CALIFORNIA STATE POLYTECHNIC
COLLEGE BULLETIN • •
SAN LUIS OBISPO
AND SAN DIMAS

1949 ANNUAL REPORT

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From The Desk of The President

AS PRESIDENT of the California State Polytechnic College, I have the honor to submit to the State Board of Education and the State Department of Education this report on major developments at the college during the 1949 calendar year.

In the belief that the differences between this college and other California state colleges are now more clearly understood than in past years, I have limited my report to a review of the activities of the college during 1949.

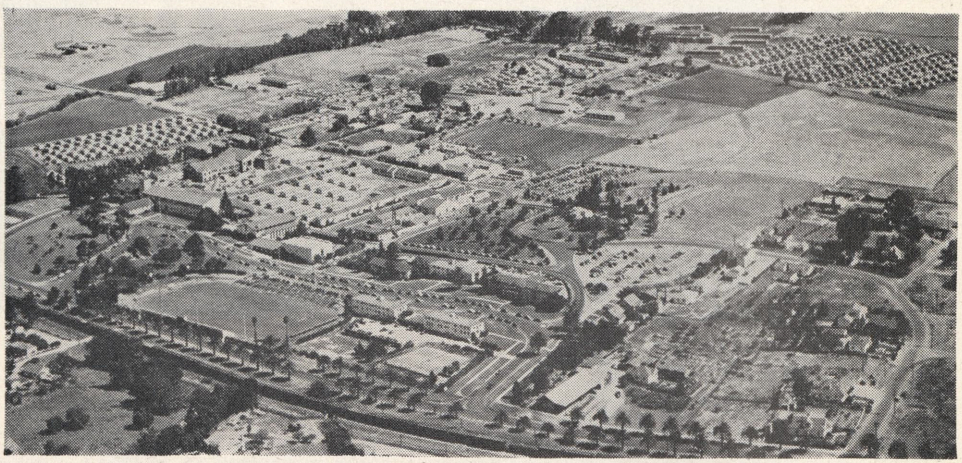
No simple recital of progress achieved by the college in one year would seem impressive unless viewed against a backdrop of the 45-year struggle of the institution to attain educational respectability for occupational training.

The growth of the college in the past decade is the direct result of the active and sympathetic support of members of the State Board of Education, the State Department of Education, and the Legislature. That the college now has full, unrestricted accreditation, and is approved as a teacher training institution, is a tribute to their confidence in the soundness of the college's basic philosophy of occupational training.

Respectfully submitted,

Julian A McPhee

San Luis Obispo campus of the California State Polytechnic College.



Enrollment, Fall Quarter 1949

A TOTAL of 2909 full-time students registered at the San Luis Obispo campus of the California State Polytechnic College for the fall quarter, 1949. This figure exceeds by 209 the upper limit of enrollment for men at the San Luis Obispo campus as set by the Strayer committee survey for the year 1960. An additional quota of 900 women students for the San Luis Obispo campus was set by the State Department of Education. At present no women students are enrolled as there are no dormitory or physical education facilities available for them. At the San Dimas campus, the total number of students registered by the end of October was 439. The recommended total permanent capacity for that campus as set by the Survey is 1000.

The total enrollment of 3348 full-time students for both campuses was an increase of 365 students over the total of 2938 enrolled in the fall quarter of 1948. Following are the summaries of the San Luis Obispo campus enrollment:

By Division

Engineering Division	1296
Agricultural Division	1380
Science and Humanities	233
	2909

By Year

First year	863
Second year	704
Third year	714
Fourth year	572
Fifth year	56
	2909

Enrollment By Departments

Agricultural

Agricultural Engineering	142
Agricultural Inspection	49
Animal Husbandry	555
Field Crops Production	108
Truck Crops Production	46
Dairy Husbandry	162
Dairy Manufacturing	40
Fruit Production	55
Ornamental Horticulture	95
Poultry Husbandry	112
Soil Science	16
	1380

Engineering & Industrial

Aeronautical Engineering	164
Architectural Engineering	196
Air Conditioning & Refrig.	229
Electrical Engineering	182
Electronics & Radio	201
Maintenance Engineering	26
Mechanical Engineering	262
Printing	36
	1296

Science & Humanities

Education	41
Biological Sciences	29
Mathematics	31
Physical Education	83
Physical Science	10
Social Science	39
	233

Place of Legal Residence

County	Jan. 1, 1941	Mar. 21, 1946	Nov. 1, 1946	Nov. 1, 1947	Oct. 1, 1948	Oct. 1, 1949
Alameda	25	19	35	63	85	108
Alpine	0	0	0	0	0	0
Amador	1	0	0	0	1	2
Butte	9	1	1	4	6	10
Calaveras	1	0	0	0	0	0
Colusa	5	2	2	1	2	3
Contra Costa	17	7	13	12	30	37
Del Norte	0	0	0	0	1	1
Eldorado	0	0	0	7	14	14
Fresno	23	20	65	65	73	71
Glenn	7	1	3	5	10	16
Humboldt	13	6	12	13	17	14
Imperial	12	3	7	12	16	15
Inyo	2	0	2	3	3	3
Kern	18	8	29	27	50	66
Kings	13	6	18	17	17	15
Lake	0	0	1	1	3	2
Lassen	1	2	2	3	10	11
Los Angeles	197	163	397	439	588	651
Madera	5	1	3	11	3	5
Marin	1	2	3	10	11	17
Mariposa	1	0	0	2	1	2
Mendocino	8	1	9	13	7	6
Merced	16	2	13	27	41	26
Modoc	4	0	1	4	4	6
Mono	0	0	0	1	0	0
Monterey	8	8	19	41	52	50
Napa	1	7	4	4	7	10
Nevada	0	1	3	4	5	6
Orange	39	12	40	59	78	93
Placer	5	1	4	5	7	2
Plumas	0	0	0	0	0	1
Riverside	24	11	32	35	81	64
Sacramento	7	5	13	27	38	42
San Benito	3	1	5	9	11	10
San Bernardino	34	13	28	44	54	65
Santa Clara	18	15	43	53	53	73
San Diego	20	15	69	78	125	114
San Francisco	17	19	34	61	53	66
San Joaquin	16	14	19	28	27	33
San Luis Obispo	81	134	175	427	225	215
San Mateo	7	6	22	28	37	42
Santa Barbara	37	19	32	64	89	108
Santa Cruz	9	10	28	33	32	31
Shasta	1	3	1	5	5	5
Sierra	0	2	2	2	2	2
Siskiyou	7	0	4	4	3	7
Solano	5	0	1	5	11	11
Stanislaus	19	7	15	38	43	63
Sonoma	9	8	19	21	25	38
Sutter	4	0	2	9	11	12
Tehama	7	2	3	5	4	6
Trinity	1	0	0	1	0	1
Tuolumne	3	2	6	3	1	1
Tulare	21	18	43	56	56	68
Ventura	9	8	34	33	46	50
Yolo	3	3	2	4	2	4
Yuba	5	1	1	7	11	5
Other States & Foreign Countries	67	67				
Other States			179	231	301	390
Foreign Countries			20	21	31	54
U.S. Territiories					34	59
	866	655	1518*	2185*	2553*	2902*

*Not all students registered at the San Luis Obispo campus were included in this survey as some cards were not available at the time the study was made. In 1946 actual enrollment was 1571, in 1947 it was 2229, in 1948 it was 2575, and in 1949 it was 2909. Had the balance been included in this study, some additional counties would be represented.

Summary of Enrollment Distribution

In contrast to other state colleges, California State Polytechnic College's enrollment is wide-spread throughout the state. Fifty-five of the 58 counties in the state were represented in the fall of 1949.

In a San Luis Obispo enrollment breakdown, 390 students were registered from 44 of the 48 states. New York had the most out-of-state students with 35; Nevada with 28; Oregon, 26; Pennsylvania, 22; Arizona, 22; Washington, 22; Illinois, 21; and Michigan, 20.

Fifty-nine students indicated Hawaii as their legal residence while 10 registered from Mexico, 7 from Iran, and 6 from Iraq; 19 foreign countries are represented.

A study of the foregoing registration by counties at San Luis Obispo shows a percentage distribution of the counties having the largest representation as follows:

County	Percentage	County	Percentage
Alameda	3.7	San Bernardino	2.2
Contra Costa	1.2	San Diego	3.9
Fresno	2.4	San Francisco	2.2
Kern	2.2	San Luis Obispo*	7.4
Los Angeles	22.4	Santa Barbara	3.7
Merced	.89	Santa Clara	2.5
Monterey	1.7	Santa Cruz	1.0
Orange	3.2	Stanislaus	2.1
Riverside	2.2	Tulare	2.3
Sacramento	1.4	Ventura	1.7

* The percentage shown for San Luis Obispo county is not realistic because a great many of the 866 married students give San Luis Obispo county as their home address when in reality they do not come from this county.

Enrollment By Classes and Curriculum Level

Agricultural	Vocational	Technical	Degree	Special
Freshmen	72	150	235	27
Sophomores	24	87	215	13
Juniors	0	72	182	2
Seniors	0	0	290	5
Fifth Year	0	0	6	0
	96	309	928	47
			Total Agriculture	1380

Engineering and Industrial	Vocational	Technical	Degree	Special
Freshmen	23	64	240	1
Sophomores	5	72	250	1
Juniors	0	116	281	2
Seniors	0	0	238	1
Fifth Year	0	0	2	0
	28	252	1011	5
			Total Engineering	1296

Science and Humanities	Vocational	Technical	Degree	Special
Freshmen	0	0	53	0
Sophomores	0	0	36	0
Juniors	0	0	59	0
Seniors	0	0	37	0
Fifth Year	0	0	48	0
			233	
			Total Science and Humanities	233

Enrollment of Veteran and Non-Veteran Students

	Veterans	Non-Veterans	Total
Freshmen	252	609	861
Sophomores	354	350	704
Juniors	479	235	714
Seniors	504	71	575
Fifth Year	42	13	55
	1631	1278	2909

Enrollment of Married Students

Public Law 346	681	
Public Law 16	115	
State Veterans	12	
Married Veterans	808*	*Approximately 49% of veterans enrollment
Married Non-Veterans	58	
Total Married Students	866†	†Approximately 29% of total enrollment

Voorhis Unit, San Dimas

Enrollment By Department and Counties

Counties	Orn. Hort.	Ag. Insp.	Citrus Prod.	Decid. Fruit Prod.	Crops	Special	Total
Los Angeles	77	89	24	1	30	18	239
San Diego	4	5	2	0	0	0	11
Orange	6	13	14	0	2	1	36
Riverside	1	14	7	1	1	3	27
San Bernardino	6	8	10	0	3	3	30
Santa Barbara	0	4	6	0	0	0	10
Fresno	0	4	0	0	0	0	4
Sacramento	0	3	0	0	0	0	3
Ventura	0	6	17	1	1	0	25
Kern	0	2	0	0	1	0	3
Sonoma	0	1	0	0	0	0	1
Napa	0	2	0	1	0	0	3
Santa Cruz	1	1	0	0	0	0	2
Alameda	1	3	1	0	0	0	5
Imperial	0	0	0	0	2	0	2
Tehama	0	0	1	0	0	0	1
Tulare	0	2	6	0	0	0	8
Mendocino	0	1	0	0	0	0	1
Stanislaus	1	0	0	0	0	0	1
San Mateo	0	1	1	0	0	0	2
Santa Clara	0	2	0	0	0	0	2
Placer	0	0	0	0	1	0	1
Merced	0	0	0	1	0	0	1
Yuba	0	1	0	1	0	0	2
Inyo	0	0	0	0	1	0	1
Madera	0	0	0	0	1	0	1
Out of State	6	5	0	0	1	0	12
Out of Country	2	0	3	0	0	0	5
Total	105	167	92	6	44	25	439

Number of Degrees and Certificates Granted
(June 3, 1949)

Agriculture	Bachelor of Science	Vocational	Technical
Agriculture Engineering	1		0
Agricultural Inspection	11		2
Animal Husbandry	24	3	19
Dairy Manufacturing	5		0
Dairy Husbandry	10		7
Ornamental Horticulture	10	3	5
Poultry Husbandry	8	3	6
Agricultural Mechanics	0	1	2
Crop Production, General	10	1	4
Citrus Fruit Production	6	1	4
Deciduous Fruit Production	4		0
General Fruit Production	0		0
Engineering			
Aeronautical	13		3
Air Conditioning & Refrig.	8		14
Mechanical Engineering	12		4
Electrical Engineering	14	2	9
Electronics & Radio	10	1	8
Printing	1		
Architectural Industries			1
Social Science	2		
Total	149	15	88

Faculty, Two Campuses

FOR THE school year beginning in September, 1949, 31 new instructors were added to the faculty, bringing the total to 201 persons on the teaching staff at the San Luis Obispo and San Dimas campuses.

The following charts indicated the distribution of the teaching staff according to degrees as of December 1, 1949.

San Luis Obispo

Degrees:	
Ph.D., Ed.D.	12
M.A., M.S.	73
A.B., B.S.	69
No degrees	22
Total	176

Voorhis

Degrees:	
Ph.D., Ed.D.	2
M.A., M.S.	8
A.B., B.S.	15
No degree	0
Total	25

General Objectives

THE FUNCTION of all instruction at California State Polytechnic College is to impart to students those techniques and sciences necessary to successfully perform the occupations in which they will be employed. With the strictly occupational training are included those general education subjects which help the student understand the world in which he lives, which assist him to express himself, live harmoniously with other people, and to assume responsibility and community leadership.

There are a number of characteristics peculiar to California State Polytechnic College which should be mentioned. Among them are "the upside-down plan" of instruction and the production project method of instruction.

"Upside-Down" Plan

THE INSTITUTION does not feel it has carried out its full duty unless the student, who may have been forced to drop out before the end of his complete program, received as much experience and skills in the field of training for which he came to the institution as possible. The extent to which the "upside-down plan" is adhered to may vary somewhat with departments, but in general, an examination of the average curricula will reveal a somewhat different sequence of courses than usually found in institutions of this type.

This plan is characterized by the grouping of as many technical and job-getting courses in the first two years as possible. In the third and fourth year the student takes, in addition to courses in his major, those subjects considered as general education. The net result is that a student who completes the four-year course leading to a degree will have covered substantially the same material covered in a similar major in a typical agricultural mechanics type college—but in a somewhat inverted order. This way the student comes immediately into contact with the field of his major interest and does not feel thwarted by numerous hurdles which seem to him unrelated to his interest.

This system enables a student to earn a living, using the skills he has learned, at whatever point he may complete his formal education.

Project Operation

THE FUNCTION of preparing students for maximum employability and earning power is carried out by a thorough integration of the "doing" practices with the underlying theory. The classroom instruction, the formal laboratory experiences, and the actual project operations on a commercial scale are each used in their proper proportion. The project system consists of self-owned or managerial projects operated by students in such a way as to give knowledge in the commercial production and marketing of agricultural products or in the construction, rebuilding, repair or maintenance of industrial machinery or equipment. This combination of the very practical "learn by doing" and "earn while you learn" philosophies not only enable a student to earn money while doing work directly related to his major academic interest, but also creates an added incentive for the more rapid acquisition of further skills and knowledge. A $90,000 revolving fund from which students may borrow at five per cent interest without cosigners makes it possible to finance the many projects. A small percentage of the net profit of a project is returned to the Project Fund to guarantee against individual student financial loss.

Agricultural Division

DURING the calendar year 1949, this division of the college offered instruction in twelve major curricula. These departments were: Agricultural Engineering and Mechanics, Agricultural Inspection, Animal Husbandry, Citrus Fruit Production, Dairy Husbandry, Dairy Manufacturing, Deciduous Fruit Production, Field Crop Production, Ornamental Horticulture, Poultry Husbandry, Soil Science, and Truck Crop Production. The first three years in the majors of Agricultural Inspection and Citrus Fruit Production must be completed at the San Dimas branch. In addition to those two majors, the San Dimas branch also provides instruction in Ornamental Horticulture and Deciduous Fruit Production to those students who elect to take the first three years of their work in those majors at the southern branch.

Three special 12-week farrier courses were offered during the past year. Forty students in this department are now engaged in this work.

Objectives

The college prepares men in the field of agriculture with the principal objective being to provide graduates of this division with a full and broad understanding of basic factors involved in production, management and marketing, together with the necessary skills, experience, and related subjects to make such a graduate an efficient agricultural producer.

The educational approach used at California State Polytechnic College not only prepares men for positions in the production fields but gives thorough training in managerial skills and techniques and in the various other fields closely related to agriculture. This knowledge of all basic factors in the agricultural industry not only enables the student to reach the top in the industry but it gives him a grasp of the significance of all agricultural processes and consequent tolerant attitudes toward every problem faced by the industry.

Practical Experience

The college herds, flocks, orchards, range and crops land are used by students to develop practical application and technique. A unique phase of the California State Polytechnic College educational philosophy is the use of the student owned and managed project as an integral part of the instruction system. Each student in the college has the opportunity to select a productive project in the particular field in which he is interested. He has managerial and financial responsibility over the project and must submit a complete record upon its completion.

Student projects are financed though a project foundation fund from which students may borrow at five per cent interest, full loan value on beef or dairy cattle, swine sheep, poultry or crops. A small per cent of the net profit is returned to the project fund as a guarantee against other loss. This practical system not only enables the student to earn money while doing work directly related to his major occupation and academic interest, but also gives him the "feel" of ownership and management, a proven incentive for learning. Observing the young man as a producer under practical conditions furnishes an excellent indication of his probable future success on the job.

Engineering Division

THE ENGINEERING Division of the college consists of a number of departments, each of which emphasizes specialized instruction for a specific field rather than a general engineering field. However, all engineering students are given sound basic fundamentals in science and mathematics so that they will be able to advance rapidly when the opportunities arise. Major departments are:

Aeronautical Maintenance and Operations Engineering, Air Conditioning and Refrigeration Engineering, Architectural Engineering, Electrical Engineering, Electronic and Radio Engineering, Mechanical Engineering, Maintenance Engineering, and Printing.

Objectives

Primary objective of all instruction in the Engineering Division is to provide instruction that will lead to employment in maintenance, operation, production, application and sales phases of specific engineering fields. It is not the purpose of the Engineering and Industrial Division of this College to prepare engineers interested in highly specialized research or design.

A specific objective of the Engineering Division is to provide each student with necessary skills in his specific field so that he not only will be immediately employable but will be of value to his employer from the first day he enters employment.

Every student in this division also receives a thorough foundation in general engineering theory as well as practices so that he may advance rapidly in his field. Engineering students receive instructions in basic science and mathematics which enables them to study and understand new developments and techniques and thereby keep astride of changing conditions in any industrial field.

In the process of achieving these objectives, the Engineering Division also attempts to inculcate in every student proper work habits and attitudes which will lead to success-

ful employment. Such students have the proper attitude to start at the bottom in their specific field, and the proper background to advance to higher positions.

Occupational Emphasis

The majority of the engineering opportunities for placement on the Pacific Coast are in fields other than research and design. Since the need lies in this direction, the California State Polytechnic College engineering curricula intends to confine its offerings to these practical fields of engineering. The only phases of design work included are those which relate to design of equipment and systems in Air Conditioning and Refrigeration and with the application of engineering to industrial plant operations.

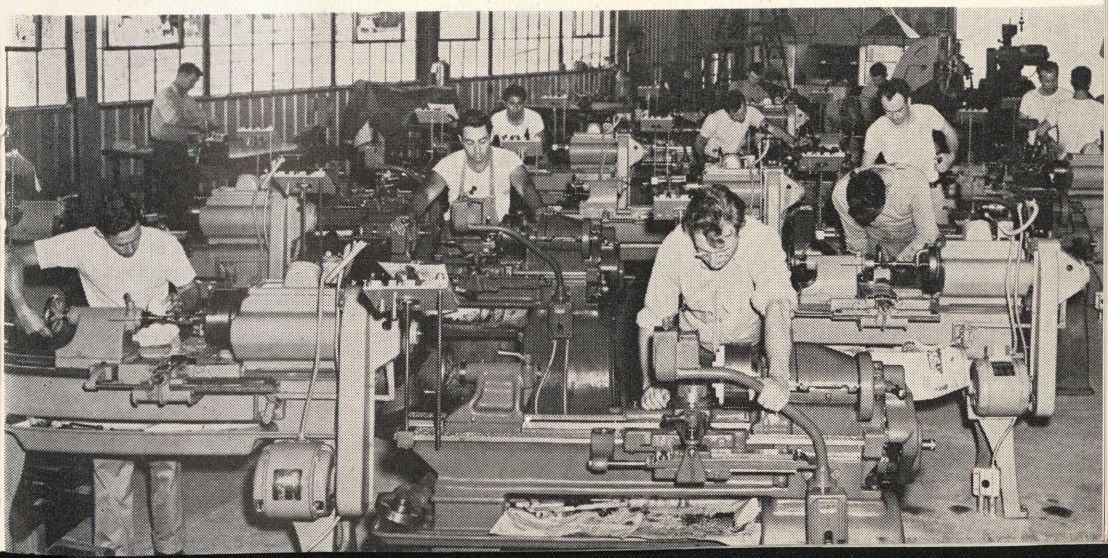
Providing training for these kinds of engineering positions required no major changes either in the educational philosophy or the instructional methods used at the college over a period of years. The present degree curricula in each of the engineering departments are the result of normal and gradual growth from the technical to the degree level. The degree program retains some of the practical experience features of the technical curricula.

It serves not only the needs of industry, but also the needs of those students who are occupationally motivated and essentially interested in materials, men, and processes. The majority of the present enrollment in the Engineering Division fall in this category.

Practical Experience

In order to provide practical experiences similar to those which will confront an engineering student at the time of employment, every engineering department has it own well-equipped laboratory in which a student is given an opportunity to work with the same type of machinery, tools, equip-

Machine Shop is one of many well-equipped shops in which students learn by doing.



ment, etc. that is used in the specific engineering field for which he is training. Laboratory instruction in every engineering department is based on the objective of providing group or individual projects similar to those which will be encountered by the students on the job. Such projects are not routine laboratory exercises, but are practical projects conducted along commercial lines. For example, in the Electrical Department a job such as the installation of a motor or the re-wiring of a shop or room is assigned to a group of students. They plan the job, make an estimate of the cost for labor and material, and prepare a bill of materials. When these estimates come in, the job is assigned to one student who acts as foreman and carries out the work through to completion. He is assigned student help from the laboratory classes, keeps all records of material and labor used, and upon completion makes the final report. Similar projects of various kinds are carried on by all departments in the Division throughout the campus.

Science and Humanities Division

THE SCIENCE and Humanities Division was organized as an administrative unit in September 1947. The division graduated its first majors in June 1949. They were from the mathematics and social science departments.

The number of graduates and the number of majors (222 including graduate students) is a poor indication of the size and function of the division. Seventy-three instructors or over 40 per cent of the faculty are in the division. This large number is necessary to carry out the service functions of the division which are (1) to provide for students in agriculture and engineering those courses closely related to their major work and (2) to offer courses in general education to all.

In addition to these service functions the division has two more functions: (1) to prepare students for vocations in the fields of health and physical education, mathematics, biological science, physical science, and social science; and (2) to assume responsibilitiy for preparing students for teaching.

Teacher Training

IN 1947 the California State Polytechnic College was approved to prepare teachers for the Special Secondary Credential in Vocational Agriculture, and Special Secondary Credential in Health and Physical Education, Mathematics, Physical Science, and Social Science.

All teacher training activities are coordinated under the committee on Teacher Education. Representation on this

committee is college-wide and includes the dean of the agricultural division, the dean of science and humanities division, department heads in the fields represented by the General Secondary majors and minors, the dean of instruction, dean of admissions, guidance and placement, the agricultural teacher trainer, and the chief of the Bureau of Agricultural Education. The purpose of this committee is to insure that teacher education remains a college-wide function and that the work in the various programs is integrated so that candidates receive balanced preparation for service in the public schools of California.

Agricultural Teacher Training

The program in Agricultural Education is designed to qualify applicants for the following teaching credentials: Special Secondary Credential in Vocational Agriculture, Special Secondary Limited Credential in Agriculture, and the General Secondary Credential with a teaching major in agriculture. The student group participating in this program can be divided into two categories: 1) undergraduate students majoring in particular fields in agriculture, 2) graduate students enrolled in fifth-year training, including directed teaching.

The responsibilities of the Teacher-Training Office with the first named group is that of individual counseling in guiding students to take the proper courses in agriculture and education which are required in addition to the undergraduate pattern of the major. More than 200 different students have been so counseled and advised during 1949.

The college cooperates with the State Bureau of Agricultural Education in conducting the graduate fifth-year training which is especially designed to prepare teachers of agriculture for the secondary schools. Beginning in 1949 these two agencies reinstated the full fifth-year training. During the years of World War II and up to July 1, 1949, the college has operated this training program on a minimum requirement basis. The longer training program is considered by authorities to be much more satisfactory in the proper and more adequate training of such teachers.

During the year 1949, 25 teachers of agriculture completed their training for secondary credentials and were placed in teaching.

During the 1950 calendar year, it appears that the college will recommend twenty-eight candidates for agricultural credentials, sixteen candidates for health and physical education, and eight candidates for General Secondary credentials in other fields. This is a total of fifty-two candidates.

The Master's Degree

ON OCTOBER 1, 1949 the California State Polytechnic College was approved to grant the degree of Master of Arts in Education with concentrations in agriculture, biological science, mathematics, health and physical education, physical science, and social science. Because the purpose in allowing state colleges to grant the Master's Degree was to improve the quality of the teaching in California public schools, there was little need to add courses in the research field nor to hire additional research specialists, but rather to work out a flexible plan by which superior teacher prospects and deserving teachers in the field could receive additional professional preparation pointed toward practical applications.

Major Program Developments

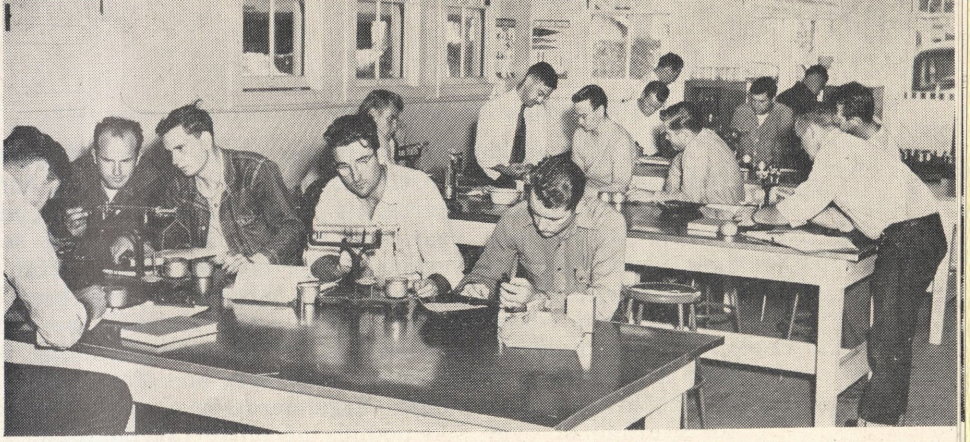
IN SUMMARIZING the work of the year at California State Polytechnic College, it is almost impossible to report current developments in all 26 major departments of the college. The next few pages of this report will be devoted to a sampling of their activities, particularly noting those which have changed or expanded their offerings. The full reports of all departments are to be printed separately. The reading of these departmental reports is recommended to all who are interested in fully understanding the work of the college.

Soil Science

Beginning with the fall quarter, 1949, a new major curriculum in Soil Science was offered. Five new courses were added to the previous offerings in this field to fill out the degree curriculum. Sixteen students enrolled as majors the first quarter. One additional instructor was added to the previous staff of two men. The applicability of soil science to many fields of endeavor made it practical to establish the curriculum on a two-, three-, and four-year basis. In addition to the majors, the department last year provided instruction to 775 students from other departments of the Agricultural Division.

Agricultural Engineering and Mechanics

Considerable work has been accomplished by this department in the development of the program which the Farm Machinery and Equipment Dealers have asked the college to carry out in recruiting and training men for that industry. Several new courses were added and one course



Students run laboratory experiments in the new major department of Soil Science.

was modified to include work in shop procedure and management. A circular was published and distributed by the industry calling attention to the college's offerings and the opportunities for young men in this field. Graduates who have gone into this industry have made excellent records and the farm equipment people are very enthusiastic about the practical type of training given. A two week short course for farm equipment salesmen was offered during July and received much favorable comment from the industry.

Architectural Engineering

The department moved into new quarters during the year. About 7,000 square feet of floor space was made available by adapting a building built and used by the NYA resident unit before the war. Facilities now include well-lighted drafting rooms, lecture rooms, and studios with appropriate reference library and catalog facilities. The college Welding Department fabricated 70 custom-designed drafting table and stool frames for the Architectural Engineering department. Considerable saving was realized by using the facilities of the Welding Department for this job.

Dairy Manufacturing

The newly equipped college creamery went into operation during the year in remodeled quarters formerly used as a kitchen for the campus NYA resident unit. Instruction can now be given more adequately in the manufacture of common dairy products such as butter, ice cream, and cheese. Lack of a college creamery has been a serious handicap to offering a major in dairy manufacturing since it was necessary to take dairy manufacturing classes to local creameries for factory practice. It is now expected that there will be more interest in this field and that enrollment will show a substantial increase.

Dairy Production

The 202 students now majoring in dairy production and manufacturing constitutes one of the largest enrollments in the dairy department of any college in the United States. During the year, the college Holstein herd set a new United States average of 639 pounds of butterfat per cow. This exceeded a record of a Wisconsin herd that had stood for 18 years. Several cows in the Holstein herd hold national individual records. The dairy cattle breeding herd of 150 purebred Guernseys, Holsteins, and Jerseys is one of the highest producing college herds in the country with an average of over 500 pounds of butterfat per cow. Last year the dairy department did a gross business of about $85,000, more than paying maintenance expenses at the same time serving a very valuable educational purpose.

Maintenance Engineering

Considerable progress was achieved by this department in its second year of operation. The department now has three full-time instructors and an enrollment of 26 majors. Practical laboratory classes are conducted in carpentry, painting, electrical work, plumbing, masonry, and mapping. The laboratory is the college campus, and the work done in these laboratory classes are jobs chosen from the regular maintenance work on the campus. Since there is a wide variety of maintenance work, the instructors are able to chose jobs that fit into the proper instructional sequence. Limiting enrollment increases the cost of instruction, but the maintenance work done by these 26 students more than off-sets the increased cost of instruction.

Mechanical Engineering

National recognition of the department was gained by installation during the year of a student branch of the national professional organization, Society of Automotive Engineers. The new, student-built hydraulics laboratory is now being used for instructional purposes and has proved to be a very worthwhile addition to the departmental facilities. Additions and improvements to the laboratory are under construction by senior students doing most of the design and construction work on a project basis.

Animal Husbandry

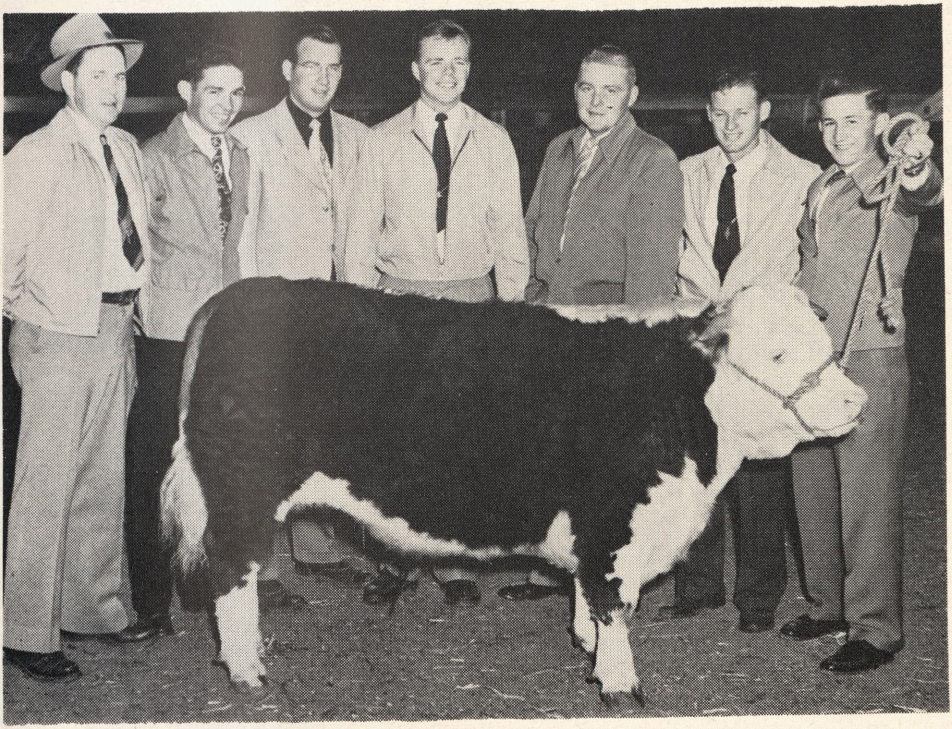
The 1949 fall quarter enrollment of 555 major students in this department constitutes one of the largest enrollments in animal husbandry of any college in the United States. With the increased enrollment, it was necessary to increase the available farm land of the college to provide space for students to conduct their practical work in livestock production. Negotiations were completed during the year for

the purchase of 1500 additional acres of farming and grazing land which streches northwest of the former campus boundary. The new land brings the total of campus and farm land owned by the college in San Luis Obispo to about 3,575 acres.

Students enrolled in this department carry supervized livestock programs to supplement their classroom and laboratory work. In 1949 students fed out and marketed about 250 head of beef cattle, 600 head of sheep, and 600 head of swine for a gross return of about $56,461. As their share of the profits, students received about $4000, and foundation received about $2000.

Students of this department entered open competition with their student-owned livestock against outstanding Western breeders at the Great Western Livestock show, the Grand National, the State Fair, and the Los Angeles County fair. Outstanding among the livestock exhibited and marketed at these shows by students was the Grand Champion steer, and the Grand Champion hog of the Great Western Livestock show. The steer, owned cooperatively by six students, sold for a new Pacific Coast record price of $8350. The 222 pound fat hog, owned by one student, sold for $2 per pound.

Cal Poly's livestock judging team shown with student-owned Grand Champion steer.



Student Welfare Service

DURING THE YEAR considerable progress was achieved in the coordination of student welfare activities under the administration of the Dean of Student Welfare. This office is charged with responsibility for housing supervision, health service, resident employment, post-graduation placement, coordination of student activities, liaison and administration of athletic contests, management of student store, loan funds, scholarships, campus post office, discipline, etc.

Housing

The housing problem is a particularly important one to the California State Polytechnic College. The college is definitely a state-wide institution with only 215 of the 2909 students enrolled at the San luis Obispo campus listed as residents of the county in which the college is located. Even this figure is not realistic since 29 per cent of the students are married, and most of these list San Luis Obispo as their legal residence, even though they came from out of the county to attend college.

During the past year the college provided housing for 1867 single men and on-campus housing for 313 married students. More than a 1000 of the single men were housed at Camp San Luis Obispo and 75 more resided at the Las Higueras Housing Project. Present facilities on the campus will accommodate 742 single men. There is need for permanent on-campus dormitory facilities to house from 1800-2000 men.

The college also provides housing on a rental basis for 24 faculty families and several single faculty members.

Student Labor

In addition to the opportunities for students to earn money through managerial and self-owned projects, California State Polytechnic College uses a maximum number of students to operate the college farm and handle grounds and campus maintenance on both the San Luis Obispo and San Dimas campuses.

The student payroll, both state and foundation, for the month of October, 1949, was selected as a typical example. During that month 543 students received $13,945 from the foundation for work done in connection with the operation of the cafeterias and dormitories on both campuses, health center, dairy, poultry plant, feed mill, etc.

For that same month, 546 students on both campuses received a total of $11,994 from the state for such typical tasks as ground and building maintenance, repair and alterations, security patrol, farm operation, student assistants, etc.

Scholarships

Fifteen donors of scholarships last year contributed a total of 47 individual awards. These varied from $100 to $500 per year. In the majority of cases, the scholarship committee selected the individuals and recommended them to the donors. However, in several cases the selection was made by the individual making the award.

Loan Fund

During the year a total of 537 individual short-time loans were made to students who found themselves in need of temporary financial assistance. A total of $11,012 was loaned from a fund amounting to $3,252, indicating the loan fund revolved about three and a half times during the year.

Student Activities

DESPITE CONSIDERABLE overcrowding of both classroom and dormitory facilities caused by a record breaking enrollment, student morale generally is very high. That this is true under adverse circumstances is due in part, we believe, to an active program of directed extra-curricular activities.

Problems of self-government are handled by the students through their Student Affairs Council, their Board of Athletic Control, Board of Publications Control, etc. Although students are given a free hand in the control of their own affairs, they are not encouraged to make last year's mistakes all over again. Instead, the college provides competent advisors for all campus organizations and thereby has maintained a close working relationship between student and administrative groups.

At a recent meeting of the California Collegiate Athletic Association, of which this college is a member, representatives of the other colleges paid tribute to the full-scale program of minor and intra-mural sports maintained by the California State Polytechnic College. In addition to fielding competitive varsity and freshmen teams in all the major sports, the college provides facilities and coaching staff and encourages competitive teams in boxing, wrestling, gymnastics, tennis, cross-country, swimming, and other minor sports.

The Music Department of the college provides opportunity for students to participate in a number of musical organizations. Included are a fifty-piece uniformed marching band, a 17-piece dance orchestra, a 60-voice men's glee club, and numerous quartets, and smaller instrumental groups.

Building Program

THE CAMPUS MASTER plan is now provisionally approved and reflects planning for permanent education and service functions for a student body of 3600. Proposed buildings are all functional in design, to be built at the lowest possible cost for permanent construction.

The master plan calls for the replacement of many old wooden structures, which presently constitute a fire hazard and are inadequate for education functions. It also calls for replacement of many poorly lighted, heated and ventilated war surplus buildings now being used as classrooms.

By January 1, 1950, working drawings will be in process for the proposed new science building and the agricultural engineering building. Functional studies are now being made for the following additional new buildings: agriculture classroom, power house, mechanical engineering laboratory, home economics classroom, slaughter house and meat laboratory, steer feeding unit and hay storage shed, industrial arts building, and two dormitory units to house 500 men each.

During the year new dressing rooms, showers, toilets and limited office facilities were added to the athletic department facilities. Additions were made to the press box and radio broadcasting booth at the football stadium. A new athletic field storage house with space for ground equipment was constructed adjacent to the practice field.

A major remodeling program was completed at the Camp San Luis Obispo housing unit. Ward-type facilities were converted to double rooms, all outside surfaces were painted, and one-half of the inside surfaces were repainted.

Dexter Memorial Library

THE WALTER F. DEXTER Memorial Library was occupied during the last part of August, and the installation of all equipment was completed during October, 1949. The $700,000 structure has two large reading rooms, with seating accommodations for 400, stack room space for 120,000 books, audio-visual rooms, classrooms, seminar rooms, conference rooms, and library staff work rooms.

The staff now consists of ten professional librarians and six clerical assistants.

The book budget for the fiscal year 1949-50 was raised to $20,000. During the calendar year of 1949, 4938 books were added to the library collection. In 1949 circulation statistics were as follows:

Books loaned to students	18,200
Books loaned to faculty	4,275
Reserve books	20,072

The new $700,000 Walter Dexter Memorial Library opened officially in September.

This is a considerable increase over the 1948 circulation and present circulation indicates that use of the library has at least tripled in the three months since occupying the new building.

The Audio Visual Department of the Library has shown 1286 motion picture films to a total of 68,653. Six-hundred-and-forty-four films were rented or borrowed and the department's own collection of films now numbers 335. These figures do not include any of the film strips or slides handled by this department.

Counseling Center

BECAUSE Cal Poly stresses the importance of training for an occupation, all students are offered vocational guidance. On the average, 95 students make appointments in the Counseling Center for this service each month, a total of approximately 950 students per year. This does not include a large number of students who come in for counseling without appointments.

During registration week of each quarter, entrance placement tests are given to all new students. During the past school year roughly 6,800 entrance placement examinations were given to approximately 1400 students. A large number of new students request and receive an interpretation of their entrance test results. A new procedure introduced this year was the interviewing of all new students by a select group of counselors.

Approximately 300 students requested a change in their major curricula or in their level of instruction and received counseling during the process.

A closer working relationship between the counseling Center and the Departmental Advisors is being brought about by a conference during which entrance placement test results for all new students are interpreted and discussed. During the past year representatives of the Counseling Center have met with the advisors of all of the departments.

Voorhis Unit—San Dimas

THE SOUTHERN branch of the college located at San Dimas has classrooms, laboratories, shops, equipment, citrus groves, deciduous orchards, truck crop land, greenhouses, glasshouses, and other necessary facilities. Here the college provides the first three years of work in the degree curricula and all of the instruction in the two and three year program in Agricultural Inspection, Citrus Fruit Production, Ornamental Horticulture and General Crop Production. Dormitories, cafeteria, student store, swimming pool, athletic field, non-sectarian chapel, and other facilities make the Voorhis campus a compact unit.

Agricultural Inspection

Facilities are provided at the Voorhis Unit for teaching men in the common practices and skills and the essential techniques in agricultural inspection. The curricula were established after each course and combination had received the approval of the State Department of Agriculture for its effectiveness in training inspectors. Graduation requirements include actual work in commercial packing houses and at inspection points. Field trips are made to nearby shipping points, picking, packing, and propagation districts, in addition to the field work on campus.

Citrus Fruit Production

The Voorhis campus has facilities for teaching fruit production on a practical basis. The college-owned grove and orchard are operated primarily by students as part of their instructional program. Various irrigation methods are employed on the campus in connection with fruit production. Farm equipment, including tractors, tillage implements, spray rigs, and fumigation equipment, is owned, maintained and operated on the campus farm. A small nursery of citrus, avocado, and deciduous plantings is operated to give instruction in the problems of propagation and raising of trees.

Ornamental Horticulture

The Ornamental Horticulture facilities on the Voorhis campus consist of a metal stripped lath house, two large commercial size glass houses, propagation shed and frames, a subtropical canyon, a two-acre nursery, and one acre of cut flowers. Extensive landscaped portions of the campus include, in addition to the buildings, seven acres of lawn and three miles of roadway. Estates, parks, golf courses, nurseries, and flower plantings in the vicinity serve as a natural laboratory for field experience and practice. The new Kellogg Unit also provides practical learning opportunities in estate management and care, as well as practice in cutting, grafting, seedage and propagation.

General Crops Production

Through the use of the limited crops facilities on the Voorhis campus and the extensive lands of the Kellogg unit, students are prepared for specific enterprise production in vegetable, field, and truck crops. Both campuses are located near the Los Angeles fruit and vegetable market, which is the largest in the world. Some 100 acres are under student cultivation as part of their instructional program.

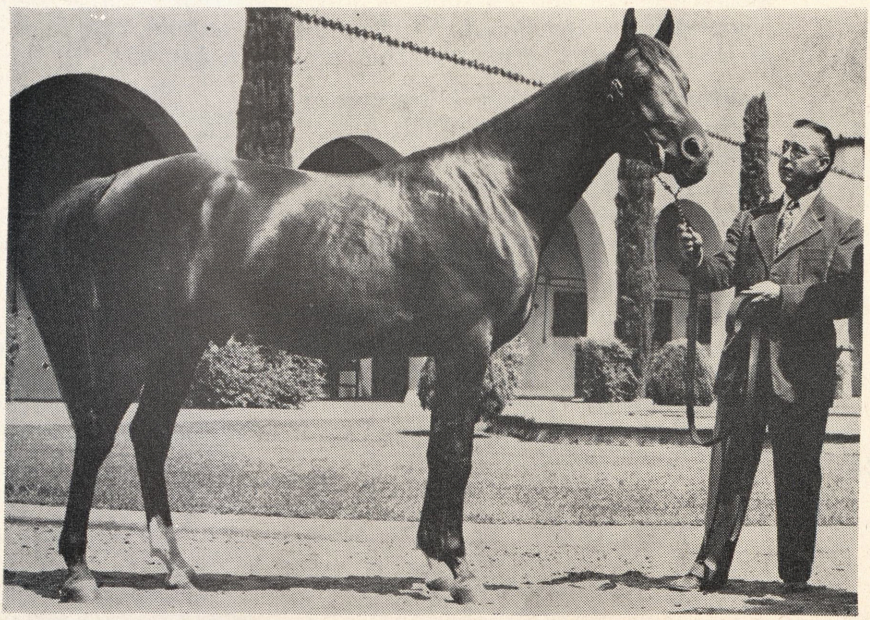
Kellogg Arabian Horse Ranch

NEGOTIATIONS WERE completed late in 1949 for the acquisition as a gift of the four million dollar, 812-acre Kellogg Arabian Horse Ranch near Pomona. The property along with some 50 blooded Arabian brood mares and stallions was donated to the college by the Kellogg Foundation. The Kellogg Ranch lies approximately one-mile from the edge of the Voorhis Unit campus, as the crow flies, and is one-mile from the city of Pomona.

The property will be utilized for a sound, college-level educational program based upon the same philosophy which guides the educational offerings at the San Luis Obispo and Voorhis Unit campuses.

Months of intensive study and research will have to be completed before future plans for the Kellogg Ranch can be announced. As part of the agreement with the Kellogg Foundation, the college will continue the breeding of Arabian horses as part of the regular animal husbandry program. The college has since 1941 operated a Thoroughbred breeding program on the San Luis Obispo campus in cooperation with the California Thoroughbred Breeders' Association.

The famous Kellogg Arabian Horse Ranch was given to the college in 1949.



Special Services

EACH YEAR THE college offers its facilities as a public service for the use of outside groups for short courses, in-service training, conferences, conventions, workshops, and other meetings.

California Agricultural Teachers Association

The college annually is host to the California Agricultural Teachers Association. The annual conference on the campus June 27 to July 2 drew an attendance of 440 teachers.

A five day work shop from June 20 to 24, 1949, for members of the same group, was provided by the college in cooperation with the State Bureau of Agricultural Education. Over 200 high school and junior college instructors in agriculture and instructors in the Institutional On Farm Training for Veterans were in attendance.

Future Farmers of America

More than 400 FFA members attended the annual Statewide FFA judging contests held in early May of 1949. More than 450 members attended the annual Convention of the Future Farmers Chapters held on the campus September 26-28, 1949.

Health and Physical Education Workshop

The annual California Workshop sponsored by the California Association of Health and Physical Education and Recreation was held on the campus during the summer of 1949, and is scheduled to return here for the summer of 1950. Certificates of completion were awarded to 203 persons who attended the workshop.

California State Veterinary Medical Association

The annual mid-winter conference of this association brought more than 300 veterinarians and animal health authorities to the campus in January, 1949. Plans were completed in December for the eighth annual conference of this group to be held on the campus in January, 1950.

California Association Nurserymen

During May, 1949, the college and the department of Ornamental Horticulture were hosts to more than 200 members of the association for a three-day short course. Speakers from the industry and the college acted as instructors. In October, the Horticulture department was host to 40 members of the Tri-County chapter of the association.

Farm Equipment Dealers Short Course

The California Farm Equipment Dealers' Association in cooperation with Agricultural Engineering and Mechanics department of the college conducted the first two-week short course for farm equipment dealers in July and August.

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