

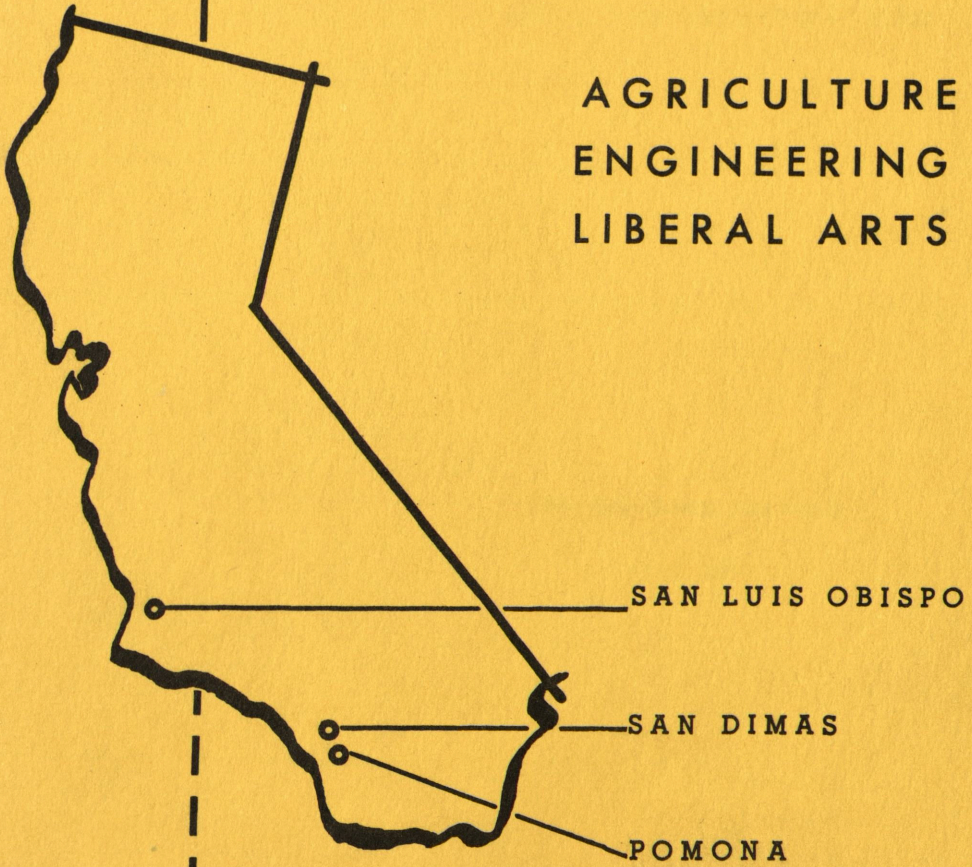
Annual Report - Calif. State Poly College SLO 1954-55 Archives

1954-55 ANNUAL REPORT

CALIFORNIA STATE POLYTECHNIC COLLEGE

One of California's Ten State Colleges,
Administered by the Board of Education
And the State Department of Education

AGRICULTURE
ENGINEERING
LIBERAL ARTS



Archives

Annual Report 1954-55

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San Luis Obispo, California

April, 1955

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FOREWORD

The administration of a college in any year is a dual operation. Current problems of the year always require concentrated effort. At the same time, the course for the future of the college must be charted. The year 1954-55 for which the annual report is submitted herewith has been marked by this two-fold problem to an unusual degree.

The current problems were greater because of the increase in enrollment with which the academic year was begun. An increase of 21.5 per cent in the number of students on the San Luis Obispo campus heralded for California State Polytechnic College the beginning of the growing demand for college education in California which the experts have predicted.

With this increase came problems which demanded immediate solution. Additional qualified instructors had to be found on short notice. More facilities for housing students were in immediate demand. Means of stretching instructional facilities to accommodate the sudden increase in numbers taxed the imagination of the administrative staff.

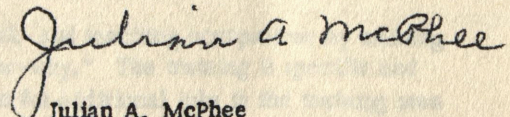
This same increase in the number of students, a harbinger of still greater numbers in following years, made it evident that planning already started must move forward at accelerated tempo to make ready for operations on a much larger scale.

During the year, Cal Poly's administrative staff has sought answers to the problems of increased facilities, of larger and stronger faculty, and of expanded curricular offerings to meet the needs of the greater number of students in the period just ahead. This planning has made even greater demands upon our time than have the immediate problems of current operation.

Particularly in connection with the Kellogg-Voorhis campus, future developments have required intensive planning. The opening of bids this spring for the construction of the first academic building on the Kellogg campus marks the beginning of a new State higher educational facility which in a very few years will serve a student body larger than that now on the San Luis Obispo campus. The planning of the physical phases of this institution has required long labor which has been exceeded, however, by the analysis and research necessary to formulate the curricular offerings required to meet the educational needs of the area which the Kellogg campus will serve.

In this constructive effort, we have had the understanding help of the State Board of Education, the State Department of Education, members of the Legislature and other State officials. Only such much appreciated assistance makes possible the successful completion of our task.

Respectfully submitted,



Julian A. McPhee
President

FUNCTIONS AND OBJECTIVES

The special function of the College is occupationally centered education which stresses preparation to meet actual job requirements. The special function is the same at each of the College's three campuses. The original and main campus, now 2,850 acres in extent, is at San Luis Obispo. The college, which is one of California's ten state colleges, has a branch unit in eastern Los Angeles County operating on two campuses, the 157-acre Voorhis Campus at San Dimas, and the 800-acre Kellogg Campus at Pomona.

"Cal Poly," as the college is informally known, was established by the state legislature in 1901 as a state-wide rather than a regional institution. It serves the needs of students from all 58 of California's counties with specialized occupational offerings in its three divisions--agriculture, engineering, and liberal arts--leading to the degree of Bachelor of Science with a major in any of 28 subject fields. The college is also authorized to grant the Master of Arts degree and to recommend candidates for teaching credentials in six teaching fields. The college is fully accredited by the Northwest Association of Secondary and Higher Schools and the Western College Association.

Legislative Purpose in Founding the College

The legislative act which created Cal Poly defined its purpose in these words:

". . . the purpose of this school is to furnish to young people of both sexes mental and manual training in the arts and sciences, including agriculture, mechanics, engineering, business methods, domestic economy, and such other branches as will fit the students for the nonprofessional walks of life."

The establishing act further stated that

"This act shall be liberally construed, to the end that the school established hereby may at all times contribute to the industrial welfare of the State of California."¹

Four Major Objectives

Pursuant to this purpose, the college through its more than half a century of service has sought the realization of four objectives:

1. To prepare students for specific occupations
2. To develop in students the attitudes that will enable them to understand the relationship and importance of the individual and his work to the economic and social responsibilities of citizenship
3. To contribute to the general welfare of the state by providing a continuous program of educational service to agriculture, industry, and education.
4. To demonstrate the effectiveness of the Cal Poly philosophy and pattern of education

Cal Poly prepares its students for managerial, technical, and teaching occupations by training the hands as well as the head, by adding "know-how" to "know-why." The training is specific and practical. Each year of study is planned to prepare the student for additional jobs in the training area of his major department. Requirements of the job, rather than those of professional graduate schools, determine the educational experiences to be offered to each student. Practical laboratory work under job conditions is emphasized. Students learn by doing. They may also earn while learning through the project system of instruction in which Cal Poly is a pioneer.

¹Chapter 101, Statutes of 1901.

"Upside-down" Curriculum

To make maximum use of the student's interest in his field of specialization as an incentive to study, and also to ensure job preparation for the student who cannot spend four years at college, work in the major department is begun in the freshman year. The course of study, therefore, is "upside-down" in comparison with the conventional college program. The college seeks to make the student aware, through early contact with the practical phases of his major subject, of the value of him of courses in the sciences and the advantage of applying himself diligently to the study of these and other basic subjects. The general education courses which supplement the occupational instruction are offered in each of the four college years.

Cal Poly accepts responsibility not only for the occupational education of its students but also for helping them to obtain the best possible opportunities for careers. Through follow-up visits to the graduate and his employer, the college also provides on-the-job assistance to the Cal Poly alumnus during his first years in the field.

HISTORY

Under the name of California Polytechnic School, Cal Poly opened its doors to students for the first time on October 1, 1903. On the opening day, the main building was not completed and the debris left by the builders had not been cleared from the dormitory. Nevertheless, Director and Mrs. Leroy Anderson moved into the dormitory and called together the three faculty members and 15 students to meet in the unfinished parlor of the building.

This beginning, humble and small though it was, had been attained only after long effort. The first bill to establish a polytechnic school at San Luis Obispo had been introduced in the California State Legislature in 1895 by Senator S. C. Smith of Bakersfield, but the Legislature adjourned without taking action on the bill. In 1897 another bill by Senator Smith was approved by the Legislature, but was pocket-vetted by Governor James H. Budd. In January, 1901, Senator Smith again introduced his bill in the Senate, and it was also introduced in the Assembly by Warren M. John of San Luis Obispo. The Senate bill was passed by both houses and was signed by Governor Henry T. Gage. The school was governed until 1921 by a local board of trustees appointed by the governor. In 1921, control of this institution, as well as of the state schools for the deaf and blind and the state teachers colleges, was transferred to the State Board of Education.

No level of instruction was specified in the legislative act which created the California Polytechnic School. It opened as a state vocational high school in keeping with the educational concepts of the time. In 1927, because district high schools were providing vocational education along agricultural and industrial lines at the same level as the Cal Poly program, it was found necessary and desirable to raise the level of instruction at Cal Poly to that of a junior college. In 1929 the enrollment of new students was limited to young men. In 1933 the institution was changed from a junior college to a two-year technical college offering terminal instruction in agricultural and industrial fields. In 1936 a third year of terminal instruction was added, and in 1940 a fourth year, and the college was authorized by the State Board of Education to grant the Bachelor of Science degree. The first baccalaureate exercises were held in 1942.

Kellogg-Voorhis Unit Started

The Voorhis Unit of Cal Poly came into being in 1938, when a two-million dollar school and farm, completely equipped, were deeded to the college by the owners, Charles B. Voorhis of Pasadena and his son, former congressman Jerry Voorhis, for the express purpose of providing an expanded program of collegiate occupational training.

The Cal Poly approach to collegiate occupational training was again recognized by a substantial gift in November, 1949, when the W. K. Kellogg Foundation donated to the college its 800-acre Arabian horse ranch near Pomona. This property, valued at \$4,000,000, was deeded to the State of California to be used for occupational training consistent with the philosophy and educational objectives of California State Polytechnic College. The Kellogg ranch and the Voorhis campus are now operated as the "Kellogg-Voorhis Unit."

PROGRAM OF THE COLLEGE

The college applies its practical methods and philosophy of higher education to all its instruction, which includes, on its main campus, the divisions of agriculture, engineering, and liberal arts.

The Division of Agriculture offers majors in agricultural engineering; animal husbandry; dairy husbandry and manufacturing; field, fruit, and truck crops; ornamental horticulture; poultry husbandry; and soil science. Majors offered by the Division of Engineering are in aeronautical engineering, air conditioning and refrigeration engineering, architectural engineering, electrical engineering, electronic and radio engineering, mechanical engineering, and printing. Supporting courses in engineering include machine shop and welding.

Majors in the Division of Liberal Arts are offered in agricultural journalism, biological science, health and physical education, mathematics, physical science, and social science. Supporting courses are offered by departments of English and public speaking, education and psychology, music, and military science and tactics.

INSTRUCTIONAL PHILOSOPHY AND METHODS

Throughout its occupational education, Cal Poly uses the "upside-down" curriculum in which the student begins work in his major department in his freshman year and is given ample instruction in the practical phases of his field of specialization during the first two years of his course.

By enabling the student to get right at the primary thing for which he came to college, the "upside-down" plan keeps him from feeling thwarted by numerous hurdles which at first seem to him unrelated to his interests. Another important advantage of the unconventional curriculum is that it enables the student to earn a living, using the skills he has learned, at whatever point he may be forced to leave school.

Spreading of general education courses throughout the four college years instead of grouping them in the first two also is made possible by the "upside-down" plan. Thus students take the more advanced general courses in the later years when they are better prepared to appreciate what they are studying.

To make its occupational education practical and effective, Cal Poly has developed the "learn by doing" method of instruction. Students practice in the laboratories and shops and on the college ranch the techniques they have studied in the classroom. When, after college, the students start work on their jobs, they have the confidence that comes from experience and know-how.

THE PROJECT SYSTEM

Closely associated with "learn by doing" instruction is the project method of teaching in which Cal Poly has pioneered. 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 and equipment on an equally commercial basis. This combination of the very practical "learn by doing" and

"earn while you learn" philosophies not only enables 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 to the end that the projects will be more profitable.

In each major department students are encouraged by their instructors to take part in project activities, either individually or as a group. A revolving fund for projects is available from which students may borrow money for an investment in livestock, ornamental plants, seeds, feed, machinery to be rebuilt, etc. No cosigner is required for a student who borrows from the project fund, and the fund is so operated as to guarantee the individual student against loss from project operation.

The most popular agricultural projects are those of fattening livestock, raising beef, sheep, swine, or dairy cattle; conducting individual dairy projects or working as members of a group in management of a dairy herd; operating a poultry unit as a project; growing ornamental or field and truck crops.

The field of engineering also makes use of the project method, as is illustrated by the radio-repair service project operated in the Electronics and Radio Engineering Department and by the student-operated program of repair and maintenance of campus air-conditioning and refrigeration equipment.

ENROLLMENT -- FALL QUARTER, 1954

A total of 2745 full-time students registered at the San Luis Obispo campus of the College for the fall quarter, 1954, while a total of 384 registered at the Kellogg-Voorhis campus during the same period -- a total for both campuses of 3129. Of those at San Luis Obispo, 1133 were in agriculture, 1339 in engineering and 215 in liberal arts. Graduate students numbered 58.

The locations of the homes from which the students come indicate clearly the more-than-regional character of Cal Poly's service area. Of the students on the San Luis Obispo campus, 85.4 per cent come from 54 California counties, 8.3 per cent from 42 other states, and 6.3 per cent from 37 territories and foreign countries. At the Kellogg-Voorhis unit, 92 per cent of the students come from 27 California counties, 3.9 per cent from other states and 4.1 per cent from U. S. territories and foreign countries.

The current enrollment of 2,745 individual students on the San Luis Obispo campus is expected to increase to 3,200 by 1955-56. Steady growth to an enrollment of 3600 students in 1959-60 is forecast. At the Kellogg-Voorhis unit, enrollment is expected to increase at once to 750 when the College moves into its new buildings on the Kellogg campus in 1956-57.

PLACE OF LEGAL RESIDENCE (SAN LUIS OBISPO)

7

COUNTY	OCT. 1 1948	OCT. 1 1949	NOV. 10 1950	OCT. 30 1951	NOV. 18 1952	NOV. 16 1953	NOV. 23 1954
ALAMEDA	85	108	106	93	87	82	113
ALPINE	0	0	0	0	0	0	0
AMADOR	1	2	0	0	1	1	2
BUTTE	6	10	10	8	7	14	14
CALAVERAS	0	0	1	2	5	2	2
COLUSA	2	3	12	4	5	4	3
CONTRA COSTA	30	37	45	36	36	31	38
DEL NORTE	1	1	1	0	0	0	0
EL DORADO	14	14	12	5	2	3	8
FRESNO	73	71	50	43	35	40	39
GLENN	10	16	14	14	10	16	15
HUMBOLDT	17	14	8	11	12	12	17
IMPERIAL	16	15	17	26	40	22	20
INYO	3	3	7	7	4	1	3
KERN	50	66	51	47	67	73	77
KINGS	17	15	17	13	15	20	20
LAKE	3	2	5	2	4	1	3
LASSEN	10	11	6	4	3	5	4
LOS ANGELES	588	651	596	481	454	429	531
MADERA	3	5	4	5	4	11	7
MARIN	11	17	14	12	15	10	14
MARIPOSA	1	2	1	2	0	3	3
MENDOCINO	7	6	6	8	17	10	17
MERCED	41	26	31	25	15	12	14
MODOC	4	6	5	3	1	1	2
MONO	0	0	0	0	0	0	0
MONTEREY	52	50	57	38	37	42	60
NAPA	7	10	5	2	9	8	15
NEVADA	5	6	5	2	3	5	4
ORANGE	78	93	84	51	50	67	77
PLACER	7	2	5	6	5	7	12
PLUMAS	0	1	0	0	0	0	1
RIVERSIDE	81	64	68	56	49	49	65
SACRAMENTO	38	42	46	47	54	54	66
SAN BENITO	11	10	7	3	4	7	6
SAN BERNARDINO	54	65	64	51	46	45	65
SANTA CLARA	53	73	79	55	55	58	64
SAN DIEGO	125	114	95	89	80	93	105
SAN FRANCISCO	53	66	68	57	48	45	43
SAN JOAQUIN	27	33	39	26	27	18	33
SAN LUIS OBISPO	225	215	199	186	185	202	264
SAN MATEO	37	42	43	35	53	48	62
SANTA BARBARA	89	108	120	91	116	104	120
SANTA CRUZ	32	31	34	34	25	24	27
SHASTA	5	5	5	8	8	6	7
SIERRA	2	2	1	2	0	0	0
SISKIYOU	3	7	6	3	8	7	8
SOLANO	11	11	12	7	11	12	16
STANISLAUS	43	63	46	32	36	27	35
SONOMA	25	38	31	26	31	30	34
SUTTER	11	12	9	6	7	6	4
TEHAMA	4	6	8	3	5	3	4
TRINITY	0	1	2	1	1	2	2
TUOLUMNE	1	1	3	4	3	3	5
TULARE	56	68	67	53	42	55	61
VENTURA	46	50	47	36	38	41	44
YOLO	2	4	4	4	2	7	7
YUBA	11	5	6	3	2	5	5
OTHER STATES	301	390	307	219	206	197	228
FOREIGN COUNTRIES	31	54	48	60	123	133	172
U. S. TERRITORIES	34	59	76	52	49	46	58
	<u>2553</u>	<u>2902</u>	<u>2715</u>	<u>2199</u>	<u>2257</u>	<u>2259</u>	<u>2745</u>

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 1948 ACTUAL ENROLLMENT WAS 2575, IN 1949 IT WAS 2909, IN 1950 IT WAS 2767, IN 1951 IT WAS 2213, IN 1952 IT WAS 2259. HAD THE BALANCE BEEN INCLUDED IN THIS STUDY, SOME ADDITIONAL COUNTIES WOULD BE REPRESENTED.

Summary of Enrollment Distribution Within the State

Following the trend which began in 1903 and has continued ever since, Cal Poly's enrollment is wide-spread throughout the state--in contrast to that of the regional state colleges. At the San Luis Obispo Campus 54 of the 58 counties in the state were represented in the fall of 1954. At the Kellogg-Voorhis Campus fall quarter, 1954, enrollment distribution shows students from 32 of California's counties.

Enrollment by Classes and Curriculum Level
(San Luis Obispo Campus Only)

<u>Agricultural</u>	<u>Technical</u>	<u>Degree</u>
Freshmen	103	321
Sophomores	49	213
Juniors	0	221
Seniors	0	226
Fifth Year	0	0
Graduate	0	0
	152	981
	Total Agriculture	1133

<u>Engineering and Industrial</u>	<u>Technical</u>	<u>Degree</u>
Freshmen	3	550
Sophomores	0	351
Juniors	0	268
Seniors	0	167
Fifth Year	0	0
	3	1336
	Total Engineering	1339

<u>Liberal Arts</u>	
Freshmen	66
Sophomores	44
Juniors	49
Seniors	56
Fifth Year	0
	215

<u>Graduates</u>		
Agricultural Education	40	
Education	18	
	58	
		ALL TOTAL 2745

Enrollment of Veteran and Non-Veteran Students

	<u>Veterans</u>	<u>Non-Veterans</u>	<u>Total</u>
Freshmen	294	749	1043
Sophomores	236	421	657
Juniors	180	358	538
Seniors	129	320	449
Fifth Year	0	0	0
Graduates	28	30	58
	<u>867</u>	<u>1878</u>	<u>2745</u>

Enrollment of Married Students

Public Law 346	54	
Public Law 16 and 894	12	
Public Law 550	357	
State Veterans	<u>48</u>	
Married Veterans	471	Approximately 54.3% of veterans enrollment
Married Non-Veterans	<u>270</u>	
Total Married Students	741	Approximately 27.0% of total enrollment

Comparative Enrollments by Years (San Luis Obispo)

<u>5-yr. Intervals</u>	<u>1-Yr. Intervals</u>	<u>1-Yr. Intervals</u>
1903-04---- 20	1938-39---- 651	1946-47---- 1571
1908-09---- 151	1939-40---- 780	1947-48---- 2229
1913-14---- 194	1940-41---- 739	1948-49---- 2575
1918-19---- 110	1941-42---- 711	1949-50---- 2909
1923-24---- 114	1942-43---- 570	1950-51---- 2767
1928-29---- 399	1943-44---- 80	1951-52---- 2213
1933-34---- 239	1944-45---- 128	1952-53---- 2259
1938-39---- 651	1945-46---- 819	1953-54---- 2259
		1954-55---- 2745

Comparative Enrollments by Years (Kellogg-Voorhis Campus)

<u>5-Yr. Intervals</u>	<u>1-Yr. Intervals</u>	<u>1-Yr. Intervals</u>
1938-39---- 113	1938-39---- 113	1946-47---- 280
1943-44---- Closed W. War II	1939-40---- 137	1947-48---- 393
1948-49---- 411	1940-41---- 136	1948-49---- 411
1953-54---- 423	1941-42---- 117	1949-50---- 438
	1942-43---- 69	1950-51---- 405
	1943-44---- Closed W. War II	1951-52---- 331
	1944-45---- Closed W. War II	1952-53---- 413
	1945-46---- Closed W. War II	1953-54---- 423
		1954-55---- 384

KELLOGG-VOORHIS CAMPUS ENROLLMENTFall Quarter, 1954Enrollment by Departments

Animal Husbandry	98
General Crops Production	71
Fruit Production	31
Ornamental Horticulture	75
Horticultural Services & Inspection	78
Soil Science	<u>31</u>

Total	384
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Enrollment by Classes and Curriculum Level

<u>Agricultural</u>	<u>Degree</u>
Freshmen	138
Sophomores	141
Juniors	67
Seniors	<u>38</u>
Total Agriculture	384

Enrollment of Veteran and Non-Veteran Students

	<u>Veteran</u>	<u>Non-Veteran</u>	<u>Total</u>
Freshmen	30	108	138
Sophomores	31	110	141
Juniors	29	38	67
Seniors	<u>20</u>	<u>18</u>	<u>38</u>
	110	274	384

Enrollment of Married Students

Public Law 346	4
Public Law 16 and 894	8
Public Law 550	48
State Veterans	<u>5</u>

Married Veterans	65	Approximately 59% of veterans enrollment
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Married Non-Veterans	<u>45</u>
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Total Married Students	110	Approximately 28.6% of total enrollment
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PLACE OF LEGAL RESIDENCE (Kellogg-Voorhis)

<u>COUNTY</u>	<u>Nov. 10</u> <u>1950</u>	<u>Oct. 30</u> <u>1951</u>	<u>Nov. 18</u> <u>1952</u>	<u>Nov. 9</u> <u>1953</u>	<u>1954</u>
Alameda	1	0	5	2	2
Contra Costa	1	0	1	0	1
El Dorado	0	0	1	1	0
Fresno	2	2	0	2	1
Imperial	1	5	1	4	9
Inyo	0	0	0	0	2
Kern	3	2	2	2	5
Los Angeles	239	185	226	234	179
Madera	0	0	0	0	1
Marin	0	0	1	1	1
Mendocino	1	2	1	1	1
Merced	1	0	0	0	1
Modoc	0	1	0	0	0
Monterey	0	0	1	1	0
Napa	1	1	2	2	3
Orange	31	31	34	35	30
Placer	0	1	1	1	0
Riverside	11	15	35	29	25
Sacramento	0	0	0	0	2
San Bernardino	33	21	36	40	33
San Diego	13	9	16	19	23
San Francisco	0	4	1	1	3
San Joaquin	0	0	0	0	2
San Luis Obispo	1	0	0	0	0
San Mateo	1	0	1	1	3
Santa Barbara	9	8	9	8	5
Santa Clara	2	2	1	1	0
Santa Cruz	1	0	0	1	2
Solano	0	0	1	1	1
Sonoma	1	0	0	0	0
Stanislaus	0	0	0	1	1
Sutter	0	0	1	1	0
Tehama	1	0	0	0	0
Tulare	5	3	1	0	2
Ventura	21	14	6	5	13
Yolo	0	0	1	0	0
Yuba	0	0	0	0	2
Other States	16	13	10	12	15
U. S. Territories	2	1	6	6	6
Foreign Countries	3	9	8	11	10
Total	401*	329*	409*	423	384

*Not all students registered at the Voorhis campus were included in this survey as some cards were not available at the time the study was made. In 1950 the actual enrollment was 405, in 1951 it was 331, and in 1952 it was 413.

DEGREES AND CERTIFICATES
Number of Degrees and Certificates Granted
(June, 1954--both campuses)

<u>Division and Department</u>	<u>Bachelor of Science</u>	<u>Vocational</u>	<u>Technical</u>	<u>Master of Arts in Education</u>
Agriculture				
Agriculture Engineering	18	1	1	0
Agricultural Inspection	21	0	0	0
Animal Husbandry	57	3	11	0
Dairy Manufacturing	3	1	0	0
Dairy Husbandry	16	1	1	0
Ornamental Horticulture	26	0	0	0
Poultry Husbandry	8	0	1	0
Crop Production, General	13	0	0	0
Citrus Fruit Production	8	0	0	0
Deciduous Fruit Production	5	0	1	0
Soil Science	13	0	0	0
Truck Crops	0	0	0	0
Field Crops	11	2	0	0
Engineering				
Aeronautical Engineering	17	0	0	0
Air Conditioning & Refrigeration	5	0	1	0
Mechanical Engineering	34	0	2	0
Electrical Engineering	11	0	1	0
Electronics & Radio Engineering	13	1	0	0
Printing	6	0	0	0
Architectural Engineering	24	0	2	0
Maintenance Engineering	0	0	0	0
Liberal Arts				
Biological Science	4	0	0	1
Health and Physical Education	11	0	0	6
Mathematics	1	0	0	0
Social Science	4	0	0	5
Physical Science	2	0	0	0
Education Agriculture	0	0	0	4
Agricultural Journalism	2	0	0	0
	<u>333</u>	<u>9</u>	<u>21</u>	<u>16</u>

Grand Total Graduates, June 1954 -- 379

FACULTY

Combined Campuses

228 persons are on the teaching staff at the San Luis Obispo and San Dimas (Kellogg-Voorhis) campuses. The following tables indicate the distribution of the teaching staff according to degrees, as of March 28, 1955.

Degrees:	<u>San Luis Obispo</u>		<u>Kellogg-Voorhis</u>	
	Doctorates	37	Doctorates	5
Masters	84	Masters	19	
Bachelors	64	Bachelors	12	
None	9	None	0	
	<u>Total</u>	<u>194</u>	<u>Total</u>	<u>36</u>

MAJOR CONSTRUCTION PROGRAM

This report on the current status of the college building program embraces both the San Luis Obispo and Kellogg-Voorhis campuses. At San Luis Obispo during the past year, work was begun on almost three and a quarter million dollars worth of construction. At the Kellogg campus, construction will start soon on a million dollar Science and Classroom Building.

In the following paragraphs is a more specific explanation of the building program status at San Luis Obispo and Kellogg-Voorhis.

San Luis Obispo

Science & Classroom Building. This 90,000 sq. ft., one-story, reinforced concrete building standing where the old dairy unit once stood, is under construction and scheduled to be completed sometime this coming fall. It will serve biological and physical sciences, soils and, on a temporary basis, certain other subjects. It contains 39 classrooms and provides office space for 42 faculty members.

Physical Education Addition. The bids for this work were opened on January 19, 1955, and the following week the contractor was starting the job. This project consists of two physical education activity rooms, a locker room to serve approximately 450 people, showers, storage rooms and a double office. This addition is south of the gymnasium floor and east of the dressing rooms and natatorium. The facility is scheduled to be ready for use this September 1.

Agricultural Engineering Building. Bids for this building were opened at the Los Angeles office of the Division of Architecture on Wednesday, February 19, 1955. This project consists of two buildings ---one containing 7 shops and the other 6 offices and 3 classrooms. This unit is scheduled for completion by January 1, 1956. Included in the project is the construction of a portion of the new Perimeter Road which is a part of the campus master plan.

Ornamental Horticulture Unit. Working drawings are now practically complete for this new unit to be located on a 10-acre site along what will eventually be the main campus entrance. The project is scheduled for completion during the coming summer.

Engineering Building. The construction of this building is provided for in the 1955-56 Governor's Budget which we are expecting will be approved by the Legislature. Working drawings for this building are now being made with funds in the current year's budget. The construction of this building, containing 17 electronics, electrical, and strength of materials shops, and 5 lecture rooms, will alter the countenance of the campus as much as any other building so far. First, we will see the aero engines moved to an addition of equal size at the aero hangar. Second, the fire house will be moved to the future Corporation Yard area adjacent to the southwestern edge of the Thoroughbred Unit, and one of the three lower cottages will be moved with the fire house to accommodate the student firemen. Third, the second of the cottages will be moved to the Cheda Unit to furnish housing for dairy students that have dairy projects there and the third of the cottages will be moved to a site just north of the Horse & Beef Pavilion to furnish housing for animal husbandry students. Fourth, one of the metal CU units (20' x 48') and the student repair garage will be relocated on the north side of the north perimeter street encircling the Mountain Dormitories to provide facilities for students desiring to repair their own cars. Three other CU metal buildings will be moved to the Corporation Yard area west of the Thoroughbred Unit to be used for temporary storage space. Fifth, the welding equipment will be moved to one of the two shop buildings originally constructed by the N. Y. A. which has been used for one of the agricultural engineering shops during the past few years. Sixth, the old landmarks of aero, welding, machine shop, and Ag. Mechanics #1 will disappear to be replaced by the modern Engineering Building.

Kellogg-Voorhis

The contract for the Science and Classroom Building at the Kellogg campus will be let shortly after April 13, 1955, when bids for this project are opened. The building will be scheduled for completion in August, 1956. This building will provide classrooms, laboratories, and offices for botany, zoology, physics, chemistry, and other science departments. Temporarily, some of the laboratories will be used as general purpose classrooms.

In the Governor's Budget for 1955-56 are three buildings totaling \$1,301,600 for the Kellogg Unit. These items are for physical education facilities, cafeteria, crops and fruit field house, and an ornamental horticulture unit.

These buildings together with the Science & Classroom Building mentioned above will provide the initial complement of instructional facilities required for the admission of 750 students in the fall of 1956.

MINOR CONSTRUCTION PROGRAM

The 1954-55 budget shows \$141,590 was available at the three campuses for work in this category. The construction projects classified under the heading of minor construction are those which are estimated to cost less than \$20,000.

Valuable opportunities for students to supplement their regular classroom instruction are provided through projects selected from the minor construction program by the College's instructional divisions. For example, the College Maintenance Department, in cooperation with the Architecture Department, has completed a project room for the Architectural Engineering Department. A temporary steel building formerly used as a general purpose classroom has been converted and equipped for use as a laboratory for the Electronic Engineering Department to aid in handling the large increase in enrollment experienced by this department.

Other projects of less instructional nature which are valuable from the standpoint of providing essential job responsibility have been done by students for pay under the supervision of the maintenance staff. Still other minor construction projects have been done by private contractors. The College views its minor construction project program as one of the essential implements in helping it to accomplish its educational objective of practical and applied education.

SPECIAL SERVICES

Cal Poly tries to provide, within its means, educational services to the various areas of education and industry encompassed by its program. The program during the past year has been quite substantial and the results have repaid the effort expended.

Because of the close coordination and cooperation that has existed between the Bureau of Agricultural Education and the College during the developmental years of the two programs, the contribution in this area has continued to occupy a most important place in the service phase of the College's program.

This year, 1954-55, 23 men will receive the Special Secondary Credential in Vocational Agriculture and 8 will receive the Limited Special Secondary in Agriculture. Of some 384 vocational agriculture teachers in 235 high schools and junior colleges of the State, approximately one-half received their training at California State Polytechnic College. Of those who were trained in California, considerably over 50 per cent took their work at Cal Poly.

In view of this large percentage of the State's agricultural teachers trained by this College, a cooperative program of in-service training with the Bureau of Agricultural Education was initiated many years ago. During 1954-55, several different subject-matter specialists from the College's agricultural staff at both San Luis Obispo and Kellogg-Voorhis visited 81 different high schools and junior colleges to assist teachers in developing improved teaching techniques and to provide teachers and students with pertinent information related to agricultural subjects and student agricultural projects.

Not only does the college provide help through this specialists' visitation program during the regular school year but each summer it offers specially selected short courses of one week duration in various agricultural subject-matter areas. These short courses are designed to give high school and junior college teachers concentrated information and skills particularly adapted to meet the secondary school need. Last summer, 68 teachers participated in this program.

Next to the last week in June of each year the California Agricultural Teachers' Association in conjunction with the Bureau of Agricultural Education holds its annual conference on the San Luis Obispo campus. This past summer there were 311 in official attendance for the full week of the conference and several other members attended for a part of the week. College staff also participated actively in this conference.

The Future Farmers of America held their State Final Judging Contest and Annual State Convention on the San Luis Obispo campus again this year with 1300 different high school boys participating.

The Young Farmers of America and the Young Homemakers of America held their State Conventions concurrently on the San Luis Obispo campus with some 300 delegates from all over the state in attendance. These two organizations are the post high school counterparts of the Future Farmers of America (F. F. A.) and the Future Homemakers of America (F. H. A.).

The Kellogg-Voorhis unit campuses afford handy and often-used meeting places for the sectional and regional meetings of the agricultural teachers, F. F. A., and Y. F. A. groups of Southern California.

For the past several years, the California Association of Health, Physical Education, and Recreation, in cooperation with the State Department of Education and the College, has sponsored two summer workshops of two weeks each on the San Luis Obispo campus. One of the workshops is for women, and the second one is for men. The workshops are so scheduled that the two groups meet concurrently for one week in order that they may have joint meetings dealing with those physical education instructional matters that are applicable to both boys and girls. This past summer's program attracted 340 teachers from high schools and junior colleges in every section of the state.

The College's two cafeterias provided the essential facilities required to conduct a concentrated one-week workshop for school lunch personnel during the summer of 1954. One hundred fifty employees of elementary and high school lunch programs attended this conference, jointly sponsored by the College and the State Department of Education.

Other groups from industry and education that have met on one or another of the three campuses during the past year or have been served by the College are: Conference of Managers and Judges of the Western Fairs Association; California Nurserymen's Association annual week-long conference dealing with the most timely industry developments and problems; Livestock, Dairy, and Poultry Breeders Conferences; meeting of the State Steering Committee on Vocational Education in the Junior Colleges of California; and Central Coast Section Meeting of the California Industrial Education Association.

In addition to the conferences, meetings, and workshops listed above, there were many other groups from industry and education that met at the College but the above serve to illustrate the types of services that the College desires to provide.

THE FOUNDATION

The functions of the Foundation are to provide instructional aids to agriculture and engineering, to manage housing and cafeteria facilities, and to provide and manage special services. The Foundation serves instruction in agriculture by acting as banker for student projects and by management of Foundation herds, flocks and crop programs. The projects are used to give students experience in management problems on a small scale. The Foundation herds, flocks and crops are used for training in management on a larger scale and for teaching basic skills needed for successful production. In support of engineering instruction also, the Foundation makes possible assorted production and management activities for students. More detailed reference to these aspects of the Foundation's functions will be found in the report of the two instructional divisions concerned.

The cafeterias and dormitories are so managed as to operate practically at cost. For example, those on the San Luis Obispo campus in 1953-54 showed a profit of \$1,202.85 on an operation which grossed more than half a million dollars.

Cafeterias

The cafeterias are a large operation, particularly on the San Luis Obispo campus. The two cafeterias there this year are using per week: 1,320 gallons of milk, 480 loaves of bread and 6,000 rolls, 1,050 pounds of fresh and frozen vegetables, 150 gallons of ice cream, 2,700 pounds of potatoes, 450 dozens of fresh eggs, two tons of carcass beef, 510 pounds of pork and 600 pounds of poultry.

These foods offered in carefully planned and balanced menus enable a student to get daily 3,000-3,600 calories, 105 to 140 grams of protein and an average of 300 grams of carbohydrate. The cafeterias serve some 13,400 meals during an average school week.

The balanced budget, scientific diet, and present volume of the feeding operation have been achieved despite handicaps which increase as the number of students grows.

Housing and feeding have always been considered as one economic unit in the College operations, but it has been only in recent years that any board charges have been required. At present, full board along with room is not required on either campus due to the lack of sufficient capacity or equipment to handle the entire load. At San Luis Obispo the meal ticket requirement covers about 60 per cent of all meals. This requirement pushes the present facilities to the limit during the school week, but leaves low spots on weekends as compared to full board requirements. A student snack bar is also available with 150 seats to help take care of this overload on the San Luis Obispo campus. Considerably smaller facilities of this same type are also available on the Voorhis campus.

The critical facilities at present that prevent the most efficient operations are:

1. The design and size of the dining area. The south cafeteria was designed for a maximum student population of 250, but must serve at noon (the critical service hour) 500. The north cafeteria, built at the outset of World War II, was designed to serve the five original temporary type units housing 210 students, but is now expected to care for approximately 700 students.
2. The food preparation space area is inadequate and under present loads highly inefficient as far as work movements are concerned.
3. Lack of adequate refrigeration, bake shop area, meat processing area, and storage of dry products.

Housing

Dormitories are available for 1235 single students at the San Luis Obispo campus and there is housing also for the families of 262 married students. At the Kellogg-Voorhis campus housing is available for 228 single students and for 16 families.

Almost half of the dormitory space at San Luis Obispo is in the motel type dormitories of concrete construction built in 1952 which because of the need for housing have an occupancy of three men for their two-man rooms. Deuel Dormitory which houses 100 men was built in 1908 with the result that maintenance costs for its continued use are high. Three other permanent dormitories which range from 24 to 30 years in age house 164 men and are in excellent condition. The other housing is in 16 temporary structures of frame construction, most of them with wallboard partitions. Housing for married students includes 187 trailer units installed in 1947 which are estimated to be usable for two more years at most. The other housing for married students is in 75 temporary units, recently repainted and reroofed to put them into satisfactory condition.

At the Kellogg-Voorhis campus most of the housing for single men is in well-built permanent structures. The housing for married students is in temporary buildings.

Placement

The Placement Office assists students in finding the most desirable permanent employment possible at graduation and in obtaining part-time and summer employment to meet college expenses. It also provides a continuous follow-up program with graduates and their employers.

Seniors are not only afforded opportunities to interview the representatives of employers from education, agriculture, business and industry who visited the campus in even greater numbers this year, but are given abundant access to the latest occupational information. Freshmen and sophomores make use of this material in choosing fields of work for summer and part-time employment, while juniors and seniors are able to use this information to follow trends and developments in their chosen fields very closely. A new procedure of counseling seniors individually concerning placement was developed this year.

In the area of teacher placement, the office worked with a committee of Western Institutional Teacher Placement Association and School Administrators on a standardized teacher placement folder which was accepted by that organization on a trial basis for use by members. High schools in the county and other selected areas were visited to follow up on the progress of graduates who are teaching in those schools, to become better acquainted with the schools and their administrators, to keep administrators informed concerning our teacher training program and to assist in the selective recruitment of teacher candidates.

In providing summer jobs, the Placement Office makes an effort to place students in work that has some relationship to their major fields of interest. Assistance given in connection with part-time work has the additional objective of aiding development of proper work habits and attitudes in each individual. To encourage this the College provides supervised work experience for a maximum number of students by employing them in phases of campus and farm operations. This year 67 per cent of the money paid for temporary help in connection with this sort of work for the college was paid to students. This work employed 335 students. On minor construction consisting of projects amounting to \$20,000 or less, 30 per cent of the wages was paid to students.

The follow-up program of the Placement Office has further developed its survey of the employment of graduates. The outstandingly effective follow-up of the graduate in his job situation was afforded again by the President's Annual Alumni Tour which this year entered six southern counties and provided the usual opportunities for interviews with employers and alumni.

COEDUCATION DEVELOPMENTS

The legislative act which created Cal Poly in 1901 includes the statement " . . . The purpose of the school is to furnish to young people of both sexes mental and manual training in the arts and sciences . . . " After the level of instruction was raised in 1927 to that of a junior college, school authorities decided it would be best to limit enrollment to boys. In 1929 legislation was passed which limited "registration, enrollment and attendance of the California Polytechnic school to male students."

However, in 1937 legislation was introduced which repealed the limitation against enrollment of girls. When the Education Code was revised in 1947 for the purpose of changing the institution's official name, the original intent of the Legislature to have Cal Poly operate as a coeducational institution was re-affirmed with the retention of the statement that: "The purpose of the college is to furnish to young people of both sexes mental and manual training in the arts and sciences, including agriculture, mechanics, engineering, business methods, domestic economy, and such other branches as will fit the students for the nonprofessional walks of life." (Chapter 3, Article 1, Section 20651, Education Code--Amended by Stats. 1947, Ch. 120).

For a number of years there have been many applications for admission from girls. Because the college did not have adequate facilities, even for the expanded post-war enrollment of men, college officials were forced to deny women admission on the basis that "no adequate facilities existed for girls."

Had appropriate and sufficient instructional facilities been available for girls, lack of housing still would have been an insurmountable problem. Until this year the college had no way of housing girls either on campus or in the community. Now that the several army camps in this area have closed, housing in the community has become available to the extent that more than half of the college's 2600 male students have been able to find adequate rooms off campus. Property owners in the area seem anxious to convert other unrented apartments and residences into single student housing.

An emergency situation created by the necessity for a large number of local teachers to take work toward regular teaching credentials resulted in additional pressure on College and State Department of Education officials to approve admission of women to Cal Poly. Because of recent changes in credential rules, teachers with emergency or provisional credentials are required to enroll in an accredited college for the purpose of obtaining a degree and a regular teaching credential. On November 16, 1954, 100 San Luis Obispo area teachers submitted a petition to the state senator representing the 29th District requesting his assistance in obtaining admission to Cal Poly for them. Following a conference in Sacramento between the Senator and the State Director of Education, the college was directed to prepare and submit for approval a plan for the admission of women students at the San Luis Obispo campus.

A Coeducation Planning Committee had been appointed by the President late in the 1953-54 academic year. It was charged with the responsibility "for detailed studies of various problems related to the inauguration and early development of a program of coeducation at the San Luis Obispo campus."

The Planning Committee studied the following areas in relation to the admission of women students: curricula, housing, food service, health and medicine, student activities, counseling and guidance, admissions, instructional facilities, and non-instructional facilities.

In curriculum planning the Co-Ed Planning Committee worked out a complete four-year course for a major in Home Economics. The curriculum in Elementary Education is planned for those holding provisional credentials who wish to meet requirements leading to a regular credential or for the student who wishes to work toward an Elementary credential from the beginning. The curriculum in Home Economics is so devised that the student will be introduced at the outset to skills and information which will make her a better homemaker and make her more employable. At the same time this curriculum satisfies the requirements for the credential in Home Economics.

The problem of housing women students has been studied intently by the Coeducation Planning Committee. When and if coeducation is finally instituted at Cal Poly, it will be a long-time program which must be carried on to the credit of the College and the State. For that reason College officials feel very strongly that beginning freshmen women just out of high school and away from home for the first time should be housed on campus where adequate supervision can be assured. Therefore, it is planned that the admission of entering freshmen women will be limited at the outset to those who can be housed on campus. As a result plans were prepared for adapting the existing Chase, Heron and Jespersen halls to residence of women. To make the plan as complete as possible detailed lists of the required furnishings were worked out. Plans for changes in the existing Health Center, together with equipment lists, have been prepared to enable the Health Center to meet the possible demands of women students.

Because some of the classes held for women working on credential problems may be held at night, there will be a necessity for a large number of women to walk through the central area of the campus at night. The lighting of this central area must be improved. Estimates and plans for this work were prepared by the State Division of Architecture.

Since there are no instructional facilities for Home Economics at the present time at Cal Poly, it was necessary for the planning Committee to make complete plans for the beginning courses in this area.

Pursuant to the request of the State Director of Education, the College presented on February 4, 1955, a "Plan for the Admission of Women to California State Polytechnic College, San Luis Obispo Campus." Concurrently, amendments to the Capital Outlay section of the 1955-56 Budget were submitted to provide for women's restrooms, installation of street lighting, expansion of Health Center, alteration of existing classrooms to convert to Homemaking laboratories, and conversion and furnishing of three existing dormitories to accommodate women.

The request for Budget amendments to provide for coeducation at Cal Poly were submitted in February by the State Director of Education to the Director of Finance. Admission of women at the College is now contingent, therefore, upon approval of the Capital Outlay Budget amendments by the Department of Finance and the Legislature.

LIBRARY

With the addition of 5,580 new acquisitions during calendar year 1954 the College Library now has a total collection of approximately fifty thousand volumes. It receives 403 paid subscriptions and 84 free subscriptions, a total of 487 periodical titles.

Based on the enrollment figures in the Fall Six-Week Statistical Report for 1954 of 2679 students there was an average of 22 loans per student with a total circulation figure of 51,802. However the un-recorded use of materials within the library under our open-stack system was extremely heavy so that the counted circulation by no means reflects full library usage.

Audio-Visual Department

The faculty is effectively using audio-visual teaching methods as an integral part of the Cal Poly education plan. Increasingly vital to the curriculum are the audio-visual methods using demonstrations, motion pictures, still pictures, audio recordings, models mock-ups, charts and other materials.

The Audio-Visual Department of the Library is continually growing in instructional service to assist the faculty in maintaining a high level of teaching effectiveness. Greater aid to instruction is achieved through the Audio-Visual Department's activity in: source development and cataloging of current instructional materials, ordering and scheduling materials for class use, providing equipment for utilizing the instructional materials, and maintaining equipment and materials in optimum condition.

During this past year there has been notable progress in meeting a greater portion of the instructional needs for audio-visual services. The limited equipment has been pressed to the maximum of efficient use through a revision of the check-out and circulation system. A stepped-up maintenance program, and more individual training of instructors and students in proper equipment operation has also extended the equipment utilization. Classroom operational failure has been greatly reduced by the development of a rigid inspection and preventive maintenance program on equipment and films. A great gain in meeting more of the faculty demand for projected visual materials is being made by the addition of light control curtains to the existing classrooms and by the incorporation of light control in all new classrooms.

The audio aspects of audio-visual services are rapidly expanding through a tape recording and copying service. The pressing needs for audio materials are now being met by the development of a library of recorded tapes and phonodiscs.

In addition to its furnishing of direct services to instruction, the Audio-Visual Department is active in supplying special services for the workshops and conferences held on the campus in the various areas of education and industry. The Audio-Visual Department handles all public address facilities, tape recording of lectures and speeches, and provides all types of audio-visual equipment and materials for specialized demonstrations and presentations.

As a part of its ever-growing service to instruction, the Audio-Visual Staff is devoting time to consultation, planning, and development. The staff is working closely with the faculty committees on new construction in the planning of classroom facilities.

AGRICULTURAL DIVISION

Instruction in the Agricultural Division specializes in training for production and for related agricultural services. Constant effort is made to keep instruction in step with the growing mechanization of California agriculture and with other modern trends. The objective is practical occupationally centered instruction and to this end "learn by doing" is widely practiced in the best tradition of the College. Learning by doing and the project method of instruction are made possible in the Division by the California State Polytechnic College Foundation. The latter organization makes possible the financing of production projects required to put them on a practical, commercial basis. The Division continues to have the largest undergraduate enrollment in agriculture in the western states.

Highlights in the Division for the year follow.

Facilities

Construction has begun on an Agricultural Engineering building consisting of two units, one with seven shops and the other with three classrooms and six offices. These new facilities should greatly relieve the pressure of overcrowded classes in temporary quarters under which the department has been operating.

A new veterinary science hospital has been completed providing the best of facilities for the treatment of all animals. Approximately eight animals are treated weekly in the new hospital which has a capacity of four animals at one time.

Corrals and the feed barn were remodeled at the dairy project farm and a 150-ton silo erected. A 12-student capacity cottage was moved from the central campus area to the dairy project farm to provide convenient housing for students with dairy projects.

Site preparation has been carried out on the site of the new 10-acre ornamental horticulture unit for which working drawings are now being completed. Two laboratory rooms, a large storage and repair building and 1500 square feet of glasshouse space will be added to department facilities next year.

The Crops Department has installed new equipment for use in teaching courses in cotton production, field crop technology and general field crops. Included are a small cotton gin, a new type Emerson dockage tester such as is used in grain grading by U. S. inspectors, moisture testers, pilot type screen mill and disc machines.

Projects

As usual, projects have been emphasized in all agricultural departments in which their use is practicable. The animal Husbandry Department increased its emphasis during the year on the livestock project program both as to number of students carrying projects and improvement of their project summaries and analysis of the completed work. The project feeding program has afforded a number of senior students an opportunity to conduct feeding trials and new management practices for their senior project requirement. The procedure of setting up the problem, carrying through to completion and summarizing and analyzing the results has given them valuable experience for typical livestock production positions. Students have continued to exhibit their projects at the major livestock shows and sales with favorable results in competition with leading breeders. During the year, 180 animal husbandry students marketed 1,550 head of cattle, sheep and hogs with a gross value of \$113,000. These projects showed a net profit of \$11,643 of which students received \$7,762 as their two-thirds share.

Projects were used as an important part of the teaching procedure in the Poultry Department. Nearly every poultry major completes two or more projects in meat-bird raising, replacement flock brooding, turkey growing, laying flock management or care of breeding flocks. Nearly all of the birds maintained by the department are for use in student projects in which each student shares in the financial return. In addition to their individual projects, students participate in commercial poultry management and production.

The Crops Department completed a successful project program during the year. Twenty-seven students participated in growing irrigated crops on 25 acres and dry land crops on 37 acres. The crop yields obtained were generally above average. In sugar beets the yield was 24 tons per acre of clean beets. The average yield of corn silage was 24 tons per acre. Of oat and vetch hay 2.2 tons per acre were harvested and of grain corn slightly more than 2 tons per acre.

The Ornamental Horticulture Department operated 31 student projects with 45 students participating. Sales of student projects at the College nursery amounted to \$3,200.

Ninety milk cows and 45 young stock were included in the dairy projects operated by 45 students in the Dairy Department. Income from dairy projects was approximately \$22,000.

Other "Learning by Doing"

The Agricultural Engineering Department continued its practice of using the whole College farm as a training laboratory. During the year, students designed and constructed several small buildings for the Poultry and Dairy departments, two 250-ton concrete lined pit silos, a 20' by 80' manure pit, an irrigation reservoir and many pieces of smaller equipment such as calf shelters, water troughs, concrete floors, feeders. They also erected a 32' x 100' all-steel farm machinery storage building. Under supervision, students majoring in the department did all the servicing, maintenance and major overhaul work on the wide variety of tractors and farm machinery used by the College. This practical training is regarded very highly by employers in the farm equipment field.

In connection with increased instruction in landscape design which was begun in the Ornamental Horticulture Department this year, students in design classes devoted much of their time to developing landscape plans for the many new buildings on campus. They also assisted in landscaping new schools in the community and developed a master landscape plan for the California Men's Colony at Camp San Luis Obispo.

As part of new work in floriculture offered for students operating greenhouse projects a variety study of Chrysanthemums was made through the cooperation of Yoder Brothers, Inc. of Barberton, Ohio. Six hundred cuttings were received each month for flowering in three-inch pots, a procedure which is new on the west coast.

Students working in nursery production courses grew nearly all the flowering plants, trees and shrubs for use on the campus. This included 200 flats of ground covers and annuals as well as several hundred plants in gallon and five-gallon cans.

Students in ornamental horticulture participated in numerous flower shows and had exhibits at two county fairs. The Poly Royal Flower Show continued to be one of the major features of Poly Royal festivities, attracting over 6,000 persons. A perpetual trophy was awarded this year by the California Association of Nurserymen to the outstanding student exhibitor at that show.

Department Activities

The Animal Husbandry Department sponsored the annual Livestock Judging Conference in cooperation with the State Department of Finance and the Western Fairs Association and conducted a three-day conference on beef cattle production in cooperation with the California Hereford Breeders Association.

The Soils Department and its affiliated Soils Club carried on demonstrations of land judging in high schools in San Luis Obispo and Santa Barbara counties. Sufficient interest was aroused on the part of participating schools that a contest was arranged for early 1955. Requests for similar work have been received from high schools throughout the State.

The results of the Agricultural Engineering Department's training program in agricultural mechanization for foreign students for the past year have been very gratifying. The program enrolled 46 students from September to June. The college has received many fine reports from former students who have returned to their homes in the far corners of the world and are now teaching their own people some of the things they learned here that will result in the production of more food and a higher standard of living. This program is self supporting in that the Foreign Operations Administration in Washington reimburses the State for each student sent here. That office also provides a full time coordinator for the program. The FOA office has on several occasions commended this College for the outstanding job being done with the foreign student training program and has cited the Cal Poly program as an example that other participating colleges might follow.

Student Activities

The Livestock Judging Team of the Animal Husbandry Department was successful in winning the Intercollegiate Livestock Judging contests at the Pacific International at Portland, Oregon; the Grand National at San Francisco; and the Ogden, Utah, Livestock Show; and competed at the International contest at Chicago. Ten students competed on the winning teams.

Dairy Department judging teams competed in three intercollegiate judging contests placing first, third and fifth. The first team won the Pacific International Intercollegiate Dairy Cattle contest at Portland, Oregon, winning first in four breeds. Team individuals placed first, second and fourth.

Scholarships

Students majoring in Soil Science now have an added incentive to do better work as a result of two scholarships granted the College during 1964. One of these by the California Fertilizer Association will be awarded each year to an outstanding senior. The other, a \$1,000 scholarship provided by the Destruxol Corporation of Pasadena, will be awarded to an outstanding junior majoring in Soil Science.

ENGINEERING DIVISION

During the year 1954-55, the Engineering Division continued to move systematically along the road to its ultimate objectives. The following brief statements summarize the objectives and the progress made toward them.

Objectives of the Division

The aim of the Engineering Division is to provide outstanding instruction in the area of applied engineering and, in the process, to be recognized as having the best program of its kind in the nation. This ultimate goal is to be accomplished by adhering to the following basic principles and philosophy.

Students must know how to do things, be able to do them well, and know why they are done.

- a. Skills courses characteristic of the major field must be taught in the freshman year.
- b. Substantial emphasis must be placed on laboratory work.
- c. Substantial emphasis must be placed on work in the major.
- d. Primary emphasis must be on instruction for specific areas of employment such as production, planning, sales, application, and service.
- e. A sufficient number of application courses must be taught to give students immediately applicable abilities useful to employers.

In addition to the regular curriculum, an intense effort must be made to develop in the students such characteristics as ability to think clearly, organizational ability, administrative ability, personality, and a sense of public responsibility. This development is sought through co-curricular activities, student advisory program, and creation of departmental atmosphere.

In addition to the regular curriculum, actual job and business experience must be provided by means of paid student labor positions, Foundation projects, and summer opportunities in industry.

Progress Toward Objectives

1. Students

- a. Enrollment increased sharply. (See Table I attached.)
- b. Number of graduates showed an increase. Per cent of national total continued to rise. Available jobs far exceeded supply of graduates. (See Table II attached.) Typical employers: General Electric Company, Westinghouse Electric Company, Southern California Gas Company, Radio Corporation of America, Douglas Aircraft Corporation.
- c. Student quality continued to rise. (See Table III attached.)
- d. Foundation projects continued to play an essential role in the instructional program.

Student projects financed through the Cal Poly Foundation were conducted in the following engineering departments: Aeronautical Engineering, Air Conditioning and Refrigeration Engineering, Electronic Engineering, Printing.

2. Faculty

The number of engineering instructors increased in keeping with increased enrollment. (See Table IV attached.) Sixty-seven per cent of the engineering faculty have had industrial experience within the last three years. This is in keeping with the College philosophy of maintaining a teaching faculty which has up-to-date industrial know-how. There are now three licensed architects and thirteen registered professional engineers on the staff.

Faculty recognition was reflected in several ways, for example; The Dean of Engineering was elected to the position of national educational chairman of the National Association of Practical Refrigerating Engineers; The Head of the Electrical Engineering Department was selected to participate in the Annual General Electric Company Professors' Conference at Schenectady, New York; The Head of the Mechanical Engineering Department was granted a Fulbright Award to help develop an engineering program at the University of Peshawar in Pakistan; The Head of the Air Conditioning and Refrigeration Department was reappointed to the national education committee of the American Society of Refrigerating Engineers.

TABLE I
Enrollment

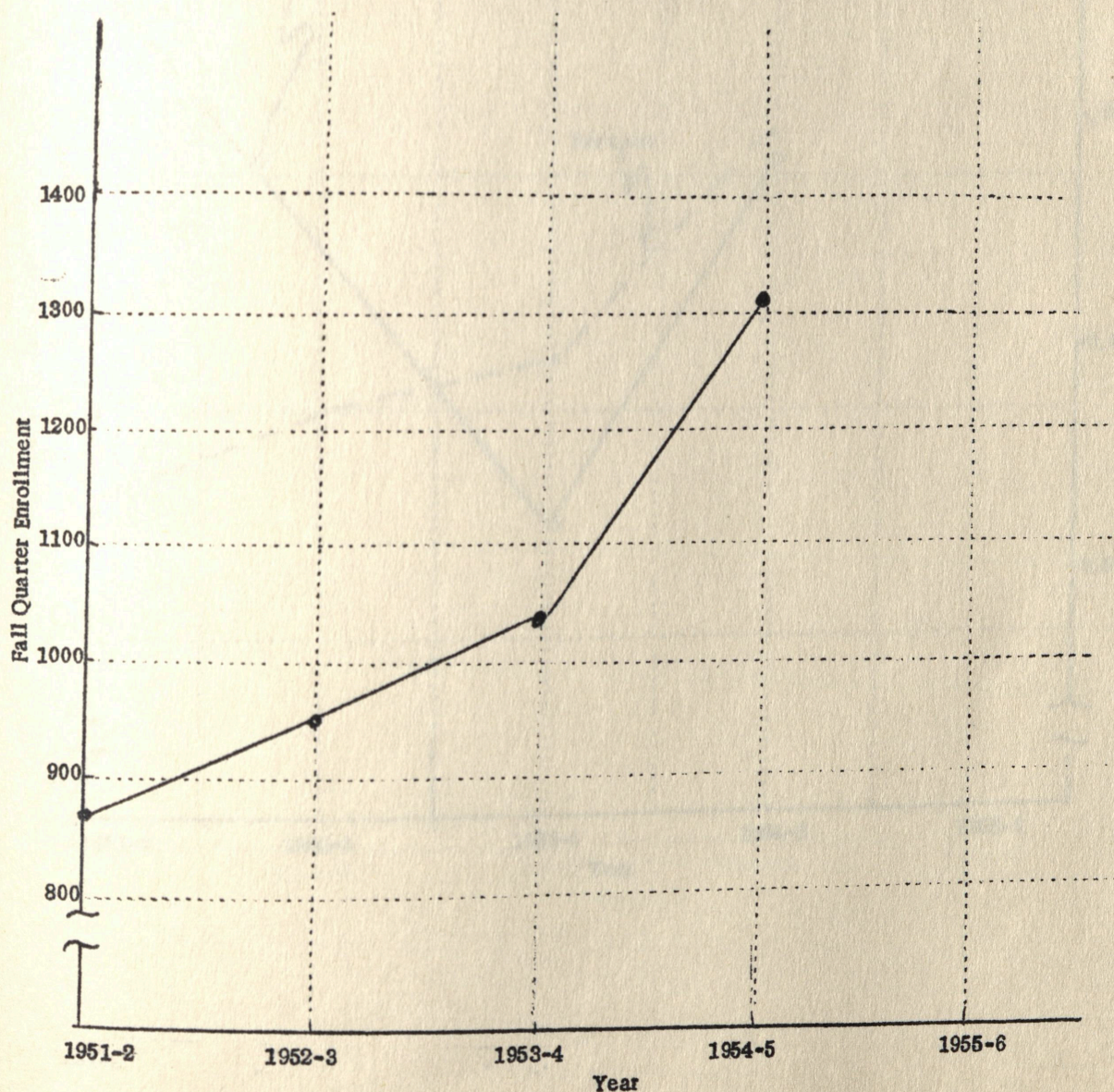


TABLE II

Number of graduates showed an increase
 Percent of national total continued to rise
 Available jobs far exceeded supply of graduates

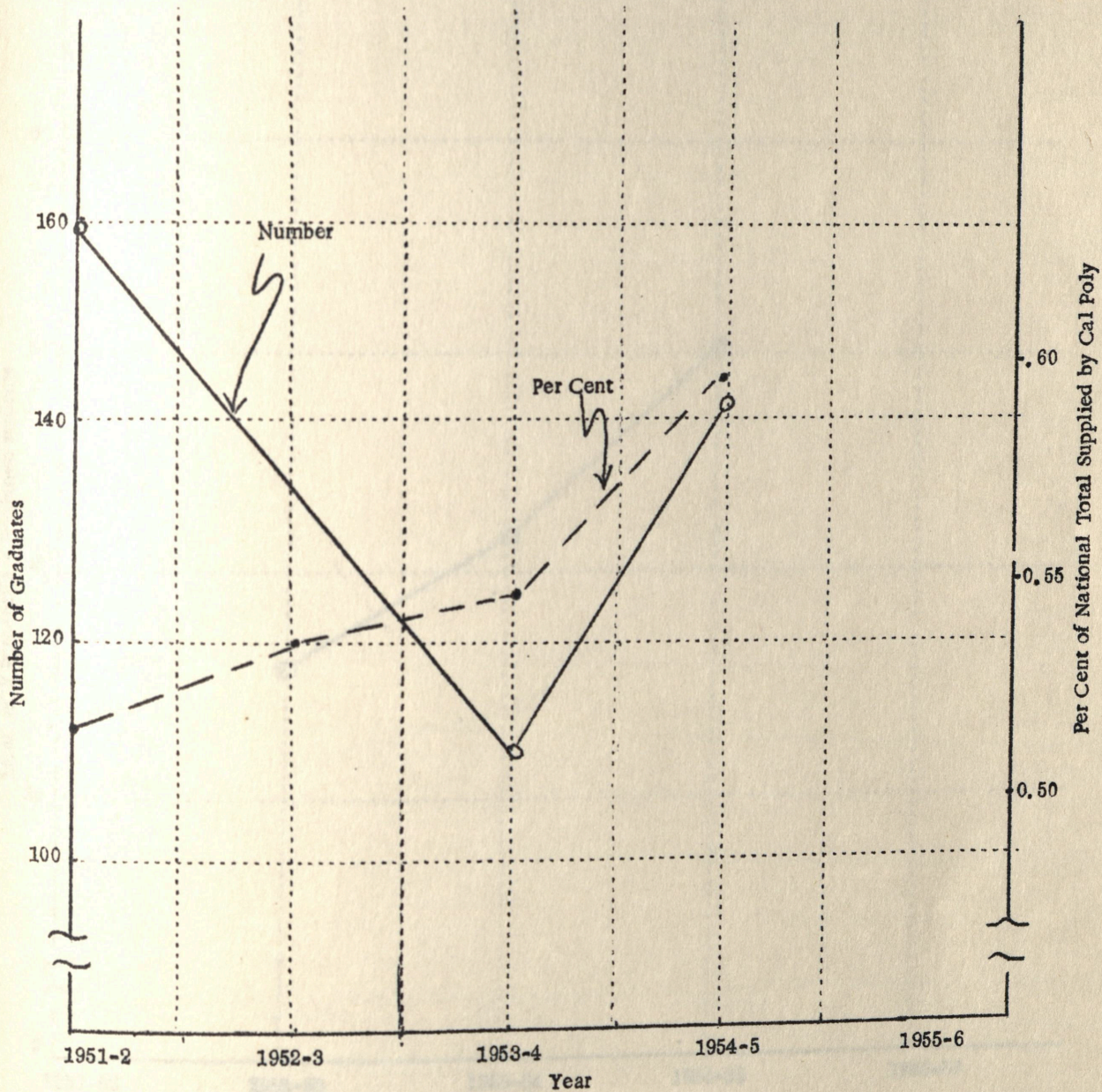


TABLE III
Student Quality Continued to Rise

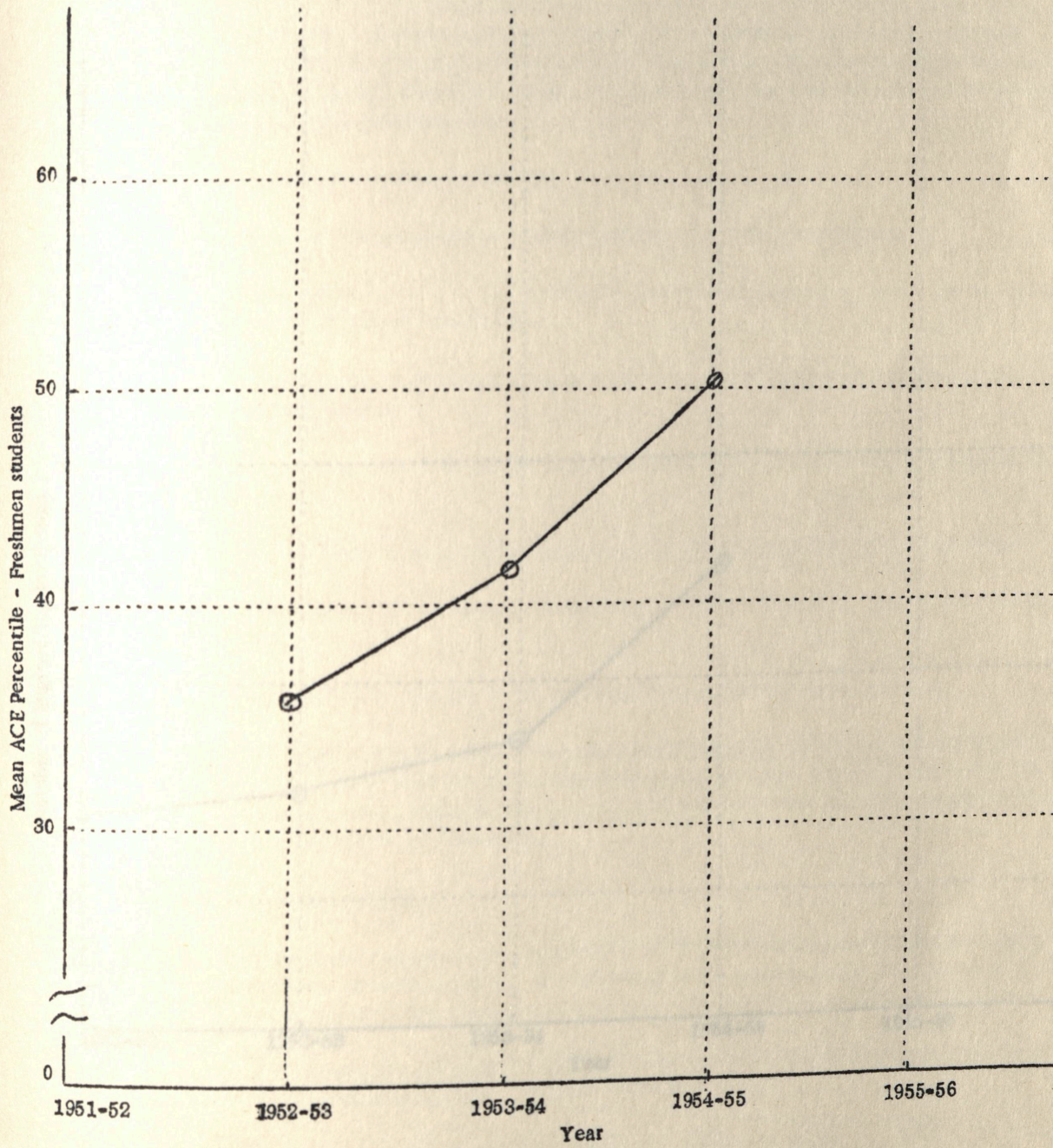
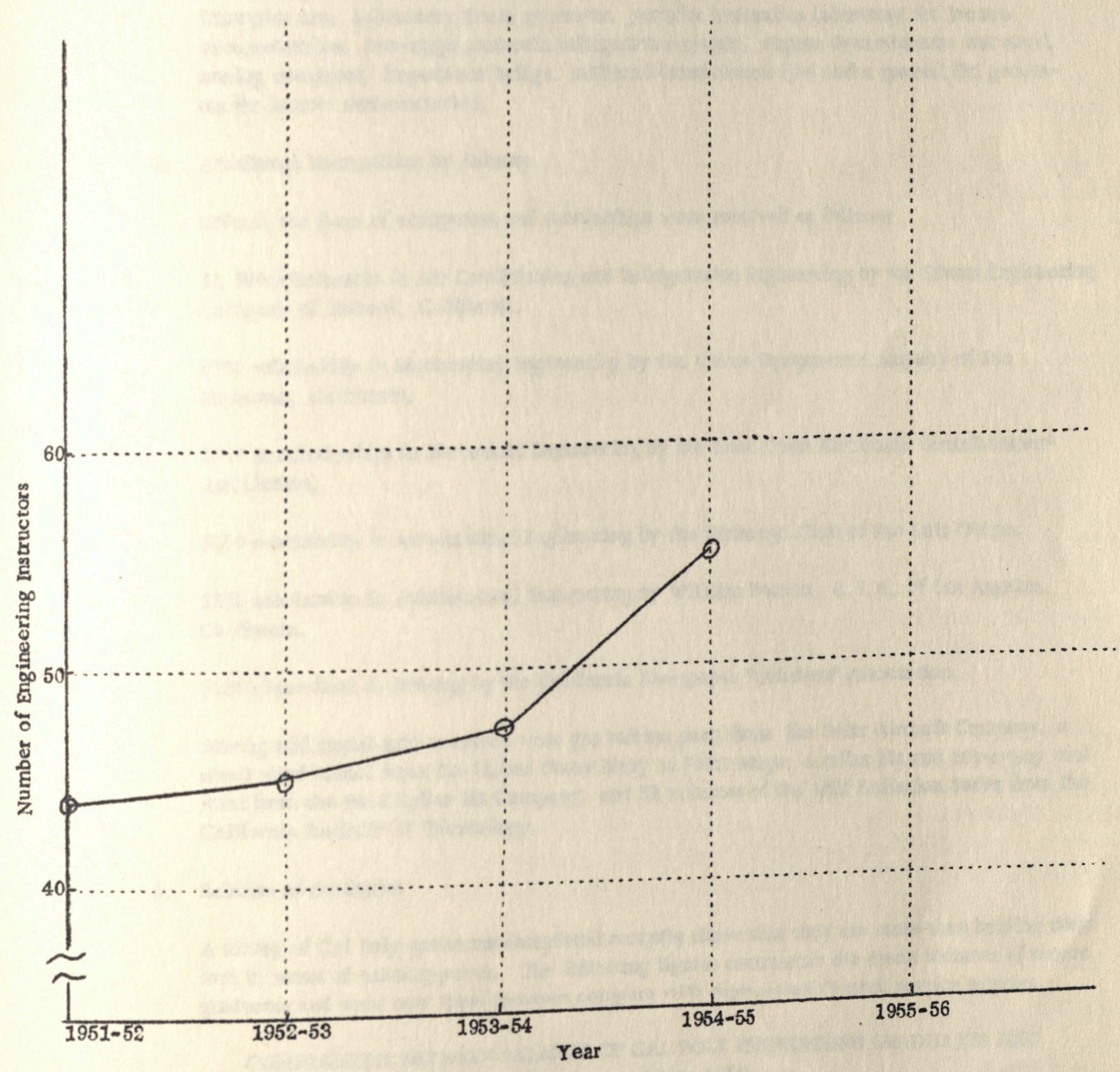


TABLE IV

The number of engineering instructors increased in keeping with increased enrollment



Class	1952	1953	1954	1955
Electronics	1 year	2 year	1 year	4 year
Mass. Inst. of Tech. (MIT)	211	247	265	287
U.S. Coast Survey	224	242	262	282-283
Naval Academy	224	242	262	282-283
Los Angeles City	224	242	262	282-283
Los Angeles County	224	242	262	282-283
Agri. Inst.	224	242	262	282-283

3. Facilities

The new Mechanical Engineering laboratory was completed and is now in full operation.

Designs are now being completed by the Division of Architecture for the first unit of the Engineering Building. This building will have approximately 50,000 feet of floor space and will house the rapidly growing electrical engineering and electronic engineering departments. As part of the site clearance for this building, improved facilities for aeronautical engineering and welding will be provided.

CIRE money for expansion of the machine shop department has been requested in the Governor's budget.

Numerous pieces of equipment were developed by students in their senior project work. Examples are: Laboratory steam generator, portable hydraulics laboratory for lecture demonstrations, two-stage ammonia refrigeration system, engine dynamometer test stand, analog computer, impedance bridge, artificial transmission line and a special DC generator for lecture demonstration.

4. Additional Recognition by Industry

Gifts in the form of equipment and scholarships were received as follows:

\$1,000 scholarship in Air Conditioning and Refrigeration Engineering by the Heatt Engineering Company of Burbank, California.

\$300 scholarship in Mechanical Engineering by the Victor Equipment Company of San Francisco, California.

\$600 in scholarships in Electronic Engineering by the West Coast Electronic Manufacturers' Association.

\$150 scholarship in Aeronautical Engineering by the Exchange Club of San Luis Obispo.

\$125 scholarship in Architectural Engineering by William Pereira, A. I. A. of Los Angeles, California.

\$1500 loan fund in Printing by the California Newspaper Publishers' Association.

Among additional gifts received were gas turbine parts from the Solar Aircraft Company, a small wind tunnel from the United States Navy at Point Mugu, a roller bit and cut-a-way tool joint from the Reed Roller Bit Company, and 28 volumes of the MIT Radiation Series from the California Institute of Technology.

5. Salaries of Graduates

A survey of Cal Poly graduates completed recently shows that they are more than holding their own in terms of earning power. The following figures summarize the mean incomes of recent graduates and show how these incomes compare with representative civil service salaries.

COMPARISONS BETWEEN SALARIES OF CAL POLY ENGINEERING GRADUATES AND
STANDARD NORMS (Salaries as of June 1954)

Class	1953	1952	1951	1950
	1 year	2 years	3 years	4 years
Experience				
Mean Salary of Cal Poly graduates	\$391	\$447	\$505	\$517
U. S. Civil Service	\$284	\$350	\$422	\$432-495
State of California	\$376	\$415	\$436	\$458-481
Los Angeles City	\$395	\$417	\$440	\$464-489
Los Angeles County	\$395	\$417	\$440	\$464-489
Agencies mean	\$363	\$400	\$435	\$454-488

LIBERAL ARTS DIVISION

The Liberal Arts Division is primarily a service division in the organizational structure of California State Polytechnic College. Within this division are found the departments which provide the background of work in science and the humanities to support all the curricula of the College. In the area of general education the division provides to all students enrolled in the College a sound program of instruction leading to the important occupational goal of American citizenship.

In addition to its service function, the Liberal Arts Division has major programs in agricultural journalism, biological sciences, social sciences, physical sciences, mathematics, and physical education. Of these, all but agricultural journalism lead to secondary teaching credentials. In the area of teacher education the division offers programs leading to credentials in the above fields and in agriculture as well as a graduate program with the Master of Arts Degree in Education as its objective.

Faculty

The phenomenon of growth has been reflected in the increasing enrollment at California State Polytechnic College just as it has in all segments of higher education in California. In looking back over the 1954-55 academic year and in looking ahead to the next few years the impact of that growth upon the Liberal Arts Division is very significant.

The greatest strength of any educational institution is its teachers. To support the increased number of students and the increased needs of those students the staff of the Liberal Arts Division has grown in both numbers and quality. In 1954-55 there was a total of 77.7 full-time equivalent instructors in the division. This is in contrast to 60.7 full-time equivalent instructors the division had at the close of the 1953-54 academic year.

The increases in the staff of the division provide a number of advantages to all students of the college. As the Liberal Arts staff grows the college is able to provide a greater variety of background experiences to students. As an example, the Mathematics Department has increased from 10.2 to 16.2 full-time equivalent instructors. This increase has made it possible to place on the staff new personnel with backgrounds in electronic computers, engineering, and other aspects of applied mathematics. In addition, most of these people also have the doctor's degree. By having courses in mathematics taught by people who have worked in fields requiring the application of mathematics the College is able to bring to students a most important aspect of education; the ability to relate theory to practice.

This same trend has been reflected throughout the Division, not only with new staff but with the entire staff of the division. The strength of the Liberal Arts program in terms of personnel lies not only in excellent educational backgrounds but also in the wealth of practical experience available to students. In this respect, the staff of the Liberal Arts Division of the California State Polytechnic College is unusual when compared to comparable college faculties. It has been a constant aim to seek personnel in such a way as to build up a faculty of people experienced in the application of their subject matter in everyday life.

Facilities

Another important aspect of college education is facilities and equipment. The departments of the Liberal Arts Division constantly strive to improve the facilities in which instruction is carried out. A large amount of this improvement is done by the staff members themselves through improvising better ways of using the space and equipment available. This year also saw an approach to successful completion of two major building projects which will provide vastly improved facilities for the College's increasing enrollments.

Construction is nearing completion on the Science and Classroom building which will house all of the life sciences and physical sciences in addition to the Soils Science and Veterinary Science departments of the Agricultural Division. This is a one-story structure with approximately 88,000 square feet of floor space. The College is rapidly approaching the total enrollment for which this building was designed, but when it opens during the 1955-56 academic year it will provide the students of the college with modern and adequate laboratory facilities in the sciences.

Another major project which will be nearing completion by the end of this year is the Physical Education Facility. Planned as an addition to our present gym this facility will provide needed office and locker room space as well as special purpose rooms. This facility should be available for use in September, 1955.

Minor additions to the facilities of the division include the establishment of an indoor rifle range for ROTC in a small building which was formerly used by the Poultry Department.

Teacher Education

Teacher Education has for many years been a primary feature of the curriculum of California State Polytechnic College. The growth of the state colleges has naturally included the growth of teacher education, which is itself a primary concern of all the state colleges. In the field of teacher education Cal Poly has been outstanding in producing teachers of vocational agriculture for the high schools and junior colleges of California. The program leading to the General Secondary credential has been a strong but small one because the emphasis in the Liberal Arts Division has been directed toward serving the needs of majors in Agriculture and Engineering. At the same time the college has a responsibility to the people of California to provide the same kind of dynamic program in other fields of Education that it has in agricultural education. To carry out this purpose, a thorough study of teacher education in the state and at California Polytechnic has been carried out this year, and the next few years will see the fruits of this study.

Present planning includes the strengthening of our curricula leading to the General Secondary credential with the addition of a major in language arts which is necessary to round out our present program. Plans are also underway to develop a curriculum leading to the General Elementary Credential which will be sound, forward-looking, and dynamic in the tradition of the present teacher education program. It is felt that this development will bring with it excellent rewards to the people of California in terms of a superior product to send to California's elementary and secondary schools in the years to come.

Enrollment

The effect of the growth of California State Polytechnic College upon the Liberal Arts Division is made more dramatic by the fact that this division serves all the students of the College. In 1953-54 the division enrolled 2074 different students in one or more of its courses during the winter quarter. The comparable figure for 1954-55 is 2642 individuals. Present indications in terms of applications for admission and enrollment trends lead to the belief that this figure will exceed 3200 individual students. Because it constantly serves the entire student population, whether increases are in Agriculture, Engineering, or Liberal Arts, the latter division feels the impact.

Almost all general education offerings are in Liberal Arts as are all the basic service offerings in science, mathematics, the social studies, and physical education. As a result, what may appear to be a disproportionate emphasis is actually the logical outgrowth of our divisional structure. The Liberal Arts Division provides in one place all of the general instruction which serves students throughout the entire college curriculum. The Liberal Arts Division's main service function to the college brings with it both growth and a strengthening of its own program and the program of the entire College.

KELLOGG-VOORHIS CAMPUS

For the past sixteen years, except for a period during World War II, the Kellogg-Voorhis campus of California State Polytechnic College has operated as a branch of the College serving the agricultural education needs of Southern California. The 157-acre Voorhis Unit in San Dimas and the 800-acre Kellogg Unit in Pomona are located just one air-mile apart and are administered jointly as one division of the college. An Executive Dean supervises the operations of the Kellogg-Voorhis campus under the direction of the President and with the guidance of other administrative officers responsible for certain phases of the over-all College program.

The Kellogg-Voorhis campus carries out the same educational philosophy and requirements as does the Agricultural Division of the College at San Luis Obispo. However, in order to meet the special needs of agriculture in Southern California and to avoid unnecessary duplication of programs, the agricultural offerings at the Kellogg-Voorhis campus in most cases provide a somewhat different emphasis from that given at San Luis Obispo.

At the present time, the Kellogg-Voorhis campus offers three-year programs of instruction in Fruit Production, General Crops Production, Horticultural Services and Inspection, and Ornamental Horticulture. Two-year programs are given in Animal Husbandry and Soil Science. Instruction also is offered in related agricultural subjects and liberal arts courses required in the major curricula.

Students normally complete the first two or three years of their curriculum at the Kellogg-Voorhis campus, depending upon the major in which they are enrolled. Candidates for the Bachelor of Science degree must take a minimum of 33 quarter units in residence at San Luis Obispo within a period of four quarters immediately preceding graduation. Because of the College's unique "upside down" program of education, students are able to obtain most of their major course work at the Kellogg-Voorhis campus. When the students transfer to San Luis Obispo to complete their degree program, they benefit from a wide variety of courses in related agriculture and liberal arts.

Because of limited offerings and facilities, enrollment at the Kellogg-Voorhis campus has remained at around 400 students. It is hoped, however, that the first of new facilities will be completed within the next 18 months which will permit the Kellogg-Voorhis campus to expand its offerings and do its part in taking care of increasing college enrollments.

Administrative Development

On April 13, 1955, bids were scheduled to be opened for the construction of a Science Building, the first structure to be erected at the Kellogg Unit as part of the development of the Kellogg-Voorhis campus. It is anticipated that this building will be completed in time for classes in September, 1956. Money was budgeted this year for the construction of a cafeteria, a gymnasium, and agricultural units; and it is expected that these facilities will be completed some time during the 1956-57 school year.

A great deal of time has been devoted to planning the expansion of the instructional program made possible by the acquisition of these new facilities. It is currently planned to open in the fall of 1956 with 750 men students enrolled in the following agricultural majors: Animal Husbandry (three-year program), Fruit Production (four years), General Crops Production (four years), Horticultural Services and Inspection (four years), Ornamental Horticulture (four years), Soil Science (two years), and Agricultural Management and Sales (first year of a planned four-year program). These plans for the expansion of the Kellogg-Voorhis campus have been worked out in detail and were listed in the mimeographed publication, A Brief Review of the Development of the Kellogg-Voorhis Campus of the California State Polytechnic College, issued in September, 1954.

During the 1955-56 school year, it is planned to continue operations and enrollment at present levels while preparing for expansion the following year.

Another development of interest during the current year was the exchange of property along the northern boundary of the Kellogg Unit for property along the southwestern boundary. The Division of Highways widened the San Bernardino Freeway along the northern boundary of the campus, and it was necessary for this state agency to acquire twenty-two acres of Kellogg Unit property. In exchange for the twenty-two acres, plus \$10,000 appropriated from the funds of the College, the Division of Highways purchased for the use of the college approximately thirty-eight acres of level land from Mrs. Zeda M. Glidewell. This land is now included in the total properties of the Kellogg Unit and is a part of the parcel approved by the W. K. Kellogg Foundation as the site for future major developments. It is planned to locate new physical education facilities on this site.

For the second year, the President and other administrative representatives of the college met with administrators of eight Southern California junior colleges to discuss problems of articulation. In addition, meetings were held with the individual junior colleges to facilitate the transfer of students from one institution to another.

Curriculum Development

Several new courses were added to the offerings at the Kellogg-Voorhis campus during the current year. The College carried on its continuing program of evaluation and reorganization of present course content to keep in step with the changes reflected in the agricultural industry and the economy in general and to take advantage of new developments in teaching and testing.

Much planning has centered around the developing of the majors in Fruit Production, General Crops Production, Horticultural Services and Inspection, and Ornamental Horticulture into four-year programs for 1956-57. Under the direction of the Dean of Instruction, these majors have been planned to serve the needs of agriculture in the seven southern counties and to supplement rather than duplicate the offerings in agriculture at San Luis Obispo.

A new major, Agricultural Management and Sales, has been developed to provide a program that would combine experience in various phases of agricultural production with training in the skills of management and selling. The first year of this major would be offered in 1956-57, with plans to add to the program each year.

Library

A new Librarian was appointed in July, 1954, and revision of the total collection of library processes was instituted. Outstanding projects completed to date include the complete inventorying of the books, periodicals, and documents collections, and the establishment and improvement of public records to indicate these holdings. An instructional program for students on library use, including a library guide, has been established. Services to faculty members also have been expanded.

The book collection now contains approximately 9,000 volumes, including bound periodicals. One hundred and eighteen paid subscriptions are being received currently. A concerted attempt, in cooperation with the library committee and instructional staff, is being made to improve the total collection and to fill existing gaps.

Foundation

The Cal Poly Foundation operates on the Kellogg-Voorhis campus in a manner similar to its function at San Luis Obispo. Foundation operations are supervised by the Dean of Agriculture, under the direction of the Foundation Manager. Such special student services as post office, infirmary, housing, and feeding are provided by the Foundation. In addition, the Arabian horse exhibitions, put on weekly throughout the school year under the terms of the Kellogg gift, are a Foundation operation.

One of the most important Foundation functions is that of sponsoring student projects of a beneficial instructional nature. During the year, individual and group projects have been carried out in Animal Husbandry (beef, swine, and sheep), Fruit Production (nursery stock), General Crops Production (vegetables), and Ornamental Horticulture (cut flowers). One of the student projects in Animal Husbandry produced the grand champion steer at the Los Angeles County Fair.

Student Personnel Activities

The Student Personnel Office at the Kellogg-Voorhis campus assumes responsibility for admissions, records, job placement, guidance and counseling, health, loans and scholarships, feeding, housing, and all matters involving students other than instruction. This year a counseling and testing office was established, the program of orientation for new students was enlarged, and a nurse was hired to supervise operations of the health center.

Despite limited enrollment and facilities, a complete student activities program has been carried out at the Kellogg-Voorhis campus. Highlights of the program this year were the following:

Work was completed on the stage of an outdoor amphitheater designed, financed, and constructed by the students.

The 13th annual Poly Vue, spring open house, attracted an estimated 3,000 persons to the Voorhis Unit to see educational displays and tour the campus.

The fifth annual Agricultural Education Field Day brought more than 1,000 high school and junior college students to the Kellogg Unit to participate in agricultural judging and skills contests.

The annual music tour between the winter and spring quarters featured the college glee club and dance band in the Ventura area, where the group entertained at four high schools.

Students participated in intercollegiate athletics in football, basketball, baseball, track, and tennis. In addition, the intramural program provided activity in touch football, softball, volleyball, and other sports.

Additions to Facilities

During the year a number of improvements were made in facilities on both campuses.

At the Voorhis Unit, the entrance road was repaved, heating and ventilating equipment was installed in the Agricultural Engineering Building, new and more effective fire hydrants were installed, two residences were remodeled to provide improved housing for single students, the service line in the Cafeteria was relocated and new equipment installed, and a counseling and testing center was constructed as part of the Records Office.

At the Kellogg Unit, the hay storage building lost by fire last year has been replaced with a temporary feed mill, three grain storage tanks, and a new small hay storage unit. In addition, the College has constructed feed lots and holding pens at the swine unit, feed lots at the beef barn, an equipment storage building, and new pasture fencing and water facilities.

Special Services

The Kellogg-Voorhis campus is becoming increasingly popular as the site for meetings of educational groups and agricultural organizations. Among the many groups meeting on campus this year were the following: Young Farmers (Southern Region), Sunkist Managers, American Begonia Society (El Monte Branch), Los Angeles County Agricultural Inspectors, Southern California Angus Breeders Association, Trade and Industry Teachers, Calavo Advisory Council, Los Angeles City Schools Agricultural Teachers, California Pest Control Operators Association, Student Personnel Staffs of Southern California State Colleges, Southern California Botanists.

In addition, such events as the Southern California Horticultural Contest, the Cal Poly Citrus Judging Contest, and the Light Horse Judging Contest (co-sponsored by Cal Poly and The Western Livestock Journal) were held on campus.