BULLETIN

OF THE

California Polytechnic School

A State School of Agriculture, Mechanical Arts, Domestic Science

THREE AND FOUR YEAR COURSES
FOR EIGHTH GRADE GRADUATES

SAN LUIS OBISPO, CALIFORNIA
1915-1916

CALIFORNIA STATE PRINTING OFFICE

ENTERED AT THE POST OFFICE AT SAN LUIS OBISPO AS SECOND-CLASS MATTER.
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FREDERICK R. YORK, M.S., Physics and Chemistry
THE SCHOOL CALENDAR.

Registration and Entrance Examinations----------Monday, September 13, 1915
Instruction Begins --------------------------Tuesday, September 14, 1915
Regular Meeting, Board of Trustees...............Saturday, October 30, 1915
Thanksgiving Recess-------- Thursday and Friday, November 25 and 26, 1915
First Term Ends-----------------------------Friday, December 17, 1915

CHRISTMAS RECESS.

Second Term Registration------------------------Monday, January 3, 1916
Instruction Begins ----------------------------Tuesday, January 4, 1916
Second Term Ends-----------------------------Friday, March 25, 1916

SPRING RECESS.

Third Term Registration-----------------------Monday, April 4, 1916
Instruction Begins ---------------------------Tuesday, April 5, 1916
Regular Meeting, Board of Trustees-----------Saturday, April 25, 1916
Graduation Day -------------------------------Friday, June 10, 1916
SCHOOL YEAR.
The Polytechnic School year is divided into three terms of fourteen, twelve and ten weeks, beginning about the third week of September and ending the second week in June. By this arrangement students can remain at home during the busy season of the year.

INFORMATION.
Students should correspond with the Registrar of the school prior to coming to the institution, to make the necessary preliminary arrangements for registration. No student should come to the school until he has made formal application for admission and has been notified by the Registrar that he can be accepted and that there is room for him. This applies to all students, both old and new.
An energetic young man can earn enough during the vacation, coupled with work during the school year, to support himself during the regular session of school. However, every entering student should have sufficient funds for support independent of work during the first year, as work during the first year interferes with the studies.

LOCATION.
The California Polytechnic School is a state institution established at San Luis Obispo under an act of the legislature of 1901. Instruction was first given in October, 1903. The government of the school is vested in a board of trustees, consisting of the Governor and Superintendent of Public Instruction as ex officio members, and of five persons appointed by the Governor for a term of four years each. The school is located one and one-half miles north of the center of the city of San Luis Obispo, on high ground commanding a beautiful view of town and valley.

PURPOSE.
The California Polytechnic School was organized for the purpose of providing practical training for the young men and women of the State who desire instruction more closely identified with the farm, shop and home life than that offered in the high school.
It offers to the young man practical instruction in Agriculture and other subjects that will enable him to make more money on the ranch and to make farm life more attractive.
It offers also a strong course in Mechanics which trains young men for life in the shops, power plants and the various branches of the electrical industry.
To the young woman it offers practical training in housekeeping and homemaking; in fact, in all phases of Domestic Science.
To both the young men and young women such cultural subjects are given as will best fit them for useful citizenship.
The California Polytechnic School is not a state preparatory school, but a school for fitting young people for successful work in the serious business of making a living, whether it be in the shop or on the farm. It was not established to entice students away from the high school, but to provide with its half million dollar equipment a practical non-professional training which could not be duplicated by any high school. Its primary object is to help the many boys and girls of the State who, although they have access to the high school, on account of their not intending to enter college, do not find in the high school manual training and shop work that intensely practical training which is found in the school shops and farm operated on a commercial scale, and without which success is impossible.
The educational field naturally lies between the trade school and the university professions; the training of directors of workmen or educated practical farmers, mechanics or homemakers.
ADMISSION AND CLASSIFICATION OF STUDENTS.

The school is open to any boy or girl upon the conditions stated below:
Applicants must give satisfactory evidence of good moral character and good behavior.

Grammar School Graduates.
Applicants who are at least fifteen years of age at the time of registration will be admitted without examination upon presenting a diploma of graduation from any grammar school (eighth grade) of the State. The application for admission should be accompanied by the grammar school certificate. If not possible to send the certificate at the same time it should be sent before September 10, 1915. The certificate will be returned to the applicant after the opening of school.

Exception.
A grammar school graduate under fifteen years of age may be admitted as above outlined provided that a special recommendation be obtained from the last teacher and that the parents or guardian reside in San Luis Obispo with the student during the school year.

Entrance by Examination.
Applicants seventeen years of age or over who do not hold a grammar school certificate, but who submit a recommendation from their last teacher or their superintendent of schools, will be admitted upon satisfactorily passing examinations in English composition, arithmetic, United States history and geography. The subject-matter of the examinations will cover the leading facts of the grammar school course. Students applying to be admitted upon examination must send their recommendations with their application for admission. The examinations for 1915 will be held in the school buildings on Monday, September 13, at nine a.m.

All applications for admission to the school must be made on the regular form as found in this circular and should be sent to the California Polytechnic School, San Luis Obispo, California, not later than September 10, 1915. This applies to both old and new students. Students not filing applications before September 10th may find it impossible to register September 13th and be charged a late registration fee of $2.00.

School is held five days a week—from Monday to Friday, inclusive. When found necessary, Saturday is used for shop, laboratory or field work. The hours for recitation, shop, field and laboratory work are from 8:15 to 12 and 1 to 4.

Registration and Schedule.
Registration days are September 13, 1915, January 3, 1916, and April 4, 1916. A fee of $2.00 is charged for late registration. Each student is assigned to a faculty member, who will act as his adviser in all matters pertaining to his course of study. Full directions as to the methods of making out daily schedules are given to the students on registration days. The schedule of each student must be approved by the proper faculty members.

The act of registering signifies acceptance of the regulations of the institution and the intention to abide by the same.

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High School Credits.

Since the institution is of like grade to the high schools, it follows that the academic work is of a somewhat similar nature to that of the high school. A graduate of a high school will, therefore, be given credit for all completed studies that correspond to those of the course elected in the Polytechnic. A limited number of units credit for academic work in the high school will be allowed as substitute for electives in the courses where electives are offered. Students who have not graduated from high school, but who have been in attendance therein for one or more years may be given credit for completed academic work for which credentials are presented. Applicants for advanced standing should present with their application for admission a certificate of all studies completed, showing the grades and the time devoted to each study.

Regular Students.

A regular student is one who is admitted to full standing upon presentation of a diploma of graduation from a grammar school or upon passing an equivalent entrance examination and who takes one of the full courses of study as heretofore outlined. All students are advised to register as regular. The essential qualifications are easily obtained by all, and the student will receive much more benefit from attendance upon the school if he or she follows the regular course of study, which has been carefully planned by the faculty.

Special Students.

Prospective entrants of average high school age are not encouraged to apply for admission as special students. However, those of mature age who are well prepared and who give evidence of their sincere desire to specialize along particular lines may be admitted as special students upon the following conditions:

They must fulfill all the requirements of admission for regular students and give additional satisfactory evidence of their ability to carry on the special work elected.

They must carry satisfactorily at least twenty-five units of school work.

*Exception:* Persons regularly occupied in or near San Luis Obispo, and who are qualified as above outlined, may be allowed to register with less than twenty-five units of work on approval of the Head of the Department.
CALIFORNIA POLYTECHNIC SCHOOL.

GENERAL INFORMATION.

Expenses.

No tuition fees are charged. *Exception*: Students who are not citizens of the United States are charged a fee of $20.00 per term, or $60.00 for the school year.

Students are expected to pay for the materials used in the shops and laboratories. To cover these expenses all students are charged regular laboratory fees. An extra charge will be made if the student takes a greater amount of laboratory or shop work than belongs to one year of a course. The regular fee is payable in three installments, on registration days of the three terms. An additional fee of $2.00 is charged for late registration. "No portion of these fees will be returned to any student leaving the institution, voluntarily or involuntarily, after the fourth week of any term." The materials supplied for the above laboratory fees are chemicals, cooking materials, wood, gas, iron, drawing paper and the like.

At the time of registration a breakage deposit of $5.00 is required of each student. A general breakage charge of fifty cents per term is made. The portion of the remaining $3.50 not required to cover individual breakage will be returned June 10, 1916.

All purely student enterprises are under the control of the Associated Student Body, which includes all students regularly registered in school. To meet the expenses incidental to literary, journalistic, social, athletic and other student activities this organization collects from each student a small fee, which is expended only under the direction and with the approval of a member of the faculty who acts as student adviser.

The laboratory fee for first year girls is $10.00 and for other students $15.00 for the year. The Student Association fee for girls is $1.50 and for boys $3.00 for the year. A breakage deposit of $5.00 for the year is required of each student. These fees and deposits are payable as follows:

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<tr>
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</thead>
<tbody>
<tr>
<td>First year girls</td>
<td>$9 50</td>
<td>$3 50</td>
<td>$3 50</td>
</tr>
<tr>
<td>Upper class girls</td>
<td>10 50</td>
<td>5 50</td>
<td>5 50</td>
</tr>
<tr>
<td>Boys</td>
<td>11 00</td>
<td>6 00</td>
<td>6 00</td>
</tr>
</tbody>
</table>

Students are required to furnish their own books, drawing instruments, and special clothing, as overalls and aprons needed in the shops and laboratories, and such special apparatus as may be needed for individual use in certain laboratory courses, such as electrician's pliers and screwdriver in the electrical laboratory.

The total cost of books, supplies and drawing instruments, together with laboratory fees, is $40.00 to $50.00 for the first year. Of this amount $15.00 to $30.00, depending upon the course of study pursued, is needed at the beginning of the school year. Drawing instruments will last during the entire course. Books and other supplies may be purchased at reasonable prices in San Luis Obispo. The total necessary expense for a nine months’ year, including board, school fees, books and material required, is about $260.00. This does not include railroad fare, clothing and other personal items.

Homes for Girls.

Lady members of the faculty will give special attention to finding homes in private families for non-resident girls. Students notifying the school of time of arrival will be met at the train and given every assistance needed by the newcomer. Correspondence is invited. Address California Polytechnic School.
Track Team.
Dormitory Residence for Boys.
A new building on the school premises provides a home for a limited number of boys and a part of the faculty. The price for room and board is approximately $24.00 per month. Occupants are required to furnish linen and a portion of bedding needed. Linen and towels are laundered without extra charge.
An additional deposit of $2.50 is required of each student residing in the dormitories, to pay for possible damage to his room or to the building. Each student is held responsible for the condition of his room and its furniture. The unused portion of this deposit is returnable at the end of the school year.
Detailed information concerning the dormitory is contained in a special circular which will be mailed upon request.

Room and Board.
The faculty each year assists students in finding suitable homes in private families. Students living outside the dormitory are required to board in places approved by the faculty. Prices for board and room range from $24.00 per month to $30.00 per month. Experience has proved that it is rarely ever advisable for students to "board themselves." Such arrangement will not be permitted except upon written request of parent or guardian and sanction of the faculty.

Self-support.
A limited amount of employment about the school farm and buildings can be given more or less regularly to a few students who find it necessary to earn a portion of their expenses while attending the school. No remuneration will be made for manual work of any kind which carries instruction with it. Some students pay a part of their living expenses by means of employment found in San Luis Obispo, chiefly from private families, caring for lawns, gardens, or doing housework.
No student should come to the school expecting to pay his entire expenses by labor during the school year. The school work occupies the most of the day, and the evenings are required to prepare the lessons for the following day.

Reception of New Students.
An organized reception committee, composed of old students directed by the Y. M. C. A., will meet all trains at the opening of the school year. Lady members of the faculty will give special attention to the girls. All new students will be assisted in finding their way to the school and to their new homes, in registering, and in becoming acquainted with the surroundings of the school and its activities.

Debate and Public Speaking.
Interclass debates and occasional debates between the Polytechnic School and local high school serve to stimulate interest in practical public speaking. Students in the English department are also asked from time to time to present papers on subjects of current interest. Student organizations, such as the Amapola Club (for Household Arts students), the Mechanics' Association and the Agricultural Club, all offer excellent opportunities for practice in public speaking.
Associated Student Body.

A general association, officered by students under the guidance of faculty advisers, has charge of athletics, the student publication, Polytechnic Journal, interscholastic debates and various social activities. The object of the organization is regulation and management of student activities outside of the regular curriculum. The plan is a marked success. The student body fees are one dollar a term, and fifty cents a term for girls.

Playgrounds and Athletics.

The athletic grounds are not excelled by those of any school of like grade in the State. Separate playgrounds are maintained for boys and girls. The girls' field contains courts for tennis, basketball and other games. The boys' athletic grounds include a football field, a baseball diamond, courts for tennis, basketball and other games, an excellent five-lap running track and facilities for other outdoor games and sports. It is planned to construct a concrete swimming pool at a cost of $500.00 during the coming year. The greatest improvement last year was the addition of two new tennis courts built on a four-inch concrete base. These were constructed by the students during the spring of 1914 and have been a source of considerable pleasure during the past year.

Athletic contests are held with high schools in San Luis Obispo and neighboring towns, and occasional games are scheduled with more distant high schools. Teams from Santa Barbara, Los Angeles, San Jose and Watsonville have been played in the last two or three years. All school athletics are under the coaching and training of competent members of the faculty. The Polytechnic is a member of the San Luis Bay Athletic Association, consisting of the high schools of San Luis Obispo and northern Santa Barbara counties.

Government.

The purpose of the institution is to build sound character as well as to train the mind and the hand. To that end no cost is too high to keep the moral atmosphere of the school clean and wholesome. Any conduct that is deemed harmful to the morals of the school will lead to dismissal. Boys and girls not showing an earnest purpose in making the best use of their time and energies will be reported to parents, and if satisfactory improvement is not shown within a reasonable time they will be asked to withdraw from attendance at the school. Regular attendance at all school exercises is required. A student failing to make a satisfactory grade in at least fifteen units for a term may be asked to withdraw. One hour in recitation or two hours in laboratory work each week for the term counts as a unit, if the work has been satisfactorily done. Reports of the scholarship of all students are mailed to parents at the end of each term, or oftener. Hazing in any form, subject to severe punishment under section 367b of the Penal Code of California, will not be tolerated, and the Board of Trustees has ordered that expulsion shall be the penalty for such offense.

In general, it may be said that no rule or regulation of the school will prove a hardship to any boy or girl who comes to the school for business and who conducts himself or herself as a gentleman or a lady.

Correspondence concerning the school should be addressed to California Polytechnic School, San Luis Obispo, California.
Minstrels—Athletic Carnival.
COURSES OF STUDY.

Three principal lines of instruction are undertaken by the school, viz: Agriculture, Mechanics and Household Arts. In all of these lines the time given to instruction is about equally divided between recitations and lectures in the classroom and practical work in the shop, field and laboratory. The courses of study are of two general kinds; the regular courses of four years’ length, and such short courses as may be outlined and announced from time to time. A Junior certificate is given at the completion of the first three years of prescribed work.

REGULAR COURSES.

A student registering for a stated course of study is expected to continue the same course throughout the year. Those completing the regular courses are granted diplomas of graduation, stating the kind of instruction and training received.

In the following outline the titles of studies are given, together with the time per week required for each. A fuller description of the studies appears on succeeding pages.

Each school day is divided into nine 45-minute periods. The first number after a subject denotes the number of periods per week devoted to classroom instruction; the second number, the periods used in field, shop or laboratory. The school year is divided into three terms. The first, second and third terms are indicated by a, b, and c, respectively. When the number of periods is the same for the three terms, the term letters are omitted. One period in classroom or two periods in field, shop or laboratory, carried with passing grades throughout the year, constitutes a unit of credit.

COURSE OF STUDY.

AGRICULTURE.

First Year.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>English I</td>
<td>5 0</td>
</tr>
<tr>
<td>Freehand Drawing</td>
<td>0 4</td>
</tr>
<tr>
<td>Mathematics I</td>
<td>5 0</td>
</tr>
<tr>
<td>Poultry I</td>
<td>2 0</td>
</tr>
<tr>
<td>Music I</td>
<td>1 0</td>
</tr>
<tr>
<td>Physical Geography</td>
<td>3 0</td>
</tr>
</tbody>
</table>

Elective for those having credit in Farm Practice: Forge I.

Second Year.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics II</td>
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</tr>
<tr>
<td>English II</td>
<td>5 0</td>
</tr>
<tr>
<td>Chemistry I</td>
<td>2 4</td>
</tr>
<tr>
<td>Botany I</td>
<td>2 4</td>
</tr>
<tr>
<td>Field Crops</td>
<td>2 2</td>
</tr>
<tr>
<td>Dairy I</td>
<td>2 4</td>
</tr>
<tr>
<td>Breeds and Breeding</td>
<td>2 2</td>
</tr>
<tr>
<td>Forge I</td>
<td>0 4</td>
</tr>
<tr>
<td>Military Drill</td>
<td>0 5</td>
</tr>
</tbody>
</table>

Electives for second year: Machine Shop I, Foundry I, Mechanical Drawing II, Carpentry II.
Third Year.
Livestock Management and Diseases of Farm Animals........ 3 4
Dairy Cattle and Herd Management.................................. 2 5
Mathematics III....................................................... 5 0
Horticulture I......................................................... 2 4
Soils and Fertilizers.................................................. 2 4
Farm Accounts......................................................... 1 0
Physics and Farm Motors.............................................. 5 4
Farm Architecture..................................................... 0 4
Military Drill or Physical Training II............................. 0 5
Students intending to go to the University elect Spanish I in place of Physics I and Farm Motors.

Fourth Year.
Subjects Common to All Divisions.
Principles of (Animal Industry a, b; Plant Industry c)................ 2 4
Surveying............................................................... 2 4
History II..................................................................... 5 0
Military Drill or Business English.................................... 0 5
Animal Industry Division.
Cooking and Hygiene...................................................... 5 0
Dairy II..................................................................... 2 4
Agricultural Chemistry.................................................. 1 4
Plant Industry Division.
Horticulture II........................................................... 2 4
Cooking and Hygiene...................................................... 5 0
Agricultural Chemistry.................................................. 1 4
University Preparatory.
Physics I................................................................. 3 4
Spanish II............................................................... 5 0

COURSE OF STUDY.
MECHANICS.
First Year.
Mathematics I............................................................ 5 0
English I...................................................................... 5 0
Freehand Drawing I..................................................... 0 5
Physical Geography..................................................... 2 0
Forge I...................................................................... 1 4
Physics I................................................................. 5 4
Mechanics A.............................................................. 5 0
Mathematics II............................................................ 5 0
English II.................................................................. 5 0
Machine Shop I............................................................ 0 5
Music I.................................................................... 2 0
Carpentry I............................................................... 0 12
Mechanical Drawing I.................................................... 0 4
Physical Training......................................................... 0 5
Military Drill............................................................ 0 5

Second Year.
Physics I................................................................. 5 4
Mechanics A.............................................................. 5 0
Mathematics II............................................................ 5 0
English II.................................................................. 5 0
Machine Shop I............................................................ 0 5
Mechanical Drawing II.................................................... 0 4
Carpentry II.............................................................. 0 4
Forge II a, b.............................................................. 0 4
Foundry I c.............................................................. 0 4
Military Drill............................................................ 0 5
### Third Year.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>Mechanics I</td>
<td>2 0</td>
</tr>
<tr>
<td>Mathematics III</td>
<td>5 0</td>
</tr>
<tr>
<td>Mechanics II</td>
<td>5 4</td>
</tr>
<tr>
<td>Chemistry I</td>
<td>3 4</td>
</tr>
<tr>
<td>English IV or Spanish I</td>
<td>5 0</td>
</tr>
<tr>
<td>Machine Shop II</td>
<td>0 8</td>
</tr>
<tr>
<td>Mechanical Drawing III</td>
<td>0 4</td>
</tr>
<tr>
<td>Military Drill or Gymnasium II</td>
<td>0 5</td>
</tr>
</tbody>
</table>

Students intending to go to the University elect Spanish I in place of English IV.

### Fourth Year.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>Spanish II or Cooking Hygiene</td>
<td>5 0</td>
</tr>
<tr>
<td>Mechanics III</td>
<td>3 4</td>
</tr>
<tr>
<td>Mechanics IV</td>
<td>5 4</td>
</tr>
<tr>
<td>History II</td>
<td>5 0</td>
</tr>
<tr>
<td>Machine Shop III</td>
<td>0 4</td>
</tr>
<tr>
<td>Military Drill or Business English</td>
<td></td>
</tr>
<tr>
<td>Surveying</td>
<td>2 4</td>
</tr>
<tr>
<td>or Mathematics IV</td>
<td>0 5</td>
</tr>
</tbody>
</table>

Students intending to enter the University elect during the third and fourth years Spanish I and II, and Mathematics IV.

### COURSE OF STUDY.

#### HOUSEHOLD ARTS.

##### First Year.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>English I</td>
<td>5 0</td>
</tr>
<tr>
<td>Mathematics I</td>
<td>5 0</td>
</tr>
<tr>
<td>Physiology</td>
<td>3 2</td>
</tr>
<tr>
<td>General Science</td>
<td>3 2</td>
</tr>
<tr>
<td>Freehand Drawing I</td>
<td>0 5</td>
</tr>
<tr>
<td>Sewing I</td>
<td>0 10</td>
</tr>
<tr>
<td>Physical Training I</td>
<td>0 2</td>
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</tbody>
</table>

##### Second Year.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>English II</td>
<td>5 0</td>
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<tr>
<td>Mathematics II</td>
<td>5 0</td>
</tr>
<tr>
<td>Chemistry I</td>
<td>3 4</td>
</tr>
<tr>
<td>Domestic Science I</td>
<td>2 0</td>
</tr>
<tr>
<td>Sewing II</td>
<td>0 4</td>
</tr>
<tr>
<td>Cooking I</td>
<td>0 7</td>
</tr>
<tr>
<td>Freehand Drawing I a, b</td>
<td>0 5</td>
</tr>
<tr>
<td>Gardening c</td>
<td>1 3</td>
</tr>
<tr>
<td>Physical Training II</td>
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</table>

##### Third Year.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>English III</td>
<td>5 0</td>
</tr>
<tr>
<td>Domestic Science II</td>
<td>2 0</td>
</tr>
<tr>
<td>Physics I</td>
<td>4 2</td>
</tr>
<tr>
<td>Cooking II</td>
<td>0 7</td>
</tr>
<tr>
<td>Applied Design I</td>
<td>0 4</td>
</tr>
<tr>
<td>Elective, 5 units.</td>
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</tr>
<tr>
<td>History I</td>
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##### Fourth Year.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>History II</td>
<td>5 0</td>
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<tr>
<td>Botany I</td>
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<tr>
<td>Domestic Science III</td>
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<tr>
<td>Domestic Science IV a</td>
<td>0 5</td>
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<tr>
<td>Sewing IV b, c</td>
<td>0 5</td>
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<td>Elective, 10 units.</td>
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#### SHORT COURSES.

In past years a limited number of short courses in Agriculture and Household Arts subjects have been given and the plan of instruction contemplates a repetition of such courses from time to time. All short courses are announced by special circulars. Personal letter will be sent at any time in response to inquiry.
STUDIES COMMON TO TWO OR MORE COURSES.

**English I and II.** English composition, rhetoric and literature. First and second years, all courses. The purpose is to aid the student in acquiring good habits of oral and written expression, and to impart a practical rather than a technical knowledge of rhetoric. A taste for good literature is cultivated by the study of books of literary worth that appeal naturally to interest of the student.

Each regular student is required to pursue continuously the study of English until the subject is completed as required in his or her course of study.

**English IV.** Business English. A course designed especially to aid Mechanics and Agricultural students in the technical descriptive writings necessary in describing laboratory experiments, machinery and mechanical operations, surveys, and in writing specifications.

**Spanish I and II.** The course is offered primarily for those students who desire to enter the University or expect to need in their future life work a speaking knowledge of the Spanish language. At the end of this course the student will be able to translate at sight ordinary Spanish, construct simple sentences and carry on a conversation in Spanish.

**History I.** General History. Third year, Household Arts course, elective in other courses. A course which gives a broad and comprehensive view of the general field of history, so that the present may be understood; that the pupils' present surroundings may be seen in their relations to the past activities of men.

**History II.** United States History and Civics. A course designed to give the essential features of the history and government of the United States in such a way that the students shall appreciate their environment and develop into intelligent citizens.

**Mathematics I.** Elementary algebra and a review of arithmetic. First year, all courses.

**Mathematics II.** Plane geometry. Second year, all courses.

**Mathematics III.** Advanced algebra and plane trigonometry. Third year, Agriculture and Mechanics courses. Elective, Household Arts course.
The mathematics classes are taught with special reference to the needs of technical students.

**Mathematics IV.** This course is intended to supply the need of the students in Mechanics for more advanced work in mathematics, as well as to furnish a means of obtaining advanced credit for those students intending to continue their studies after graduation. The work covered is advanced algebra and solid geometry.
San Luis Obispo, a city of 6,000 people, is on the coast line of the Southern Pacific Railway, 250 miles south of San Francisco and 225 miles north of Los Angeles. There are provided several daily trains from San Francisco and Los Angeles. Port San Luis, ten miles distant, is the harbor from which the Pacific Coast Railway passing through the city reaches 90 miles into the interior southward. Passenger steamers of the North Pacific Steamship Company call at Port San Luis on regular schedule.

The climate of San Luis Obispo is a pleasing combination of sea and mountain air, moderate in temperature both summer and winter. The ocean shore ten to twelve miles distant and picturesque mountains surrounding the town make the home of Polytechnic School a delightful residence section of the State.
San Luis Obispo has churches representing the following denominations: Baptist, Catholic, Christian, Christian Science, Congregational, Episcopal, Lutheran, Methodist, and Presbyterian, all of which welcome students who wish to find a church home during their residence at the school. The Catholic congregation occupies the famous Mission San Luis Obispo de Tolosa, established by Father Junipero Serra in 1772.

A free public library established in 1897 now contains over 9,500 bound volumes and 7,000 unbound pamphlets and magazines. It occupies a $10,000 library building, which is the gift of Mr. Carnegie. Students in the Polytechnic School are granted equal privileges in the library with the residents of the city.
**Surveying and Irrigation.** Prerequisites, Mathematics II, Mechanical Drawing I. Studied in conjunction with Mathematics III. Instruction is divided between field work and the drafting room. Students learn the use of instruments, the laying out of foundations, running ditches to grade, setting cross-section stakes, with the calculation of the earth to be removed, field surveying, including the transfer of field notes to neat form in the drafting room. Special attention is given to the design and construction of irrigation ditches, dams and flumes. The large school farm offers an excellent field for practical work. This is supplemented in the spring term by a week of camp life devoted entirely to solving such field problems in land surveying and laying out irrigation systems as can not be worked out in the half-day periods of the regular school sessions. The equipment includes high-grade transits, levels, clinometers, barometers, chains, tapes and other apparatus sufficient for a class of twenty-five. Agriculture and Mechanics courses.

**Physical Geography.** First year, Agriculture and Mechanics courses. A general course, including a study of the physical features of the land, its changes, and the effects upon soil conditions; climatic conditions, and their relation to plant growth; how to read and interpret maps. Instruction by recitation, laboratory, and field observations.

**Chemistry I.** Elementary chemistry. Prerequisite, Mathematics I. Third year, Mechanics course; second year, Agriculture and Household Arts courses. A course in general inorganic chemistry, including elementary chemical theory and calculation. A study of the common elements and their compounds, with emphasis upon the economic importance of each. Special attention is given to the chemistry of the farm, and the shop. Classroom and laboratory instruction. The third term for Household Arts students is made especially practical by including an elementary study of the chemistry of foods and digestion.

**Physics I.** Elementary physics. Prerequisite, Mathematics I. Third standing in other courses. The course includes classroom and laboratory instruction in the mechanics of solids, liquids and gases, simple measurements, and the fundamental laws of heat, light, sound, invisible radiations and electricity. Special attention is given to the preparation of the students of the various departments that they may be fitted for the studies coming later in their courses. The laboratory is fully equipped with up-to-date apparatus.

**Botany I.** Elementary Botany. Second year Agriculture course, third year Household Arts course. A general course in practical botany, with instruction in class, laboratory, and field. First term: seed germination and a study of roots, stems, leaves, flowers and fruits. Second term: a study of plant structure with the compound microscope, tracing the development of algae, fungi, bacteria, mosses, ferns and seed plants. Third term: a study of weeds, grasses, flowers and other wild plants; plant breeding and plant societies. The extensive flora of the school gardens and grounds offers a very interesting and profitable field for botanical study.

**Freehand Drawing I.** Work in pencil, crayon, water color and ink. Study of form and proportion, perspective, and light and shade by means of pencil drawings of geometric forms, casts, still life, plant forms and machine models. Agriculture and Mechanics students give special attention to drawings of
plants, perspective drawings of furniture and buildings, and to furniture
design. Household Arts students adapt conventionalized plant forms to
design for embroidery and begin the study of color applied to drawing and
design of costume. First year, all courses.

**Mechanical Drawing I.** First year. Agriculture and Mechanics courses. General instruction in the use of instruments, plates in freehand and mechanical lettering, solution of problems in geometrical construction, and preparation of working drawings. A textbook will be used and occasional examinations given.

**Physical Training I and II.** Required of all first and second year students. No one is excused without a certificate of disability from a physician or the recommendation of the instructor. There are separate departments of instruction for boys and girls. Each student is required to procure the regulation gymnasium costume. The course consists of instruction in marching, calisthenics, light gymnastics, folk dances and wholesome games. Training in regular school athletics under the direction of a faculty member may be taken as a part of the second year work.

**Music I.** A drill in the more simple notations used in music, sight singing and chorus work. The aim of this course is to give the students an opportunity to discover the pleasure that music may bring them and develop an appreciation of the best music as well as an understanding of good songs.

**Military Drill.** By act of Congress all State Agricultural Schools are required to give instruction in the elements of military science.

The physical exercise, the discipline, the habits of promptness and reliability inculcated, are of great assistance in any occupation. To walk straight, to talk straight, to be neat, to respect the rights of others, to learn to obey orders before giving them, and to be decent because it is right and because it pays, are taught in conjunction with the regular drill. No boy can help being benefited by the discipline.
Poultry Husbandry I. An elementary course covering the fundamental phases of the poultry industry. The chief subjects considered are the breeding, feeding, rearing, housing and handling domestic birds. The laboratory work includes practice in incubation, brooding, feeding, caponizing, bleeding, and dressing and packing fowl for market. Each student is required to care for a small flock, and to keep a careful record of it, with a financial statement at the end of the feeding period.

Poultry Husbandry II. A study of the breeds commonly found on California farms. Particular attention is paid to inheritance and the evolution of breed types. Laboratory practice in the course consists in a careful study of the distinguishing points of the different breeds and varieties and their standard requirements. Care, preparation for exhibition, and the judging of show birds are duly considered.
Students desiring more advanced work in poultry will be given the privilege of a research course worked under the direction of the instructor. The student may be assigned to some special and original problems which he will be expected to carry through, and furnish at the completion a detailed report.

**Farm Practice.** The primary object of this course is to acquaint students with the different operations that occur on the ordinary farm, and for the development of a certain amount of skill in their performance.

The entire course is devoted to actual farm operations, from the care of farm animals to some of the intricate problems of farm life. Hitching up and driving, plowing, the preparation of the seed bed, planting, spreading manure, concrete construction, building and repairing fences, repairing harness and farm machinery, are some of the things done by individual students. Caring for fences and fence corners and general cleanliness of the farm are given high consideration. The students are assembled occasionally and a general discussion of the fundamental underlying principles of their work is taken up in the classroom.

**Field Crops.** The first two terms are taken up with a study of the principal cereal, forage and fiber crop production of California. The origin, history and development factors influencing growth, place in rotation, soil preparation and cultural methods; weed enemies, their prevention and eradication; harvesting, marketing and profits, and distribution and value to the State are considered in the study of each crop.

During the third term, Farm Management is taken up. A study is made of the problems relating to convenience and comfort in the various operations of the farm, and in the correlation of the different lines of farm activity, with the view of eliminating all of the non-essential features.

The farm layout is considered with special reference to size, arrangement of fields, water supply, location of yards and buildings, lanes, roads and building sites. The proper distribution of labor and the economic utilization of all farm resources are carefully studied.

**Dairy I.** Secretion, composition and properties of milk. Factors influencing the quantity and quality of milk. Milk ferments and fermentation; the care of milk and milk products on the farm; a comparative study of the methods of creaming; the construction and operation of farm separators; the principles and application of the Babcock test; first principles in butter making, cheese making and ice cream making.
Dairy II. This course comprises the study of the principles of creamery and butter making, the construction and care of creameries and their appliances, methods of sampling and grading cream, pasteurization, starter-making, cream ripening, creamery accounting, cheese making, ice cream making, and creamery and milk plant refrigeration.

Breeds and Breeding. History and development and characteristics of the leading breeds of livestock, pedigrees and performance of superior individuals among horses, cattle, sheep and swine. The fundamentals of livestock judging and its relation to production. A study of animal form and character, names and location of parts, indications of feeding quality, constitutional vigor, sexuality and capacity for production of meat, milk, wool, work and speed, market requirements, breed identification and adaptation.

Livestock Arrangement and Diseases of Farm Animals. This course deals with the practical side of feeding, care and management of livestock. Practice is given in feeding, care and management of hogs, horses, cattle and sheep. Diseases of farm animals deals with common and serious diseases of domestic animals, their causes and prevention.


(b) Care of the Dairy Herd. Feeding for milk production, the dairy calf and its successful development, care of dairy sires, and other factors concerned in the successful management of the dairy herd.

(c) Pure Breeds. The management of the registered breeding herd, advanced registry systems and their influence, a study of the performance and breeding of the leading families of the various dairy breeds, judging by the breed standard.

(d) Dairy Farm Economics. The relation of dairy farming to the maintenance of soil fertility, intensive dairying with food cows, suitable crop relations to secure an abundance of cheap, farm grown protein, soiling and other systems, dairy farm buildings, silos and yards.

FEEDS AND FEEDING.

A consideration of the classes of food nutrients; the ordinary and possible functions of each in the animal body; digestion, absorption, and assimilation; the extent and nature of the demands for maintenance, growing, fattening, milk and work; principles in selection of rations; feed stuffs; feeding standards, and compounding rations.

MEATS.

This course includes a study of the killing, dressing, cutting, and curing of beef, pork, and mutton.
A Young Drafter.
PRINCIPLES OF ANIMAL AND PLANT BREEDING.

(a) A treatment of the principles and practices involved in the improvement of the domestic animals. The course includes a discussion of the subjects of reproduction, variation, heredity, selection, line breeding, inbreeding, cross-breeding, grading, and other subjects correlated with the breeding and improvement of farm animals.

(b) A study of the methods used in the improvement of our existing varieties of plants and fruits and in the origination of new varieties. Practical instruction is given in the greenhouses, orchards and gardens of the Polytechnic School, accompanied by visits to the famous flower and vegetable seed farms of San Luis Obispo County.

Horticulture I. General Horticulture. A study of plant propagation, fruit-growing and vegetable gardening. The work in plant propagation includes instruction in the principal methods of growing plants from seeds, cuttings, bulbs, etc., and by budding and grafting. The work in fruit-growing includes instruction in the selection of orchard sites and in the planning, planting and care of fruit orchards, together with a brief study of each of the most important California fruits. The work in vegetable gardening includes instruction in the use of hotbeds and cold frames, together with an individual study of the culture of each of the most important California vegetable crops. Much practical instruction is given in the greenhouses, nurseries, orchards and gardens of the Polytechnic School, accompanied by visits to the most important fruit orchards, vegetable gardens and seed farms of the county, and practical work in the same whenever possible.

Horticulture II. Advanced Horticulture. This course comprises a detailed study of each of the most important deciduous and semi-tropical fruits grown in California, including soil and climatic adaptations, general culture, picking, packing and marketing. One term is devoted to a study of insect pests and plant diseases of orchard and garden, methods for their control, and the State and federal horticultural and quarantine laws governing the same. Much practical instruction is given in the gardens, orchards and laboratories of the Polytechnic School, accompanied by visits to the most important fruit districts and practical work in them whenever possible. With the assistance of the County Horticultural Commissioner, practical instruction will also be given in the inspection of orchards, nursery stock, mail packages, etc., for insect pests and plant diseases.

Soils and Fertilizers. Soils and Soil Fertility. Prerequisites, Chemistry I and Physics I. A study of the physical features of the soil, including soil origin, soil-forming rocks, agencies of soil formation, and the characteristics of the principal soil types. Tillage and its effect on the texture, aeration, moisture and plant food content of the soil; different systems of farming, such as summer fallowing, dry farming, irrigation farming and crop rotation, are studied. The chemistry of the soil, its plant food constituents, alkali and other harmful materials, commercial fertilizers, the use of stable manures and green manure crops; the depletion, conservation and renewal of soil fertility, are all duly considered. The laboratory period is devoted to soil physics, a study of soil types, and to working out some of the soil problems commonly found on California farms.
Agricultural Chemistry. Prerequisites, first, second and third years, Agriculture course.

The general principles of chemistry are presented as applicable to the science of modern agriculture. It includes the chemistry of plant and animal life, together with the analysis of soils, fertilizers, feeds, dairy products, irrigation waters and other substances of interest to the farmer.

The laboratory work is made as practical as possible.

Farm Law. A study of the forms of business organization and management, individual proprietorship, partnership and corporation; advantages and disadvantages, legislative restrictions, etc. Attention is also given to farm and general advertising methods, systems of credits and collections commonly used by the business world; plans of buying and selling, mortgages, deeds, securities, interest and features affecting their legality, are considered.

Farm Accounts. This course consists of a study of some of the simple methods of farm accounting. In connection with the class work the student is required to make plans and inventories of farms and to prepare a complete, accurate set of accounts, showing the actual financial records for one year's operation on a typical farm.

Farm Architecture. Work is given in planning and arranging the various buildings that should be found on the farm. Plans are drawn, with due regard for sanitation and the laws of health, of the ranch house, dairy and horse barn, hog house, poultry house, implement shed, etc. Attention is given to different building materials, estimates of cost, specifications, and the making of blue prints.
Physics I and Farm Motors. The different divisions of the subject, viz: Mechanics of solids and liquids, Heat, Magnetism, Electricity, Sound and Light, are taken up relative to their usefulness, special attention being given to the essentials. The work in farm motors is taken up at the power plant and in the electrical laboratory. The various divisions covered are: The operation and repair of the different types of gasoline and crude oil engines, the operation and adjustment of the steam engine, the care and operation of steam boilers, the wiring and installation of electric motors and generators, refrigeration systems, etc.

MECHANICS.

Mechanical Drawing II. Oblique, orthographic and axonometric, projection; development of patterns for tinsmith work; elementary architectural drawing with special attention paid to the development of envelopes for cornice work. More advanced work will be assigned to students desiring to specialize in this class of drawing.

Mechanical Drawing III. Working drawings of machine parts; the design of gas and steam engines; reinforced concrete design; tracings and blue printing. The work of this course is carried on in conjunction with “Strength of Materials” and “Mechanics and Heat Engines.”

Forge I. This course gives practical work in both iron and steel, and includes drawing, upsetting, welding, drilling, tempering, and repair work. During the third term pieces may be made from original designs by the more advanced students.

Forge II. A course in practical toolmaking, including, for the more advanced students, the making and repairing of machine tools.

Foundry I. This course includes molding and casting in white metal, iron, bronze and brass from patterns made in Pattern Making I and from broken machine parts. Core making is also included.

Carpentry I. A practical course in bench and machine work. Models of the joints commonly used in carpentry and joinery are made, followed by practical work both in and out of shop. This course includes instruction in the grinding and sharpening of tools, saw filing and work with the steel square as applied to roof framing.

Carpentry II and Pattern Making I. This course includes advanced work in cabinet making; the framing and construction of buildings; particular attention being paid to the construction of models according to blue-print drawings. Elementary pattern making, including lathe work and core box making, is a part of the course. Students may be allowed to make a limited number of pieces of furniture for themselves.

Pattern Making II. A continuation of Pattern Making I with special attention paid to the construction of the more complex patterns of castings designed in Mechanical Drawing III.

Machine Shop I. The course includes general instruction in the care and handling of machines, the cutting speed for various materials, the use of measuring instruments and general machine tools. Much time is given to exercise work at the lathe, shaper, drill press, and grinding machine. By prearrangement original work may be undertaken after the middle of the year.
Girls' Gymnasium Class.
Machine Shop II. Instruction is given in gear cutting, planer work, machine and engine building, the construction of models and in general repair work. Special pieces of work are assigned to students, depending on their choice and skill.

Machine Shop III. In this course the student is to design and construct some piece of machinery, such as a gasoline engine or a wood lathe, for himself or for the school. The aim of the course is to develop confidence in the ability of the student to apply the knowledge obtained in the earlier courses. The work of designing, drafting, making the patterns and castings and finishing the machine are all left to the ingenuity of the student.

Mechanics A. The theoretical elements of Machine Shop I and II, Forge I and II, and Foundry Work I. In this course the theory treated is later applied in a practical way in the shop work of the above courses.

Mechanics I. Strength of Materials. Prerequisites, the second year of the Mechanics course. Principles of stress, tension and shear, as applied in beam and building design; strength and physical properties of building materials, including timber, stone and metals. The design of beams, columns, riveted joints; reinforced concrete, and the more common problems in design, such as line shaftings, etc.

Mechanics II. Heat Engines and Applied Mechanics. A laboratory analysis of two-cycle and four-cycle gas and gasoline engines, crude oil engines and steam engines, with tests of their efficiency and a study of their construction and operation. A study of valve setting, horsepower measurement, the care and operation of steam boilers and other of the more common mechanical problems. The application of mathematics in calculating and determining the stresses and necessary sizes of machine parts.

Mechanics III. Hydraulics and Pumping Machinery. Prerequisite, the third year of the Mechanics course. This course consists of a study of the flow of water in pipes, ditches, flumes and canals; the measurement of water, using the miner's inch, and the weir; the testing, operation and construction of power pumps, centrifugal pumps, and water motors. The work of the classroom is carried on in conjunction with that of the laboratory.

Mechanics IV. Electrical Machinery. The theory, construction, operation and repair of alternating and direct current motors, generators, arc lights, voltage regulators, alternating current rectifiers, converters, power transmission lines, telephones, and telegraph systems. The laboratory work is of a very practical nature, dealing with the important points brought out in the classroom study. Practical instruction in house wiring, line work and the operation of the school's power plant, which is located in the same building as the laboratory, is given to all students in the course.

General Science. A study of plant propagation, soil cultivation, and the use of fertilizers applied to the growth of flowers and vegetables in the home garden.

Chemistry V. Domestic chemistry. Elective. Prerequisite, Chemistry I. A laboratory study of the materials of importance in the home, such as foods and cleaning agents; both qualitative and quantitative tests for adulterants are made. Metabolism is studied in connection with the courses in domestic science.

Domestic Science I. Foods. Studied in conjunction with Chemistry I and Cooking I. The course includes a complete study of the carbohydrate foods— their source, chemical composition, cookery, digestion, and economic value. This is followed by similar consideration of the fats and proteids.


Domestic Science III. Home Economics and Sanitation. This course includes a study of the sanitary construction of houses; sanitary, economical and artistic house furnishing; systematic housekeeping; buying and keeping accounts; water supply; disposal of waste; heating, lighting and ventilation; methods of cleansing and agents used; hard and soft water; soap and detergents.

Domestic Science IV. An elective course in which the student may carry on experimental investigation in any line of home work in which she has become interested.

Cooking I. A laboratory course in conjunction with Domestic Science I. It includes practical instruction in the preparation and cooking of cereals, vegetables, milk and cheese, eggs, fish and meat, and bread; a study of ranges, fuel, cleansing agents and kitchen appliances.
Cooking II. This second year of cooking laboratory includes the preservation of fruits and other foods; the making of pastry, cake, and desserts; the planning and serving of meals, including the careful calculation of the cost of the meals; invalid cookery. In the spring term practical laundering is given, including dry cleaning and the washing of laces and embroideries.

Sewing I. Plain Sewing. A laboratory course in the fundamental principles of hand and machine sewing, including the making of under-garments and simple dresses. A study of dress lines with the use of commercial patterns. Instruction in repairing worn or torn woolen garments, patching cotton garments, mending stockings and kid gloves.

Each student is required to make a gymnasium outfit—bloomers and midy; a kitchen outfit—two aprons, two towels and two holders; a plain set of under-garments; an embroidered set; and two simple dresses. Textiles. A study of the beginnings of textile and allied industries; weaving and spinning; rugs and baskets; cotton, flax, silk and wool fiber. The student is instructed in judging the various commercial fabrics as to adulteration and durability. Estimates of expense of finished garments are required in all sewing courses.

Sewing II. Dressmaking and Millinery. A laboratory course including the making of more elaborate skirts and waists than is required in the first course; the making of bed and table linen; the making and trimming of hats. Art needle work is planned and begun at school and finished at the home. Textiles are reviewed and a study made of the inventions for their manufacture. Each student is required to make a tailored shirt waist, a lingerie waist, a wool or silk dress and her fall and spring hats.

Sewing III. Elective. This course includes necessary garments for personal wardrobe; art needle work, including marking linen. An original letter or monogram is embroidered on a napkin, tablecloth or handkerchief.

Sewing IV. Advanced Dressmaking. Each student is required to make one gown independent of the instructor's help—a graduating dress with the necessary under-garments. This dress is to be simple and made of wash material and must be finished at least one week before the close of the term. Textiles, a study of their relation to sweat shops, child labor and the Consumers' League. Woman's responsibility as a consumer.

Freehand Drawing II. Second year. Household Arts course. Elective in other courses. A study of color and color schemes in relation to dress and house furnishings; elementary work in costume illustration and design. Drawings of charcoal, crayon, and water color from still life, plants and landscape; pen drawing, lettering and decoration of printed page.

Applied Design I. Prerequisite, Freehand Drawing I. A study of color and design applied to work in cardboard, raffia, reed, embroidery, stenciling, and block printing.

Applied Design II. Elective. The application of design to work in embroidery, stenciling, leather, metal and jewelry; and a study of color schemes for interior decoration.
Flower Drill—Athletic Carnival.
The Farm and Grounds.

The farm and grounds consist of three hundred and eleven acres of land, the most of which is rolling and typical of a large portion of the coast counties. The farm is equipped with a complete line of modern machinery, and is stocked with registered Jersey and Holstein cattle, Percheron and Clydesdale horses, and swine of the Berkshire and Poland-China breeds, all of which are used for class study as well as for their customary purposes.

The school grounds have been laid out and planted under the direction of expert landscape gardeners, and their beauty adds materially to the pleasure of school life. The plantings include hundreds of varieties of ornamental and economic plants, which are all available for field and laboratory study in botany and horticulture.

School and Farm Buildings.

The main buildings are all two stories in height with well lighted basements. They are located on rolling ground, which slopes gently away from the buildings, insuring good drainage and sanitation, and affording a fine view of the surrounding hills and valleys. The shops are one story buildings, each 40 by 100 feet.

The Administration Building.

The administration building contains the school offices, assembly hall, library, and several classrooms and laboratories.

The Household Arts Building.

The household arts building contains sewing rooms, kitchen, dining room, pantries, applied design workroom, laundry, botany laboratory and herbarium, classrooms and instructors' offices.

Boys' Dormitory.

The dormitory is a new and modern building, providing rooms for a limited number of students and faculty members. A large sitting room with fireplace, steam heat, electric lights and baths, are features of the building.

Dining Hall.

A new building, with large kitchen and pantries in addition, conveniently located, serves as central hall for faculty and student residents at the school.

The Creamery.

The creamery occupies a commodious building, supplied with a hot water and steam system, electric power, pasteurizer, cream ripener, churns and separators of various standard makes, cheese-making apparatus, a refrigerating plant of six tons capacity; in fact, a complete and varied equipment, which not only provides for the manufacturing and handling of dairy products, but also affords an opportunity for comparative study of dairy apparatus. The creamery is in daily operation.

The Carpenter Shop.

The carpenter shop contains benches and tools for a class of thirty men. A planer, band saw, swinging cut-off saw, combined power ripsaw and mortising machine and turning lathes are included in the equipment.
Scotch Folk Dance.
The Forge Shop.
The forge shop contains sixteen double down-draft forges of the latest pattern, accommodating a class of thirty-two men.

The Machine Shop.
The machine shop is equipped with eight iron lathes, polishing lathe, universal milling machine, heavy planer, drill presses, shapers, power emery wheels, cut-off saws, and a variety of high grade finishing tools and measuring devices. All machinery of the various shops is motor driven, electric power being supplied from a complete plant owned by the school. The equipment of the shops is equaled by very few secondary schools in the country.

The Power House.
The power house is a commodious one story building containing the electrical and mechanical laboratories, and the power plant which furnishes power, heat and light for the school.

The Electrical Laboratory.
The electrical laboratory is equipped with two 106-horsepower Sterling water tube boilers with auxiliary apparatus; a 50-kilowatt three phase generator, direct connected to an 80-horsepower Skinner engine; a switch board composed of two generator panels, one Terrill voltage regulator panel, two distribution panels and one plug panel, the latter giving a possible combination of over 800 connections for testing and experimental work. In addition to the above there is a large and varied equipment of alternating current and direct current motors and generators, meters and other auxiliary apparatus for the study of the operation and construction of electrical machinery.

The Mechanical Laboratory.
The mechanical laboratory is equipped with four gas and gasoline engines, one crude oil engine and an assortment of power pumps of high and low pressure which, with the power machinery of the electrical laboratory, affords a means of studying the construction, installation and operation of power plants and pumping machinery.

The Other Buildings.
The other buildings are a dairy barn and silo, a plant propagation house, greenhouses, and lath houses, an incubator cellar, poultry houses, swine houses, a pumping house, tool sheds, hay barns and cottages for employees.

Laboratories.
The laboratories are well equipped with instruments and apparatus for work in general and agricultural chemistry, physics (including photometry and X-ray apparatus), freehand and mechanical drawing, electricity, land surveying and irrigation, physical geography, botany and plant propagation, crops, horticulture, dairy and creamery, sewing, cooking and applied design.

The School Library.
The library now contains about three thousand volumes, and this number is being greatly increased. In addition to a good collection of standard English works, there are included standard present-day works on agriculture, horticulture, animal husbandry, the household arts, electricity, and various mechanical lines. Besides the general reference works, the reading room is supplied with many technical and popular magazines, daily papers, and a file of government and state agricultural publications. These are accessible at all times to students.
Only Three Hundred and Fifty Students
Can be Received this Year

Write for Application Blanks if you wish to enter. Former students as well as new should apply for admission before

SEPTEMBER 10, 1915
Party number four.

Senior Surveying Crew.