

14. **Household Management.** Second term, credit two hours. Required of seniors in home economics. Lectures, T Th, 11. Home Economics Building 100.

14a. **Household Management: Apartment Problem.** Second or third term, credit one hour. Required of seniors in home economics. Laboratory fee, \$10.

15. **Introductory Course in Clothing and Textiles.** Second or third term, credit three hours. Required of all students in home economics. Registration limited to fourteen students in each section. Practice, T Th, 2-5, S, 10-1, one section. Home Economics Building 305. Estimated expense, \$10 to \$12. Laboratory fee, \$3.

15a. Garment Construction. Second or third term, credit three hours. Prerequisite courses 2a and 15. Lecture, T, 8. Practice, second term, M W, 2-5; third term, T Th, 10-1. Home Economics Building 305. Registration limited to fourteen students in each section. Required of all students working for a teaching certificate in general home economics. Estimated expense, \$5 to \$10. Laboratory fee, \$3.

15b. Elementary Dressmaking. Second or third term, credit three hours. Prerequisite courses 2a and 15. Lecture, T, 8. Practice, T Th, 10-1. Home Economics Building 300. Registration limited to fourteen students in each section. Estimated expense, \$15 to \$20. Laboratory fee, \$3.

16. Draping, Drafting, and Designing. Second term, credit three hours. Prerequisite courses 2a, 15, and 15a, or their equivalents. Lecture, W, 9. Practice, W F, 2-5. Home Economics Building 300. Registration limited to fourteen students in each section. Open only to and required of all students working for a teaching certificate in general home economics. Estimated expense, \$3 to \$5. Laboratory fee, \$3.

17. Selection and Design of Clothing. Second or third term, credit two hours. Prerequisite courses 2a, 8, 15, 15a, and 16, or their equivalents. Practice, second term, W F, 10-1, M W, 2-5; third term, W F, 10-1. Home Economics Building 300. Registration limited to fourteen students in each section. Open only to and required of all students working for a teaching certificate in general home economics. Estimated expense, \$15 to \$20. Laboratory fee, \$2.

17a. Dressmaking. Third term, credit two hours. Prerequisite courses 2a, 8, 15, 15a, 16, and 17, or their equivalents. Practice, W F, 2-5. Home Economics Building 300. Registration limited to fourteen students in each section. Open only to students working for a teaching certificate in general home economics. Estimated expense, \$15 to \$25. Laboratory fee, \$2.

18. Introductory Course in Millinery. Second or third term, credit two hours. Prerequisite courses 2a and 15. Required of all students working for a teaching certificate in general home economics. Practice, M W, 10-1. Home Economics Building 300. Estimated expense, \$6 to \$10. Laboratory fee, \$3.

18a. Advanced Course in Millinery. Third term, credit two hours. Prerequisite courses 2a, 15, and 18. Practice, T Th, 10-1. Home Economics Building 300. Registration limited to twenty students in each section. Estimated expense, \$8 to \$10. Laboratory fee, \$3.

20. Special Problems. Second or third term, credit and hours by arrangement. No student may register in this course without the permission of the heads of the Department. Fee depends on problem.

21b. Experimental Cookery. Second term, credit two hours. Prerequisite courses 3 and 21. Practice, T Th, 2-5. Laboratory fee, \$4.

21c. Demonstration Cookery. Third term, credit two hours. Prerequisite courses 3 and 21. Practice, T Th, 2-5. Laboratory fee, \$4.

22. Diet in Disease. Second or third term, credit two hours. Prerequisite course 6. Required of students specializing in dietetics and institution management. Lecture, Th, 8. Practice, S, 9-12. Laboratory fee, \$2.

22a. Diet in Disease. Second or third term, credit one hour. A continuation of course 22. Recommended for those specializing in dietetics and institution management. Lecture, Th, 10.

23. **Extension in Home Economics.** Second and third terms, credit three hours a term. Open to seniors only and required of seniors specializing in extension. Lecture, W, 9. Home Economics Building 265. Practice, W F, 2-5. Home Economics Building 260. Laboratory fee, \$3.50 a term.

28. **Woman and the State.** Second or third term, credit three hours. Lectures, T Th S, 9.

LANDSCAPE ART

Courses suggested for students not taking the professional course in landscape art

Courses 1, 2, 3, 6, and 20 are without prerequisites and may be taken in any order desired. Courses 4, 4a, 4b, 13, 13a, and 17a are open to any student who satisfies the prerequisites or the acceptable equivalent.

Description of Courses

Instruction is given in the Landscape Art Building

2. **A Brief Introduction to Landscape Design.** Third term, credit two hours. Lecture, T, 10. Recitation, Th, 10.

4a. **Theory: Planning of Private Properties.** Third term, credit one hour. Prerequisite course 3, and, for students specializing in landscape art, course 4. Lecture, W, 9.

4b. **Theory: Planning of Public Properties.** Second term, credit two hours. Prerequisite for landscape students only, courses 3 and 4. Lectures, M W, 8.

6. **Rural Improvement.** A course of six or more lectures beginning after the Christmas recess, without credit. These lectures are outlined primarily for winter-course students. Time to be announced.

9. **Landscape Design, Elementary Course.** Second term, credit two hours. Prerequisite courses 3 and 4, Architecture 9, 11, and 13. Intended for sophomores in landscape art. Hours to be arranged. Laboratory fee, \$1.

11. **Landscape Design, Intermediate Course.** Second and third terms, credit four hours a term. Prerequisite courses 3, 4, 4a, 9, and 13, Architecture 9, 11, and 13, and Drawing 2, 3, and 4. Intended for juniors in landscape art. Hours to be arranged. Laboratory fee, \$2 a term.

13. **Plant Materials.** Summer term, credit six hours. Prerequisite Botany 1. Lectures, M W, 8. Laboratory and field trip, M F, 10-12.30, 2-4.30. Open to general election but intended for juniors in landscape art. Laboratory fee, \$1.50.

*15. **Landscape Design, Advanced Course.** Second and third terms, credit three or eight hours a term. Prerequisite course 11 and its prerequisites, and courses 13 and 17. Intended for seniors in landscape art. Two criticism periods a week, to be arranged, and additional drafting hours.

*16. **Landscape Engineering and Details of Construction.** Second and third terms; credit, second term, three hours, third term, three or eight hours. Interrelated with course 15. Prerequisite Civil Engineering 10; must be accompanied by Civil Engineering 11a. Intended for seniors in landscape art. Lecture: second term, M, 12; third term, to be arranged.

*Students wishing to elect courses 15, 16, or 18, are required to register in all three, registering for eight hours in one, and for three hours in each of the other two.

***18. Planting Design, Advanced Course.** Second term, credit three or eight hours. Interrelated with course 15. Prerequisite course 17. Intended for seniors in landscape art. Drafting with criticism, hours to be arranged.

20. Propagation. Second and third terms, credit one hour a term. Laboratory, with occasional discussions, T or W, 2-4.30.

25. Seminary. Second and third terms, credit one hour a term. Intended for seniors in landscape art. M, 4.30-6.

METEOROLOGY

1. Meteorology and Climatology. Second or third term, credit three hours. Lectures, T Th, 10. Roberts Hall 292. One laboratory period a week. Forestry Building 8. Laboratory fee, \$2.

2. General Climatology. Third term, credit three hours. Prerequisite course 1. Lectures, T Th, 8. Roberts Hall 292. One laboratory period a week. Forestry Building 8.

10. Research. Second term, credit one or more hours. Prerequisite permission to register. Hours by appointment.

PLANT BREEDING

1. Genetics. Summer term, credit five hours or, by special arrangement, three hours. Prerequisite Botany 1 and 20 or equivalents in zoology by permission. Lectures, T Th S, 8. Forestry Building 210. Laboratory, T Th, 2-4.30. Forestry Building 212.

By special arrangement the course may be taken with three hours credit without the laboratory. For such students a weekly conference will be required. Hours to be arranged. Laboratory fee, \$3.

8. Methods of Plant Breeding. Second term, credit one hour. Prerequisite course 1. Lecture, T, 10. Forestry Building 210. Three to five excursions of three hours each to the department gardens and greenhouses to be arranged during the term.

13. Genetics, Advanced Course. Second term, credit four hours. Primarily for graduate students. Seniors admitted by special arrangement only. Prerequisite course 1 or its equivalent and Botany 1, 10, and 20. Lectures, T Th S, 9. Forestry Building 210. Laboratory, Th, 2-4.30. Forestry Building 212. Laboratory fee, \$3.

16. Research. Throughout the year. For graduate students only. Hours by appointment. Forestry Building.

17. Seminary. Second and third terms. One hour a term. For graduate students only. S, 10. Forestry Building 212.

*Students wishing to elect courses 15, 16, or 18, are required to register in all three, registering for eight hours in one, and for three hours in each of the other two.

PLANT PATHOLOGY

1. **Plant Pathology.** Second, third, or summer term, credit four hours. Prerequisite Botany 1, or equivalent botany of the same type. Lecture, W, 8. Home Economics Building 100. Recitations, F, 10. Practice, W F, 2-4.30. Bailey Hall, West Basement. Laboratory fee, \$3; breakage deposit, \$2.

2. **Principles of Plant Disease Control.** Second or third term, credit four hours. Prerequisite course 1. Lecture, F, 8. Home Economics Building 100. Recitation, W, 10. Practice, W F, 2-4.30. Bailey Hall, West Basement. Laboratory fee, \$3; breakage deposit, \$2.

12. **Mycology.** Second and third terms, credit four hours a term. Prerequisite Botany 1 or its equivalent. Lecture, M, 11. Recitation, W, 11. Practice, M T, 2-4.30. Bailey Hall, East Basement. Laboratory fee, \$4; breakage deposit, \$2.

17. **History of Phytopathology.** Second or third term, credit one hour. Prerequisite course 1 and a reading knowledge of French and German. Lecture hour by arrangement. Home Economics Building 100.

19. **German Phytopathological Reading.** Second or third term, without credit for undergraduate students. Three one-hour periods a week. Hours by arrangement. Home Economics Building 100.

20. **Research.** Throughout the year. Not less than three hours a term. Laboratory fee, \$1 a credit hour; breakage deposit, \$2.

25. **Seminary.** Second and third terms. Hours by arrangement.

POMOLOGY

1. **Pomology.** Third term, credit four hours. Prerequisite for regular students Biology 1 and the farm practice requirements, or Botany 1 and 20, and permission to register. Lectures, M W F, 11. Roberts Hall 292. Laboratory, W, 2-5. Roberts Hall 202. Laboratory fee, \$3.50; deposit, \$1, to be refunded provided all tools lent to the student are returned in good condition.

10. **Economic Fruits of the World.** Third or summer term, credit three hours. Prerequisite courses 1 and 8, and Botany 1. Lectures or recitations, T Th S, 9. Roberts Hall 292. During part of the course a laboratory period, to be arranged, is substituted for the Saturday lecture. Laboratory fee, \$1.

11. **Orchard Field Trip.** Credit one hour. Prerequisite courses 1, 8, and 10, and permission to register. To be taken during the three weeks preceding the opening of the first term. Students who wish to take this trip must signify their intention by July 20 preceding. Expense of the trip must be met by the individual student.

12. **Experimental Pomology.** Second term, credit three hours. Prerequisite courses 1, 8, and 10, and Botany 1, and permission to register; must be preceded or accompanied by Botany 20, Plant Pathology 1, Entomology 3, and Soils 1. Three lectures a week to be arranged. Roberts Hall 292.

13. **Pomology, Advanced Laboratory Course.** Summer term, credit one hour. Prerequisite courses 1, 8, 10, and 12, and permission to register. Hours to be arranged. Laboratory fee, \$2.

19. **Research.** Throughout the year, credit one hour a term. Prerequisite courses 10 and 12, Botany 1 and 20, Plant Pathology 1, Entomology 3, and Chemistry 1 and 32.

20. **Seminary.** Once each month throughout the year. Required of graduate students in pomology. Roberts Hall 292.

POULTRY HUSBANDRY

1. **Poultry Husbandry.** Second or summer term, credit three hours. Lectures, T Th, 11. Poultry Building 375. Practice: second term, T W, 2-4.30; summer term, Th, 2-4.30. Poultry Building 300.

2a. **Flock Management.** Second, third, or summer term, credit one hour. Must be preceded or accompanied by course 2 or by course 10, and preferably also by Animal Husbandry 1. Practice, reporting three times daily, including Sunday, for four weeks, 7.45-8.30, 12.45-1.15, 4.30-5. Poultry Building.

3. **Incubator Practice.** Second, third, or summer term, credit one hour. Must be preceded or accompanied by course 1a or by course 10. Practice, reporting three times daily, including Sunday, for four weeks, 7.45-8.30, 12.45-1.15, 4.30-5. Poultry Building 1.

3a. **Brooder Practice.** Second, third, or summer term, credit one hour. Must be preceded or accompanied by course 1a or by course 10. Practice, reporting three times daily, including Sunday, for four weeks, 7.45-8.30, 12.45-1.15, 4.30-5. Poultry Building.

7. **Market Products.** Second term, credit two hours. Prerequisite course 1. Lecture or recitation, M, 11. Poultry Building 375. Practice, M, T, or W, 2-4.30. Poultry Building 100.

A class trip to New York for the three days immediately following the Easter vacation is required of all students. The total necessary expense is about \$20.

7a. **Marketing Practice.** Second, third, or summer term, credit one hour. Prerequisite course 7 and permission to register. Discussion hour, Th, 4.45-5.45. Practice period, three hours each week, to be arranged by appointment. Poultry Building 100.

Students may register for the course in any two of the three terms of work.

8. **Poultry Farm Management.** Third term, credit two hours. Prerequisite courses 1, 1a, 2, 4, 5, and Farm Management 1; must be preceded or accompanied by courses 2a, 3, 3a, 7, and Farm Management 2. Lecture or recitation, W, 11. Poultry Building 300. Practice, W, 2-4.30. Poultry Building 325.

9. **Commercial Marketing.** Second term, credit two hours. Prerequisite course 7. Lectures or recitations, T Th, 11. Poultry Building 325.

10. **Farm Poultry.** Second or summer term, credit three hours. Second term: Lectures, T Th, 9. Poultry Building 375. Practice, Th or F, 2-4.30, or F or S, 8-10.30. Poultry Building 300. Summer term: Lectures, M W, 11. Practice, T or W, 2-4.30.

11. **Undergraduate Conference.** Second, third, or summer term, or throughout the year, credit one hour a term. Prerequisite permission to register; must be preceded or accompanied by course 8. M, 8-10. Poultry Building 325.

11a. **Seminary.** Throughout the year. For graduate students only; required of all graduate students in poultry husbandry. M, 8-10. Poultry Building 325.

12. **Research.** Second, third, or summer term, or throughout the year, credit one to three hours a term. Prerequisite permission to register; must be preceded or accompanied by courses 8 and 11. Time arranged by appointment. Poultry Building.

RURAL ECONOMY

6. **History of Agriculture.** Second term, credit three hours. Open only to seniors. Lectures, M W F, 9. Home Economics Building 370.

7. **Rural Economy.** Third term, credit three hours. Open only to selected seniors who have had course 4 and additional training in economics and history. Lectures, T Th, 11. Home Economics Building 370.

8. **Cooperation.** Second term, credit two hours. Prerequisite Political Science 51. Lectures, M W F, 11. Caldwell Hall 100.

12. **Research in Rural Economy.** Second and third terms, credit two or three hours a term. For seniors who have done superior work and for graduates. Home Economics Building 370.

14. **Seminary.** Second and third terms. By special permission, for students who have had courses 4 and 5 or their equivalent. Tuesday afternoons. Home Economics Building 370.

16. **Rural Organization.** Third term, credit two hours. Open only to seniors. Prerequisite Farm Management 2; must be preceded or accompanied by course 4 and Extension Teaching 1 and 2. Lectures, T Th, 8. Roberts Hall 292. Practice, T, 2-4.30. Given if there is sufficient demand.

RURAL EDUCATION

1. **Introduction to Education.** Second, third, and summer terms, credit second and third terms, three hours a term, summer term, five hours. Lectures: second and third terms, M W F, 10; summer term, daily except S, 11. Open to juniors and seniors. Caldwell Hall 143.

2. **Principles of Teaching.** Third or summer term, credit five hours. Open to juniors and seniors who have completed course 1 or its equivalent. Lectures: third term, daily except S, 8; summer term, daily except S, 9. Caldwell Hall 143.

3. **Agriculture in the High School.** Second or summer term, credit five hours. Open to juniors and seniors who have completed courses 1 and 2 and who have met the farm practice requirement. Lectures, M W, 8. Laboratory, F S, 8-10. Caldwell Hall 282. Laboratory fee, \$1.

4. **Home Economics in the High School.** Third or summer term, credit four hours. Open to juniors and seniors who have completed courses 1 and 2. Lectures, M W F, 11. Home Economics Building 100. Laboratory fee, \$1.

5. **Teaching.** Second or third term, credit to be determined by work done.

10. **Educational Measurement.** Third or summer term, credit three hours. Hours to be arranged. Caldwell Hall 282.

12. **Social and Vocational Aspects of Education.** Second or summer term, credit four hours. Discussions, M W F, 2. One additional period to be arranged. Caldwell Hall 143.

14. **Organization of College Departments of Agricultural Education.** Summer term, credit two hours. Hours to be arranged. Caldwell Hall 143.

20. **Administration and Supervision of Vocational Agriculture.** Third or summer term, credit four hours. Lectures: third term, M T Th F, 9; summer term, M T Th F, 8. Caldwell Hall 282.

60. **Nature Study.** Third term, credit two or three hours. Lecture, W, 12. Agronomy Building 192. Practical exercises, T Th, 11-1, or T Th, 2-4.30. Insectary.

61. **Nature Study.** Summer term, credit two or three hours. Lecture, to be arranged. Laboratory, T Th, 2.30-5. Insectary.

62. **Nature Study, Advanced Course.** Third term, credit three hours. Prerequisites Biology 1 or course 61. Lecture, hours to be arranged. Laboratory, M, 2-4.30. Insectary.

RURAL ENGINEERING

3. **Farm Mechanics.** Third term, credit three hours. Lectures, T Th, 10. Forestry Building 126. Practice, M or T, 2-5. Rural Engineering Building. Laboratory fee, \$2.

20. **Farm Engineering.** Second or third term, credit three hours. Prerequisite plane geometry. Students are urged to take Drawing 1 in preparation for this course. Lectures, M W, 9. Caldwell Hall 143. Practice, M or T, 2-5. Laboratory fee, \$2.

Because of the change to the three-term system, the work of the second term should be taken by those who took this course in the first term and also by those who expect to take it in the spring.

RURAL ORGANIZATION

1. **The Social Problems of Rural Communities.** Third term, credit four hours. Prerequisite Political Science 51. Lectures, reports, and discussions. T W Th F, 8. Animal Husbandry B.

An introductory study of the social problems of rural communities as a basis for the social organization of rural life. Students will make individual study of selected communities.

SOIL TECHNOLOGY

1. **Soils and Fertilizers.** Second or third term, credit five hours. Prerequisite Chemistry 1 and Geology 1. Lectures, M W F, 9. Caldwell Hall 100. One laboratory period to be arranged. Caldwell Hall 49. Two recitations to be arranged at first lecture. Caldwell Hall 143. Laboratory deposit, \$3.

11. **Research.** Throughout the year. For graduate students only. Hours by appointment. Caldwell Hall 350.

14. **Seminary.** Second and third terms, without credit. Open to seniors who have taken course 6, and required of graduate students. S, 11-12.30. Caldwell Hall 143.

**COURSES IN OTHER COLLEGES REQUIRED OF REGULAR STUDENTS
IN THE COLLEGE OF AGRICULTURE**

1. **English, Introductory Course.** Second and third terms, credit three hours a term. M W F, 8, 9, 10, 11, 12; T Th S, 8, 9, 10, 11, 12. Registration, Goldwin Smith 163.

1. **Introductory Inorganic Chemistry.** Second or third term, credit six hours. Lectures, M W F, 11. Recitations, one hour a week, to be arranged. Laboratory, M F, 2-5, T Th, 2-5, W, 2-5, and S, 8-11.

1. **Elementary Geology.** Second or third term, credit four hours. Lectures, M W F, 9. Geological lecture room, McGraw Hall. Laboratory, T or Th, 2-4.30.

2b. **Introductory Experimental Physics.** Second term, credit four hours. Lectures, T Th, 9, 10, or 11. Laboratory, one two-hour period weekly.

2a. **Introductory Experimental Physics.** First and third terms, credit four hours a term. Hours as in 2b.

1. **General Zoology.** Throughout the year, credit three hours a term. Lectures, M W, 9. Sibley Dome. Laboratory, M, W, or Th, 2-4.30. McGraw Hall 21. Laboratory fee, \$3 a term.

1b. **General Zoology.** Second term, credit five hours. Lectures, T Th S, 9. Sibley Dome. Laboratory, T Th, 10-12.30. Laboratory fee, \$6.

This course together with the third term of Zoology 1 completes the required work in Zoology.

3. **Elementary Human Physiology.** Second or third term, credit three hours. M W F, 10. Stimson Hall.

51. **Elementary Economics.** Beginning course. Second and third terms, credit three hours a term. M W F, 8. Continuing course. Second and third terms, credit three hours a term. Sec. 1: Lecture, M, 9. Goldwin Smith A. Recitations, T Th, 8, 9, 10. W F, 8, 9, 10. Sec. 2: T Th S, 9 (for students who cannot attend the lecture M, 9).

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Directory of Faculty and Students, First Term, 1918-1919, price 10 cents.

Book of Views, price 25 cents.

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Announcement of the College of Arts and Sciences, April 15, 1918.

Announcement of Sibley College of Mechanical Engineering and the Mechanic Arts, February 1, 1918.

Announcement of the College of Civil Engineering, April 1, 1918.

Announcement of the College of Law, May 1, 1918.

Announcement of the College of Architecture, July 1, 1917.

Announcement of the New York State College of Agriculture, June 1, 1918.

Announcement of the Winter Courses in the College of Agriculture, June 15, 1918.

Announcement of the Summer Term in Agriculture, March 15, 1918.

Supplementary Announcement of the second, third, and summer terms in Agriculture, December 15, 1918.

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Announcement of the Summer Session, March 1, 1918.

Annual Report of the President, September 1, 1918.

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The Secretary of Cornell University,
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