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Kellogg Campus

1958-59 ANNUAL REPORT

CALIFORNIA STATE POLYTECHNIC COLLEGE

THE STATEWIDE STATE COLLEGE

Archives

San Luis Obispo
Campus

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FOREWORD

"When we build, let us think that we build forever." ~~John~~ John Ruskin

In the lives of men and of institutions come periods when, although they labor mightily, they exhibit few external signs of achievement or progress. You might say that the academic year 1958-59 has been such a time at California State Polytechnic College.

Nevertheless, I would evaluate this as a fruitful year. It has been a year of building—of building for the future. In industrial terms it could be described as "retooling for improved production." The College has been quietly, steadily at work laying the foundation of a greatly increased potential for service.

Our building effort has been far flung. It has concerned physical plant, faculty recruitment, curriculum, and administrative procedures and organization. Actual physical construction reached a new high for the history of Cal Poly with more than eleven million dollars worth of building currently in progress on the San Luis Obispo campus alone. On the Kellogg campus a complete new college plant is rising.

One phase of our building was the creation of a group of long-range planning committees. Seeking to probe the future, these committees have been concerned with Cal Poly's place in California education, the types of students the College wants, instruction and instructors the College wants, instruction costs, and the whole field of grants, fellowships, scholarships and loan funds.

Increasing the offerings of the College, seven new majors were introduced at the Kellogg-Voorhis campus and additional years of work were offered in each of the six majors added in 1957-58. At San Luis Obispo, preparations were completed for offering majors in food processing and metallurgical engineering in the fall of 1959.

Administrative organization has been streamlined during the year to deal more effectively with the operating problems created by the three-campus structure of the College. A vice president has been named as chief operations and coordinating officer for all campuses. A dean of the college has been appointed at the San Luis Obispo and at the Kellogg-Voorhis campus. Each has responsibility for all activities on his respective campus and will report directly to the vice president. The administrative deans have been replaced by a dean of student and college affairs, a dean of finance and development, and a dean of educational services and curriculum development, who are staff officers to the vice president.

In presenting this annual report to the State Board of Education and the State Department of Education, I wish to acknowledge the indebtedness of the College to them and to the State Legislature and other State officials who have cooperated in this year of building for the future. Without their counsel and their friendly understanding of our problems, the year's progress could not have been achieved.

Julian A. McPhee

JULIAN A. MCPHEE
President

ENROLLMENT OF VETERAN AND NON-VETERAN STUDENTS - SAN LUIS OBISPO

	<u>Veterans</u>	<u>Non-Veterans</u>	<u>Total</u>
Freshmen	235	1256	1491
Sophomores	339	808	1147
Juniors	319	463	782
Seniors	250	209	459
Graduates	16	36	52
Unclassified	0	11	11
	<u>1159</u>	<u>2783</u>	<u>3942</u>

COMPARATIVE ENROLLMENTS BY YEARS, REGULAR STUDENTS

(San Luis Obispo)

(Kellogg-Voorhis)

1-yr. Intervals

1938-39	651
1939-40	780
1940-41	739
1941-42	711
1942-43	570
1943-44	80
1944-45	128
1945-46	819
1946-47	1571
1947-48	2229
1948-49	2575
1949-50	2909
1950-51	2767
1951-52	2213
1952-53	2259
1953-54	2259
1954-55	2745
1955-56	3163
1956-57	3767
1957-58	4040
1958-59	3942*

1-yr. Intervals

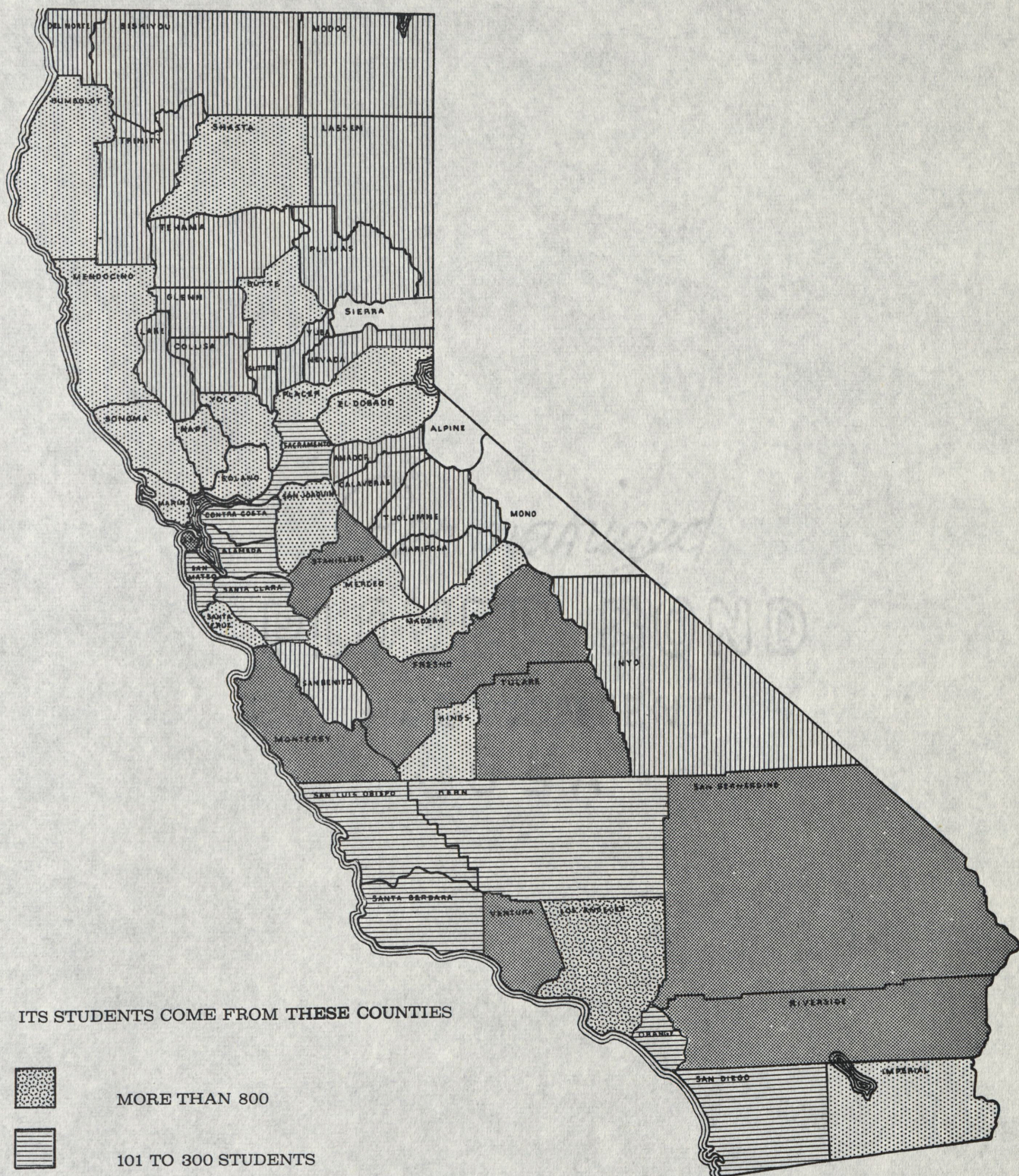
1938-39	113
1939-40	137
1940-41	136
1941-42	117
1942-43	69
1943-44	Closed W. War II
1944-45	Closed W. War II
1945-46	Closed W. War II
1946-47	280
1947-48	393
1948-49	411
1949-50	438
1950-51	405
1951-52	331
1952-53	413
1953-54	423
1954-55	384
1955-56	385
1956-57	506
1957-58	790
1958-59	1185

* For the 1958-59 year the enrollment total shown has been taken at the Fall six-week census date and does not include students who have withdrawn. In previous years, all students registering were shown with no deductions for withdrawals.

PLACE OF LEGAL RESIDENCE (San Luis Obispo)

COUNTY	FALL 1956	FALL 1957	FALL 1958
Alameda	144	141	161
Alpine	0	0	0
Amador	4	3	4
Butte	19	18	14
Calaveras	1	0	1
Colusa	6	6	4
Contra Costa	82	101	132
Del Norte	1	0	3
El Dorado	7	8	12
Fresno	58	54	53
Glenn	16	15	8
Humboldt	27	26	23
Imperial	27	23	28
Inyo	6	6	9
Kern	113	119	136
Kings	32	28	38
Lake	5	2	3
Lassen	3	8	6
Los Angeles	772	864	808
Madera	13	23	21
Marin	19	30	25
Mariposa	4	0	2
Mendocino	16	22	16
Merced	30	28	18
Modoc	4	6	5
Mono	1	0	0
Monterey	67	61	59
Napa	32	35	30
Nevada	4	3	2
Orange	116	114	111
Placer	13	18	14
Plumas	3	4	3
Riverside	84	96	80
Sacramento	111	138	121
San Benito	13	12	6
San Bernardino	87	93	96
San Diego	109	108	115
San Francisco	72	72	87
San Joaquin	55	57	47
San Luis Obispo	465*	409*	293
San Mateo	77	95	113
Santa Barbara	117	147	140
Santa Clara	80	93	104
Santa Cruz	39	36	39
Shasta	8	13	21
Sierra	0	5	0
Siskiyou	8	7	8
Solano	39	43	39
Stanislaus	62	71	62
Sonoma	42	42	43
Sutter	8	7	10
Tehama	4	4	5
Trinity	1	2	2
Tuolumne	8	12	8
Tulare	56	72	62
Ventura	71	69	85
Yolo	6	17	16
Yuba	11	6	5
Other States	234	276	320
Foreign Countries	169	194	198
U. S. Territories	86	78	68
	3767	4040	3942

* This figure includes many married students who came originally from outside San Luis Obispo County but have now established legal residence there.



KELLOGG-VOORHIS CAMPUS FALL ENROLLMENT

<u>By Division</u>		<u>By Year</u>	
Agriculture	538	First Year	515
Arts & Sciences	222	Second Year	444
(including Business)		Third Year	157
Engineering	<u>425</u>	Fourth Year	65
		Unclassified	<u>4</u>
Total	1185	Total	1185

ENROLLMENT BY DEPARTMENTS

<u>Agriculture</u>	
Agricultural Management & Sales	86
Animal Husbandry	125
Crop Production	73
Fruit Production	35
Services & Inspection	36
Landscape Architecture	115
Ornamental Horticulture	55
Soil Science	<u>13</u>
Total	538

<u>Arts & Sciences</u>	
Accounting	11
Biological Science	25
Business Administration	65
English	9
Mathematics	17
Marketing & Sales	4
Physical Education	56
Physical Science	14
Social Science	<u>21</u>
Total	222

<u>Engineering</u>	
Aeronautical	41
Electronic	229
Industrial	41
Mechanical	<u>114</u>
Total	425

Regular Students	1185
Limited Students	24
Total	1209

PLACE OF LEGAL RESIDENCE

Los Angeles	699
San Bernardino	138
Riverside	101
Imperial	37
Orange	67
San Diego	37
Tulare	10
Santa Barbara	7
Ventura	7
Kern	5
San Joaquin	5
San Francisco	4
Alameda	3
Other counties	<u>13</u>
California	1133
Other states	16
U. S. Territories	5
Foreign countries	<u>31</u>
Total	1185

ENROLLMENT OF VETERAN AND NON-VETERAN STUDENTS

	<u>Veteran</u>	<u>Non-Veteran</u>	<u>Total</u>
Freshmen	129	386	515
Sophomores	198	246	444
Juniors	67	90	157
Seniors	25	40	65
Unclassified	<u>0</u>	<u>4</u>	<u>4</u>
Total	419	766	1185

DEGREES AND CERTIFICATES

Number of Degrees and Certificates Granted
(June, 1958 - S.L.O. Campus)

<u>Division and Department</u>	<u>Bachelor of Science</u>	<u>Bachelor of Education</u>	<u>Technical</u>	<u>Master of Arts In Education</u>
<u>Agriculture</u>				
Agricultural Engineering	17			
Animal Husbandry	57		10	
Dairy Manufacturing	4		1	
Dairy Husbandry	13		3	
Farm Management	6			
Ornamental Horticulture	15			
Poultry Husbandry	7		1	
Crop Production, General	1			
Deciduous Fruit Production	2			
Soil Science	26			
Truck Crops	3		2	
Field Crops	14		1	
Mechanized Agriculture	17		3	
<u>Engineering</u>				
Aeronautical Engineering	34			
Air Cond. & Refrigeration	28			
Mechanical Engineering	111			
Electrical Engineering	29			
Electronic Engineering	83			
Printing	15			
Architectural Engineering	27			
Industrial Engineering	14			
<u>Arts and Sciences</u>				
Biological Sciences	9			1
Elementary Education	11	20		
English	1			2
Health and Physical Education	10			10
Mathematics	44			1
Social Sciences	20			2
Physical Sciences	4			
Agricultural Chemistry	4			
Education Agriculture				22
Agricultural Journalism	9			
Education				2
	<u>635</u>	<u>20</u>	<u>21</u>	<u>40</u>

Total of S.L.O. Graduates, June 1958 - 716

(June 1958 - Kellogg-Voorhis Campus)

	<u>Bachelor of Science</u>		<u>Bachelor of Science</u>
Animal Husbandry	9	Horticultural Services & Inspection	18
General Crops	11	Landscape Architecture	12
Fruit Production	9	Ornamental Horticulture	9
		Total of K-V Graduates, June 1958 -	<u>68</u>

GRAND TOTAL 784

FACULTY

Orientation and Improvement

As an incentive to individual professional improvement of the staff, Cal Poly instituted a series of college orientation lectures and group demonstrations for faculty members last Fall Quarter. The series, held weekly on a voluntary attendance basis, was expanded during the Winter Quarter into a Professional Development Program to include more detailed and technical presentation of subject matter in several fields.

The orientation program was of especial value to, and received excellent response from, faculty members new to the Cal Poly educational concept. Subsequent lectures, discussions and group demonstrations were received well by those persons especially interested in the particular subject being developed. In those cases in which the subject proved too technical for general understanding, the instruction was discontinued but possibly may be resumed next year for selected, smaller groups. Questionnaires distributed at each session revealed varying degrees of success and afforded a guide to future planning in faculty improvement programming.

Increase in Faculty

The growth of Cal Poly's faculty, numerically, is shown in the following table:

<u>Year</u>	<u>San Luis Obispo</u>	<u>Kellogg-Voorhis</u>	<u>Total</u>	<u>Increase or Decrease Over Previous Year</u>
1950-51	176	25	201	-
1951-52	147	26	173	-28 *
1952-53	159	29	188	+15
1953-54	167	37	204	+16
1954-55	194	36	230	+26
1955-56	208	38	246	+16
1956-57	254	40	294	+48
1957-58	270	69	339	+45
1958-59	292	101	393	+54

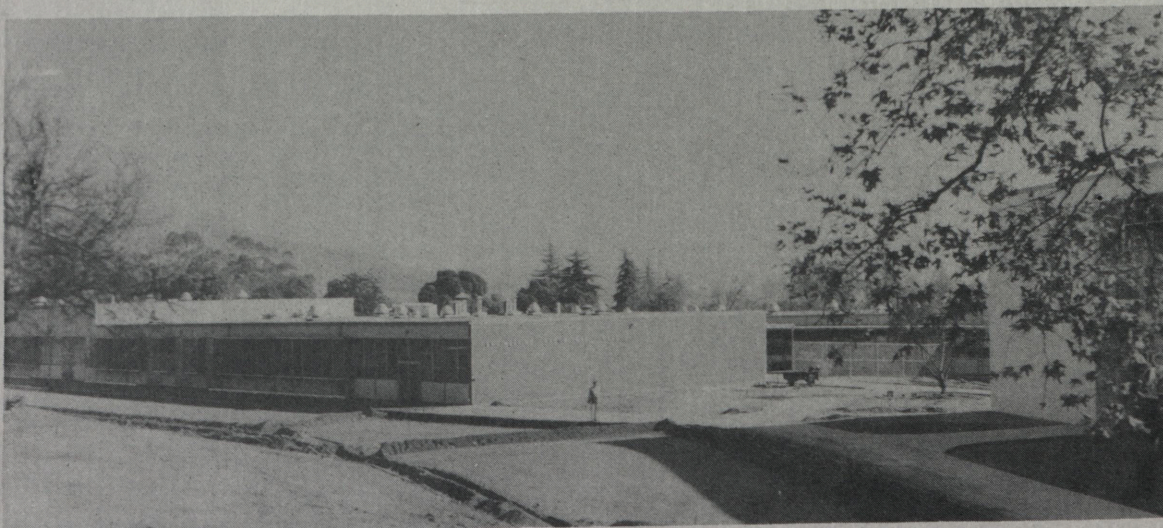
(* Korean War period)

Educational Background

The following table indicates distribution of the Cal Poly teaching staff according to professional degrees, as of Fall Quarter, 1958:

<u>Degrees</u>	<u>San Luis Obispo</u>	<u>Kellogg-Voorhis</u>	<u>Total</u>
Doctorates	65	25	90
Masters	128	38	166
Bachelors	88	34	122
None	11	4	15
Totals	292	101	393

CONSTRUCTION PROGRAM



Engineering Center--Kellogg-Voorhis

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CAPITAL OUTLAY BUILDING PROGRAM
San Luis Obispo Campus
1955-60

The Five Year Building Program covering the budget years 1955-56 through 1959-60, for which the legislative appropriations total nearly twenty-six million dollars, has already produced spectacular results on the San Luis Obispo campus. The program for 1955-56 was based on a master plan target of 4080 FTE. The 1957-58 building budget was based on a target of 5900 FTE. Since that time the capital outlay program has been based on an ultimate master plan target of 10,000 FTE. Therefore, the projections which will be shown in this report and the contemplated five-year program 1960-61 through 1964-65 represent a major step in the development of the campus for 10,000 students.

The first major building funded during this period was Engineering East. This building, whose construction appropriation amount was \$1,481,000 (equipment cost an additional \$500,000) is now in its second year of occupancy, having been accepted by the State in July, 1957. It contains 5 lecture rooms, 17 laboratories, office space for 20 instructors, plus numerous auxiliary rooms.

The next major buildings were funded in the 1957-58 fiscal year. It is the results of this budget year that are having such a dramatic effect on the campus today.

- (1) Six residence halls capable of housing a total of 1200 students are now under construction. Each will be a three-story brick structure and will contain 100 two-man dormitory rooms, a lounge room, a recreation room, study rooms, a laundry and other service rooms. The appropriations for constructing and equipping these residence halls total \$5,219,600. Completion in 1960 is anticipated, with all rooms ready for occupancy in the fall of that year.
- (2) A new Health Service Building, including six doctors' offices, a clinic, and a 30-bed infirmary, was assured by a \$551,560 appropriation. This structure is currently under construction and occupancy is anticipated in time for the opening of the 1959 fall quarter.
- (3) A new Men's Physical Education Facility was funded in the 1957-58 budget. The building, whose acceptance by the State is expected to occur in September of this year, is to contain a gymnasium with 4,000 spectator seats; a boxing room with two permanent boxing rings; a wrestling room sized to accommodate two full size wrestling mats; two lecture rooms; office space for 19 instructors; and a shower and locker room sized to handle 4,000 physical education students. The Outdoor P. E. playfields, which should also be in use in the fall of 1959, will include two turfed fields having six softball diamonds or three intramural size football fields; ten tennis courts; six four-wall handball courts, two of which are completely enclosed; and four multi-purpose courts. Appropriated for this facility was a total of \$2,521,800 including construction and equipment.
- (4) The Mathematics and Home Economics Building, which includes a one-story wing for the Home Economics Department and two-story wing for the Mathematics Department, is also scheduled for use in the 1959 fall quarter. It includes six home economics laboratories, fourteen lecture rooms, twenty-eight offices having space for 56 instructors, plus auxiliary rooms. The anticipated cost, including equipment, is \$1,259,700.

- (5) The Agriculture and Social Science Building will provide offices and space requirements for lecture, laboratories, and activity functions for a number of departments of the Agricultural Division and for the Social Science Department. It will provide an additional 10 laboratories, 15 lecture rooms, and 42 two-man offices, when completed in the fall of 1959. Its estimated cost is \$1,567,800 for construction. The 1958-59 budget included an additional \$215,000 for equipment.
- (6) Another major appropriation in the 1957-58 budget was \$2,332,300 to pay Cal Poly's share of the Whale Rock dam and water distribution system. This will assure the college of an adequate water supply for both domestic and farm use for the future.

The 1958-59 budget included appropriations for three major construction projects:

- (1) A new Cafeteria costing \$1,700,900 and capable of seating 1228 people simultaneously.
- (2) A Little Theater and Music Building having a 500 seat Little Theater with a full rigged stage, plus auxiliary rooms. The music wing of the building is to house all the college's musical activities and includes rehearsal rooms and music instruction and practice rooms.
- (3) A Graphic Arts and Industrial Engineering Building containing complete lab and lecture facilities for the Agricultural Journalism, Industrial Engineering and Printing Departments.

The State Division of Architecture is now working on the contract drawings for these three projects. Construction on these 1958-59 budget year projects will probably start during the summer of 1959 with completion and occupancy sometime during the 1960-61 school year.

Three major projects are included in the Governor's budget for 1959-60. They are a Library addition, \$1,222,500; a new Corporation Yard, \$500,000; and the Food Processing Building, \$1,412,600.

1960-65

The building program contemplated for the funding years 1960-65 envisions an expansion nearly as great as that for the 1955-60 period described above. The major instructional and service projects together with preliminary estimates of their total costs, including equipment, follows:

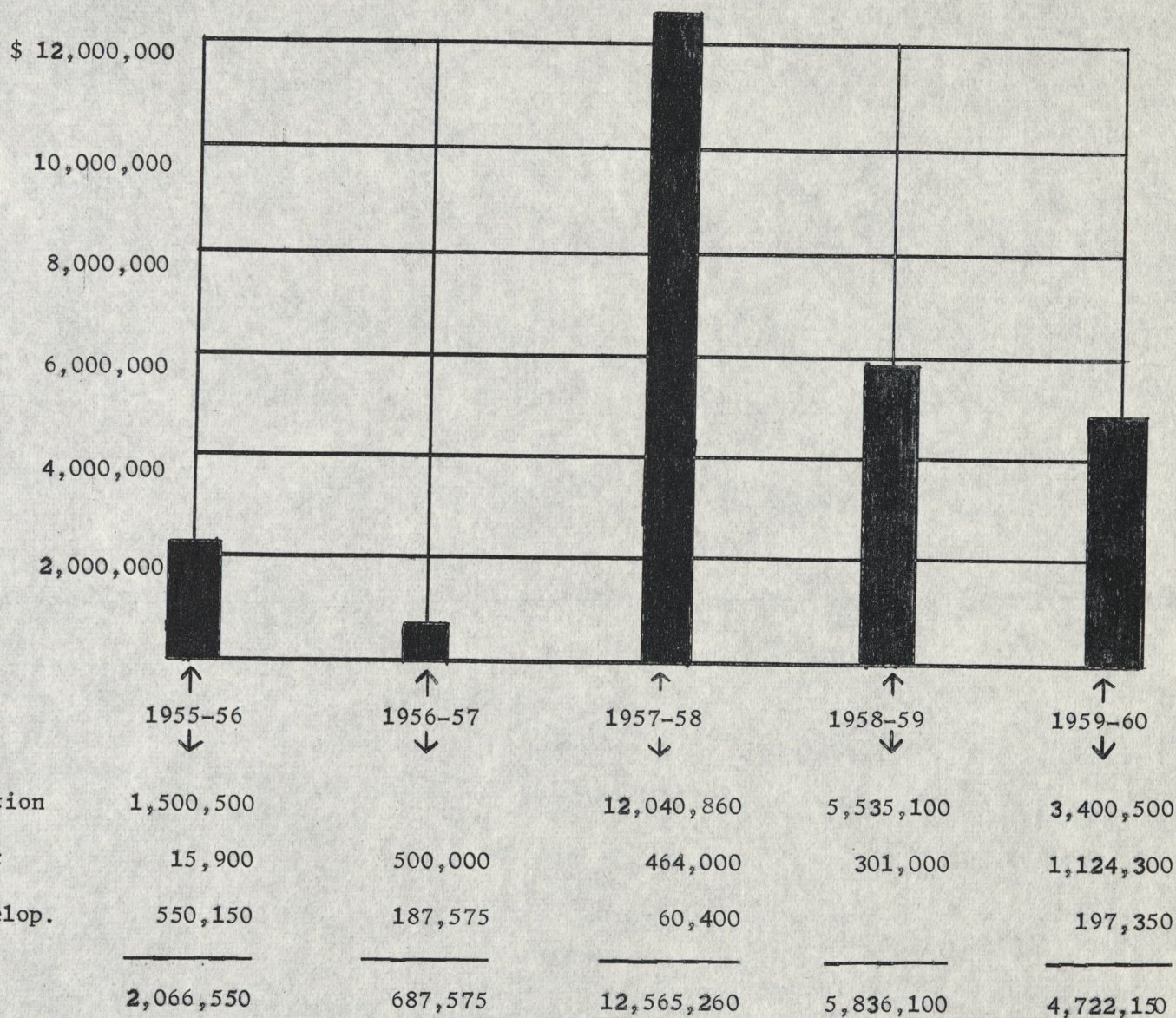
1. Engineering West	\$ 4,200,000
2. Administration & Classroom	1,350,000
3. Science Addition	455,000
4. English Wing Addition to Agriculture-Social Science Building	300,000
5. Student Activity Building	850,000
6. Auditorium	880,000
7. Agriculture Production Units	300,000

8. Residence Halls	6,740,000
9. Engineering South	1,200,000
10. Cafeteria	950,000
11. Business Classroom Building	820,000
12. Science Annex	1,250,000
13. Engineering Addition	1,350,000
14. Classroom Building	500,000

With the completion of the buildings programmed for funding during the five fiscal years 1960-65, the instructional capacity of the campus will be raised to approximately 7,800 full-time students.

Permanized
PLOYER BOND
RAC CONTENT
U.S.A.

MAJOR CAPITAL OUTLAY APPROPRIATIONS
San Luis Obispo Campus
For Budget Years 1955-1960

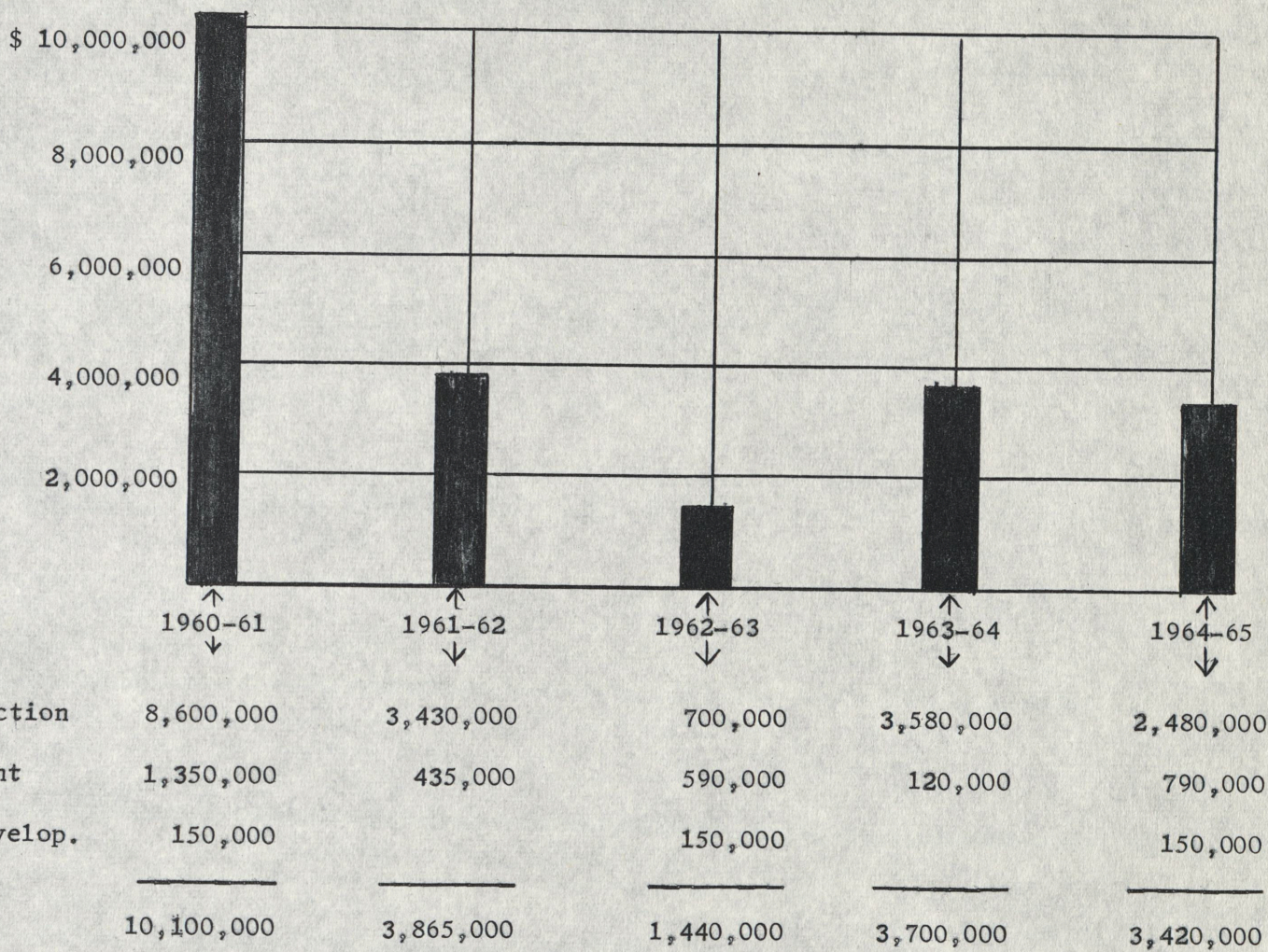


1955-60 Total: \$25,877,635

NOTES: (1) Amounts shown are from approved budget bills for years 1955-56 through 1958-59 and from the Governor's budget as submitted for the fiscal year 1959-60.

(2) Site Development amounts listed are for roads, parking lots, street lighting, sewer lines, and improvement of utility systems.

CAPITAL OUTLAY PROGRAM FOR 1960-65
San Luis Obispo Campus



1960-65 Total: \$22,825,000

NOTES: (1) Above estimates are approximations based on currently available information.

MAJOR CONSTRUCTION

Kellogg-Voorhis Campus

The Kellogg-Voorhis campus is gradually being developed into an efficient and functional unit. The master plan target for the capital outlay program in the 1955-56 and the 1956-57 budgets was 4080 FTE. During 1957, the ultimate target figure was under discussion, but finally established at 12,000 FTE. The 1960-61 through 1964-65 capital outlay program has been based on the projection of enrollment made by the Department of Education pointing towards the reaching of 12,000 FTE in 1970. Several State officials outside the Department of Education have stated that the ultimate master plan for the K-V campus should be based on a target enrollment of 25,000 FTE. The college has not based its master plan program on this larger figure. The official master plan target for our program is 12,000 FTE.

The science building, the first new building to be constructed on the campus, was completed during the Fall of 1956. Although new buildings have been added since then, the science building is still performing its multi-purpose functions of housing the administrative offices, student personnel, business management division as well as a number of the indoor laboratory activities and lecture classrooms.

During the 1957-58 academic year the first unit of the cafeteria, seating 260 persons, was completed. Also completed during the same year were the gymnasium; fruit and crops unit; the first half of the ornamental horticulture unit; the beef, sheep, swine and poultry production units; and the science building glasshouse.

The current academic year, 1958-59, saw the completion and acceptance of the engineering group, consisting of a two-story classroom and lab building plus two single-story lab units, a wind tunnel, an oxygen storage building plus an acetylene generator house. The two-story classroom building houses four electronic engineering labs, two industrial engineering labs, five general drafting labs, and six lecture classrooms. There are also twenty-one office spaces. The west lab building contains such essential engineering facilities as sheet metal shop, lathe shop, cutting and forming shop, heat and fluids lab, heat engines lab and bench lab. In the east lab building, are located the aeronautical engineering labs, such as general aero, engines testing, and aero production lab. Also in the building are a material test and structures lab, an arc welding and oxygen acetylene welding shops. In addition to the labs provided in these two units, there are offices to house forty-four staff members. These units have been constructed with the basic Cal Poly philosophy of education, "learn by doing" as a foremost criterion for their basic design.

The second building accepted during the current academic year is the business classroom building consisting of seven lecture rooms plus seven labs all designed to meet the needs of a growing program in business administration, accounting and marketing with other majors to follow. This building also has office spaces for forty-one staff members.

Also in the realm of major construction during the current academic year was the completion of an automatic telemetering system for the entire campus water distribution, both agricultural and domestic. This was a site development item which included construction of an 800 car parking lot, street lighting and general street and storm drainage improvements.

The corporation yard consisting of a maintenance and security office, auto shop, auto and truck storage buildings, plus custodial and receiving warehouse, were completed and accepted the early part of 1959. Completion of this unit will bring campus maintenance and operational services to an all-time high, from the standpoint of both quantity and quality of service.

The most recently completed units are the apiculture unit, wool lab and additions to the ornamental horticulture facilities. The apiculture unit will serve the services and inspection department. It contains modern honey processing equipment which serves as essential lab facilities for students studying beekeeping. It also provides storage area for the entire S & I department stock of equipment and supplies needed in rodent and pest control, weed control and agricultural quarantine and inspection services. It is also a work shop area for the preparation of materials used in apiculture as well as the other sections of the S & I department. This unit contains a fumigation chamber which not only services S & I, but is the sole fumigation chamber for the entire agriculture division.

Completion of the ornamental horticulture units has added a total of five additional glasshouses to the facility plus an addition to the head house. These glasshouses consist of two table-type planting houses using fogger nozzles and vertical draft fans for their temperature and humidity control. Two of the other houses are also table-type planting houses but use evaporative cooling for temperature and humidity control. The last house is a bed-type planting house also incorporating the evaporative cooling method of temperature and humidity control. The head house is primarily used to demonstrate methods of potting and planting small plants. Also a feature of the new head house is a refrigerated double flower box.

The wool lab is an adjunct of the sheep husbandry department. It provides facilities for the study of wool grading, wool judging and the study of fleece quality on all the standard breeds of sheep. As a part of this lab, there are facilities for washing, scouring, drying and photographing fleece samples in conjunction with the entire sheep husbandry program.

Due for completion during the latter part of May, 1959, is the new library building, consisting of 65,000 sq. ft. on two floors. It is of modular construction with 12,000 sq. ft. devoted to the audio visual department and 8,000 sq. ft. to general spaces, such as halls, restrooms, janitorial storage, etc. The library is designed to serve the needs of 3,000 students and to house 100,000 volumes. Facilities will be available to students and staff alike and will include micro-film reading room, listening room, and an outside reading patio.

After completion of the library, three of the four sides of the main campus mall will have been enclosed by buildings, specifically the science building and library building on the west, cafeteria on the south and the business classroom building on the east. The final building which will complete the quadrangle will be the administration building which will border the north side of the mall and will go under construction in 1960.

Due to the difficulties involved in the complex joint financing by the Federal and State governments, construction of the four residence halls designed to house 200 students each was delayed until the fall of 1958. As a consequence, these four buildings will not be completed until after the beginning of the 1959 academic year.

Due to begin during this current year is construction of additional outdoor P.E. facilities. These will include 6 new tennis courts, 4 multi-purpose courts (lining for basketball, volleyball and badminton), 4 four-wall handball courts and 2 six-wall handball courts, 5 shuffleboard courts, 2 additional softball diamonds plus complete lighting for the football field. The completion of this area will greatly enhance both the instructional program as well as the intramural sports activities.

Construction of the agricultural engineering building will begin during this academic year. The building will house an agricultural mechanics and carpentry lab, a power and machinery lab, plus a combination electricity, plumbing and irrigation lab. Also included is a 30 ft. student station lecture room plus offices for seven staff members.

Construction to be started during this academic year also will include the health center, with five doctors' offices plus treatment rooms, a complete X-ray unit, and laboratory services found in all modern health clinics. This is the first unit of a health center which eventually will consist of additional clinical space plus an infirmary and emergency operating units.

Final item in the major construction program for this year is the construction of a storm drain line which, it is hoped, will control the serious problem of erosion that has existed on the Kellogg campus since the first construction began. This line will carry not only water which is drained from some 300 acres of the Kellogg campus, but also the additional drainage from 1200 acres due north of San Bernardino Freeway which has been dumped onto the campus as a result of construction of the Freeway. This storm drain will travel some 7500 ft. and begin with a 24" pipe line which eventually will be enlarged to a 72" line at its terminus.

The Governor's budget for 1959-60 included the following projects: Construct and equip Meats Processing Building; construct Cafeteria Addition; equip Outdoor Physical Education Facilities; and Agricultural Engineering Building; working drawings for Administration-Classroom Building; and site development items.

The building program priority list submitted to the State Department of Education in December of 1958 for funding years 1960-61 through 1964-65, together with an estimate of cost is shown below:

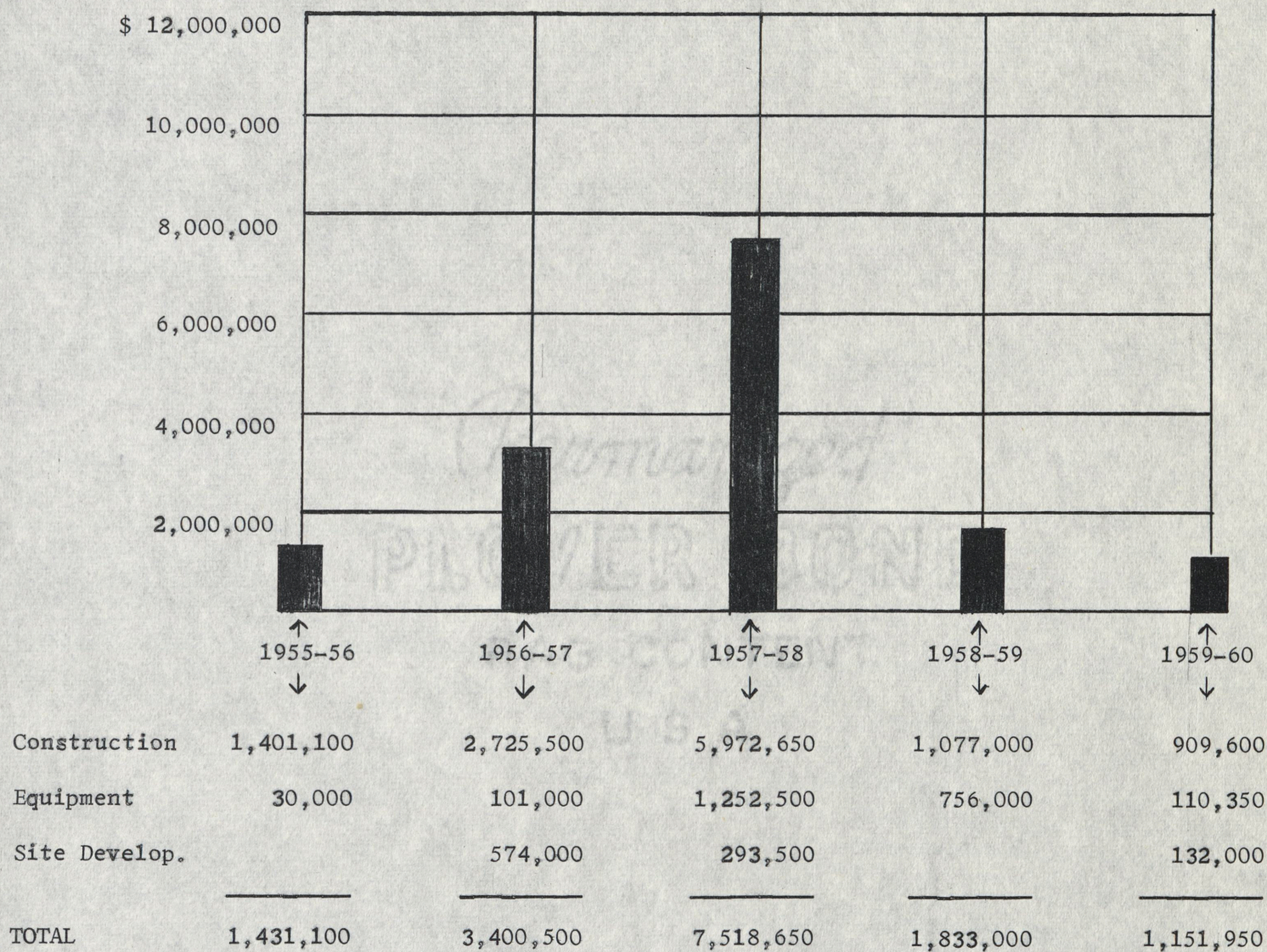
1. Men's Physical Education Facilities	\$ 1,800,000
2. Agriculture Classroom Building	850,000
3. Music-Little Theater Building	1,700,000
4. Activities Building	770,000
5. Engineering Addition	2,600,000
6. Home Making and Industrial Arts Facilities	1,150,000
7. Cafeteria No. 2	600,000
8. Additional Physics Laboratories	100,000
9. Library Addition	800,000
10. Two Residence Halls	1,580,000
11. Auditorium	1,300,000
12. Classroom Building	2,000,000

13. Health Center Addition	750,000
14. Completion of P. E. Facilities	1,800,000
15. Business Classroom Addition	900,000
16. Two Residence Halls	1,580,000
17. Engineering Addition	2,000,000
18. Classroom Building No. 2	675,000

Included in this report are two charts which will graphically display the costs of the building program through the years 1955-59, and the proposed five-year building program during 1960-65. The dollar figures used on Chart No. 1 are the figures taken from the respective years' budget bills.

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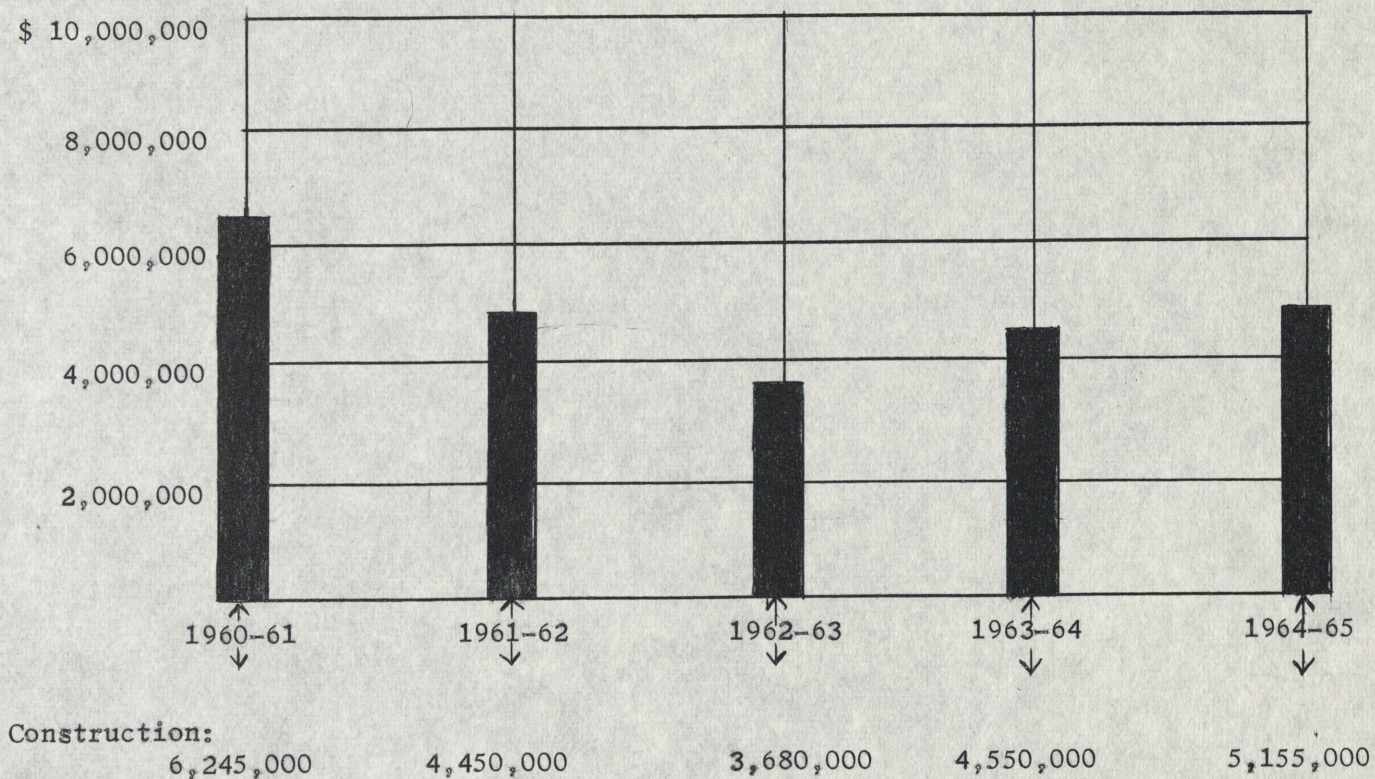
MAJOR CAPITAL OUTLAY APPROPRIATIONS
Kellogg-Voorhis Campus
For Budget Years 1955-1960



1955-60 Total: \$ 15,335,200

- NOTES: (1) Amounts shown are from approved budget bills for years 1955-56 through 1958-59 and from the Governor's budget as submitted for the fiscal year 1959-60.
- (2) Site Development amounts listed are for roads, parking lots, street lighting, sewer lines, and improvements of utility systems.

CAPITAL OUTLAY PROGRAM FOR 1960-65
Kellogg-Voorhis Campus

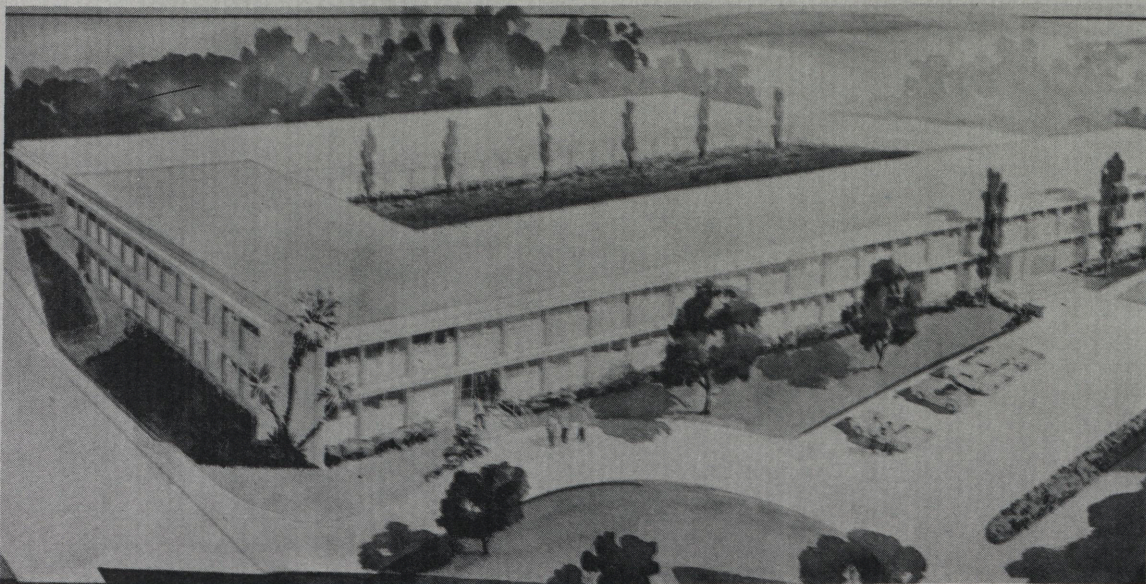


1960-65 Total: \$ 24,080,000

NOTES: (1) Above estimates are approximations based on currently available information.

PLOVER BOND

**.THE FOUNDATION
..HOUSING
.SPECIAL SERVICES**



Agricultural And Social Science Building, San Luis Obispo

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THE COLLEGE FOUNDATION

The California State Polytechnic College Foundation was organized in 1942 as a non-profit corporation for purposes of aiding the instructional and administrative program of the College. A major function of the Foundation is to aid the instructional divisions of the College in conducting a practical learn-by-doing program through the student project program and semi-commercial agricultural and engineering enterprises. The Foundation also operates and manages numerous auxiliary services on all campuses of the College including the major functions of housing and feeding.

The student project program as conducted by the instructional divisions must look to the Foundation for financial aid and assistance. The "earn while learning" or production projects are thus conducted through the Foundation as semi-commercial enterprises emulating as closely as possible a typical commercial operation. Only with this type of occupational training can experiences in operational skills and management be provided for students in the fields of agriculture, engineering and commerce.

The need for college administered and operated auxiliary activities became evident many years ago when it was ruled the State could not lend its credit to aid student project activities. It was then necessary for the Foundation to set up the facilities for loaning money or credit to the students to purchase their animals, buy feed, and even in some cases to hire other students to work for them. Similarly, in the areas of housing and feeding the services of the Foundation were called upon to provide a flexible, local management which could meet the daily needs of the students and provide a co-curricular program which the State was not prepared to do. It must be remembered that through the years Cal Poly has been the only State College with a major residence and feeding program. Through this pioneering, practices and management experiences have been developed which are now being used as a guide in the newly developed State College programs.

The development of a student project in production or work experience is started and organized in the classroom. Students and their instructors make operational plans and provide budget estimates. After approval by the dean of the division involved the Foundation and the student enter into a contract concerning the operation of the project. The enterprise then begins with the Foundation providing the supplies, materials, livestock and other goods needed. Necessary records are kept by the student and the Foundation, and records must agree in order to terminate the project at the conclusion of the student's activity.

HOUSING

San Luis Obispo Campus

On-campus housing was provided for 1197 students during the 1958-59 college year. This figure includes 75 married students and their families. A large number of students live in San Luis Obispo and the surrounding towns, some being required to drive more than 40 miles a day to and from the campus. The vast construction program in the area, including State and governmental installations nearby, plus campus construction, have greatly reduced off-campus facilities for students.

Single Student Housing—While on-campus housing was provided for 1122 single students, 737 were housed in permanent type residence halls, and 455 in temporary type structures. It was necessary to house 495 students in the five newest permanent residence halls, although they were built to house 320 students. One residence hall, built more than 50 years ago, housed 98 students, two to a room, in rooms of less than 100 square feet of floor space.

Women Students—Three residence halls have been used to house a total of 164 women students. This represents considerably less than half of the women enrolled. The remainder are housed in college approved, off-campus housing.

Married Students—On-campus there are 75 temporary type, one and two bedroom plywood dwellings at Poly Ninos Village. These were formerly used as military buildings elsewhere, and while obsolete, will be used again for the coming year.

Outlook for 1959-60—There will be little or no change in the numbers of spaces for single and married students for the 1959-60 college year. The overloaded facilities will again be used to provide spaces for 1122 single students and 75 married students. However, for the 1960-61 college year, it will be possible to provide additional housing for 1200 students in six new, modern residence halls. Four of these are expected to house 800 men students and two are to house 400 women students.

Kellogg-Voorhis Campus

Approximately 20 per cent of this year's students lived in the housing facilities at Voorhis -- 212 single men in residence halls and 40 married students in the Vet Hill unit and trailer park. Off-campus housing accommodated the remainder of students. Four new modern residence halls, providing housing for 800 students, are currently being constructed on the Kellogg Campus. Occupancy of these units is planned for the Fall quarter of 1960.

FOOD SERVICE

Food service for students and staff consists of cafeteria and snack bar operations at San Luis Obispo, Voorhis and Kellogg. Approximately three quarter million meals a year are served. To do this the food service people prepare and serve approximately 100 tons of beef, 20 tons of poultry, 8 tons of fish and 50 tons of other meats yearly. Almost 100,000 gallons of milk are used during the year, and at San Luis Obispo 75,000 gallons of this milk are produced by the Foundation dairy herd and the student project herd. Foundation creamery operations process the milk for cafeteria consumption at

San Luis Obispo. Student and staff appetites account for similar quantities of other foods.

Catering for special self-supporting functions at the various campuses is a major function of the food service program. During the year over two hundred special events will involve food service people in producing banquets, barbecues, ranch style open-air breakfasts and small parties.

The new cafeteria and snack bar at Kellogg Campus was opened in January, 1958, and will need to be expanded during 1960. On the San Luis Obispo Campus construction will start in July, 1959, on a modern cafeteria and snack bar which will replace one temporary unit that is twenty years old and one cafeteria constructed in 1914.

SPECIAL SERVICES

The desirable scope of service to students is that which encompasses more than the classroom and co-curricular activity programs for those students who are currently enrolled. An ever-present atmosphere of good will and understanding existing between the college and the industry groups into which the students graduate is a valuable complement to the students' knowledge of subject-matter fields. In recognition of this opinion, California Polytechnic is constantly on the alert that it might be of assistance to agriculture, industry, and education groups whenever and wherever feasible.

Facilities and staff on both the San Luis Obispo and the Kellogg-Voorhis campuses during 1958-59 were available to serve a number of groups whose presence on the campuses is becoming a familiar sight. This past summer brought to the San Luis Obispo campus agricultural teachers from over the state to participate in the Skills Week program of concentrated training information, followed by a week-long conference sponsored jointly by the California Agricultural Teachers' Association and the State Bureau of Agricultural Education. These programs are perhaps the cornerstones of the special services area for the original appearance of each on the San Luis Obispo campus dates back to 1934 and 1930, respectively.

In 1957 the first concentrated short course in skills of nursery practices, especially designed to aid high school and junior college agriculture instructors, was held on the Kellogg-Voorhis campus. The short course was well received and the second of these was held, again with success, during the fall of 1958.

Service to agricultural teachers also takes college staff members into the field to observe and counsel teachers on the job. This is done under the auspices of a Bureau of Agricultural Education-California State Polytechnic College jointly sponsored program that has been in operation since the fall of 1952. Because Cal Poly has trained nearly 50 per cent of these teachers under its regular instruction program, it feels this follow-up responsibility keenly.

The colorful blue jackets of several hundred Future Farmer of America boys were again seen on the San Luis Obispo campus when they held their Annual State Convention and State Final Judging Contest and on the Kellogg-Voorhis campus where they gathered for a Field Day. These events introduce many high school students to the higher education opportunities open to them.

The physical education teachers of the state also returned to the San Luis Obispo campus during the summer to hold a workshop of three weeks duration. This program is held in cooperation with the State Department of Education and the California Association of Health, Physical Education, and Recreation, and a workshop has been conducted on the campus every year since the first one held during the summer of 1951.

School Lunch Personnel have been holding workshops at San Luis Obispo each summer since 1953.

And so it goes.... Many and varied are the groups and activities served in this area. A glance at the college calendar of facility reservations for the year presents the following types of entries: Pacific Southwest Association of Chemistry Teachers conference; California Association of Refrigeration Service Engineers Society Workshop; Region 3, Game Managers meeting; Grange Youth Conference; Western Fairs Judging Contest; Nurserymen's Refresher Short Course; California Fertilizer Association and State

Colleges meeting; Association of Childhood Education Workshop; State College Audio-Visual Coordinators Conference; California Council of Vocational Associations conference; Department of Classroom Teachers, Central Coast Section California Teachers Association conference; Printing House Craftsmen meeting; Retired Teachers Association meeting; School Board Association---Tri-County conference; Committee on Diagnostic Reading Tests, Work Conference in Reading; California State Central Committee on Social Studies; Summer Workshop; California Farm Bureau Federation staff conference; California Pipe Trades Council State Apprenticeship Contest; Work Experience in Education Advisory Committee, State Department of Education, Three-Day Conference-Workshop. The numbers of participants in these affairs range from around 25 persons to 100 and over.

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STUDENT PERSONNEL

CO - CURRICULAR ACTIVITIES

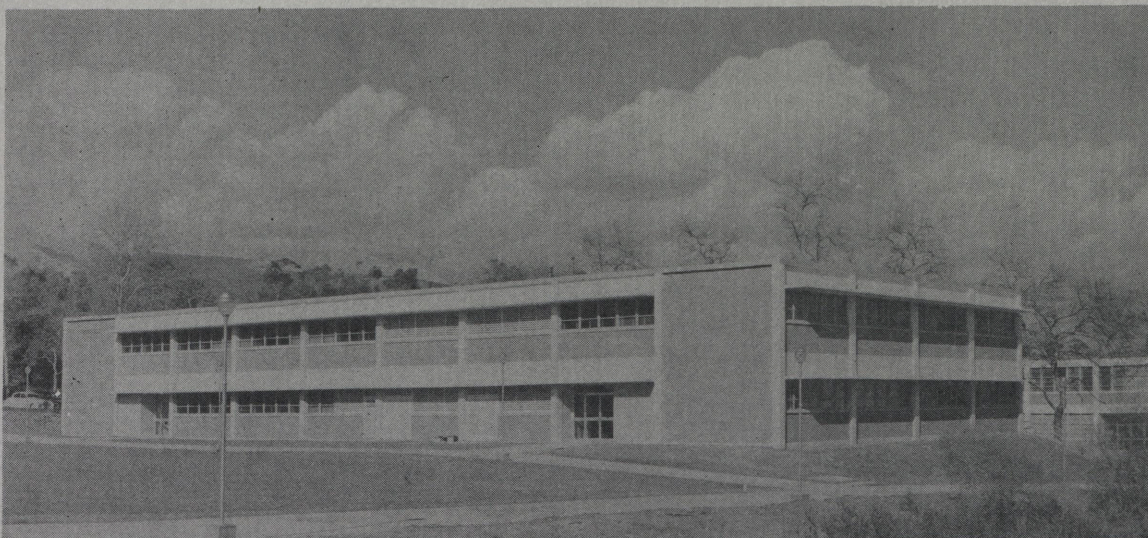
COEDS

COUNSELING

HEALTH SERVICE

FINANCIAL AIDS

PLACEMENT SERVICE



Business Building --Kellogg-Voorhis

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Co-Curricular Activities

The challenge for the Student Activities Department is to serve the needs of a larger and larger student body with a limited staff. This requires striving for greater amounts of understanding from the entire college staff, as well as the development of more effective and responsible student leadership.

The further development of leadership education opportunities for students continues to be the core of the Student Activities program. The annual leadership training conference expands each year, both in attendance and in the educational worth of the program. In addition to co-curricular growth in leadership development, student demand for curricular training in leadership understanding has increased the enrollment in the sociology course series 251, 252, and 253.

The faculty has been increasingly involved in the co-curriculum through an expanded chaperone program which was brought about through the increase of single women students. Plans for the future must necessarily include greater faculty participation in all phases of the program if the co-curriculum is to continue to stress educational values.

The "Activities Transcript" continues to gain status as an educational instrument. It gives group leaders valuable experience in discriminating among various personality characteristics and in developing greater sensitivity in evaluating the performance of group members. It also provides the individual student with an analytical view of his personality as others perceive him. This sets up a situation for personal counseling when the individual becomes aware of wide variations between his rating by others and his self-concept. The future of the Student Activities Department must be prepared to identify these individuals, to offer counseling, and to refer certain cases for more intensive help.

The music program provided co-curricular opportunities for an increasing number of students through a more diversified array of musical groups. In addition to the Annual Music Tour which this year reached approximately 25,000 persons in the San Francisco Bay Area, the concert band and Women's Glee Club performed to the pleasure of numerous audiences in the county. With an expanding enrollment, particularly in the Education Department, and a new music facility, the future for the co-curriculum in music is bright.

Publications included another outstanding Yearbook and the third year of a semi-weekly newspaper. With new facilities in the Graphic Arts, and an expansion in journalism offerings, the college will probably grow into a daily paper status.

The athletic program continued to be an outstanding program with participation by the college in 13 major sports. The intramural program attracted nearly 1,000 participants.

Finally, with larger enrollments, Student Government is called upon to offer additional services through the Associated Student Body Office and an increasing budget. The future demands more space to carry on the administration of student governmental and student organizational functions, and considerable thought is being given to plans to take care of this need. The ultimate solution calls for a complete "College Center" with a Student Activities Building as an integral part. As an intermediate step, however, the assignment of a temporary facility, as new buildings are completed, appears to be the most appropriate solution.

Kellogg-Voorhis Campus

Recognizing the need for a citizen with college training to be useful to his community as a leader or intelligent follower the college activity program again made every effort to provide all students the opportunity for first hand experience in music, dramatics, journalism, athletics, government, and social events.

A laboratory in group activities was offered in each quarter for club and student body officers stressing parliamentary procedure, the conduct of effective meetings, the techniques of leading group discussion and program planning. A leadership conference open to all students was held during the spring quarter in the San Bernardino Mountains.

Highlights of the activity program this year were the following:

"St. George and the Dragon", the associated students entry in the annual Pasadena Tournament of Roses Parade garnered the "Theme Prize" award for the second time in three years with resultant national publicity for Cal Poly students and the Ornamental Horticulture department's floriculture program.

This year the Kellogg-Voorhis campus fielded teams in more inter-collegiate sports than ever before—football, basketball, baseball, track, cross country, tennis, golf, swimming and rodeo. In addition, a reorganized intramural program provided activity in touch-football, softball, basketball, volley-ball, shuffle-board, horse-shoes, miniature golf, tennis, table tennis, and track and field.

The annual music tour between the winter and spring quarters featured the college glee club and dance band in a variety show performed for the entertainment of ten high school student bodies in San Bernardino, Los Angeles and Ventura counties.

The Ninth Annual Agricultural Education Field Day held for the first time in the fall quarter attracted in excess of 1,000 high school and junior college students to the campus to compete in the agricultural judging and skills week.

The Seventeenth Annual Poly Vue, open house, attracted an estimated 5,000 people to tour the educational displays and visit the campus.

"Engineering Week" recognized for the first time on the Kellogg-Voorhis campus featured Dr. Thomas Micheals of Hughes Aircraft Advanced Study Program who spoke on "Engineering and Science: It's Impact on Society" at a student body assembly and Mr. Bruce Grube, Director of Management, Development and Training at Kaiser Steel, who spoke at a special assembly of engineering students on "What Industry Expects of Engineering Graduates".

Several new campus clubs were established during the year to complement the establishment of new instructional majors and new areas of interest. These included: Alpha Zeta, national agriculture honorary fraternity; Agronomy Club; Entrepreneurs; K-V Flyers; Newman Club; Physics and Math Club; Racquet Club; Rocket Society; Sailing Club; Social Science; Cahper.

Women Students

June, 1959, will mark the end of the third year in the modern era of coeducation on the San Luis Obispo campus. Over this three-year period both the enrollment of women and their participation in campus activities showed continuous growth.

The number of regular women students registered for the Fall Quarter of the year 1958-59 was 391. They represented approximately 10 per cent of the total student body, and were enrolled in majors in all three divisions of the College. Four departments in Agriculture claimed 24 majors; five departments in Engineering, 9 majors; and nine departments in Arts and Sciences, 358 majors. In addition there were nine graduate students.

Campus residence halls housed 164 women and some 60 coeds resided in supervised residences off the campus. Most of the remaining number lived at home within commuting distance of the college. Women were active in club and campus activities, holding office and assuming other major responsibilities. They served on judging teams, worked on school publications, and held membership in musical organizations.

A "Big and Little Sister" program was sponsored by the Home Economics Club, and other women's affairs were coordinated by the Residence Hall Council, a group which is responsible for much of the women's government on the campus.

Scholastically, the women compared favorably with the men students. The three women's residence halls were in the top group when grade point averages for the Fall and Winter Quarters by halls were compared. Also, of the total number on the "President's List" for the 1957-58 school year, 13 per cent were women, although coeds comprised only 10 per cent of the students enrolled in the College.

Counseling and Testing

During the academic year 1958-59, the Counseling Center has continued to develop its special services to departments within and outside the Student Personnel Division. The year's progress may be summarized under three headings: services to instruction, services to other departments in Student Personnel and developments internal to the Counseling Center.

More departments in each of the instructional divisions have received services from the Counseling Center. The testing program for new students has been streamlined so that greater time may be given to the early introduction of students to their instructional departments, (departments of ROTC and Music have benefited particularly from these arrangements).

Perhaps the greatest achievement which has strengthened the relations between the instructional division and the Counseling Center lies in direct services to academic advisors, particularly with regard to students on probation, new students and students who indicate a desire to change their majors or withdraw from college. Again and again, staff of the Counseling Center have been consulted about problems concerning these kinds of students. Procedures have been improved whereby the departments feel more confident about their handling of such cases, the individual student profits from earlier and more critical attention to his academic or vocational problem and the Counseling Center plays its correct role with both the instructional department and the individual student. A formal program has been initiated

with the Dean of Engineering and all department heads in that division for immediate, long-range consultation between the Counseling Center and Academic Advisors concerned particularly with new students, probationers and students who indicate intention to change their major, or withdraw from college.

Within the Student Personnel Division, the staff of the Counseling Center has continued to consult on a wide range of topics. Staff have participated in all phases of new student integration with some attention to leadership training as well. Procedures have been improved for relating testing to new student registration. The Center continues to counsel with prospective students and their parents who are referred by the Admissions Office. Counselors have a very cooperative relationship with the Placement Office and the various recruiters who visit the campus. Many tests are administered to seniors on behalf of their prospective employers by the staff of the Counseling Center. Professional cooperation between the Health Center and the Counseling Center provides excellent service to students whose health may be temporarily impaired.

The residential nature of our campus encourages cooperation between the Counseling staff and the college officers concerned with housing. Counselors help the Residence Supervisor-Counselor select new dormitory managers, counsel students who find it difficult to adjust to college life and otherwise consult on problems in the residential program. A particularly close relationship exists between the Associate Dean (Women) and the Counseling Staff, their functions often overlapping to a considerable extent.

Internally, this has been a year of improvement for the Counseling Center. Staff meetings have concerned themselves with topics of professional growth and organizational development. We have been especially fortunate to have added a psychometrist to our staff this year, in place of a senior clerk's position, and so have been able to improve our testing function many fold. The Testing Center has revived the Occupational Information Service and continues to develop factual materials on the various occupations for which Cal Poly's curricula prepares young men and women. Plans for the Counseling Center's future offices in the administration building also served to focus staff attention upon the need for a solidarity of organization within the Center.

Counseling Center services, particularly those to the instructional divisions, are becoming so vital to the life of the student that the present staff of one and one-half counselors (the Test Officer acting essentially as a counselor) finds itself hard pressed to meet the challenge.

Kellogg-Voorhis Campus

The Guidance Center provided technical data to the advisory personnel, including placement test data and information on interests, abilities and aptitudes. In increasing numbers students are seeking information about their interest areas, aptitude test scores, vocational matters, and counsel on personal problems. Questions dealing with serious personal problems are usually referred to appropriate agencies on or off campus such as the Health Center, psychological clinics, domestic relations agencies, ministers.

The Guidance Center has administered some 2,000 guidance tests during the year. These include the academic aptitude and subject matter placement tests administered to all entering students in addition to the individual interest inventories, personality

tests and vocational guidance surveys administered to students who sought assistance from the Center.

Counseling objectives include the primary one of assisting students to work out problems requiring adjustment through a program of coordinating all aspects of the student's campus life with his academic-vocational workload. The central focus of the counseling service rests in the academic advisory system which also encompasses occupational-vocational aspects.

Student Health Service

The purpose of the Student Health Service is to protect and maintain the health of the student during his stay at Cal Poly so that he may receive the most benefit possible from his educational program. On admission to the College, the student is given a complete health examination. Any unusual findings which may influence the student's welfare, either while he is a student or in later life, are carefully investigated and steps are taken to correct such problems. About 75 per cent of the students are found to have some problem needing further investigation or care.

Over 35,000 student visits are made to the clinic each year. Services include allergy testing and treatment, electrocardiogram, basal metabolism, diagnostic X-ray service, clinical laboratory, diathermy and other physiotherapy. All students are given a serology test, influenza and tetanus toxoid vaccinations. Routine audiograms reveal better than 10 per cent of the students have some hearing loss in the speech range, while an additional 18 per cent have hearing loss outside the speech range. Two-hundred-ten students were hospitalized in the Infirmary for a total of 830 days. A clinical laboratory performs all the common laboratory diagnostic procedures.

The Student Health Service is responsible for the Environmental Sanitation on the Campus. Sanitary inspection with bacterial counts are made in the food preparation and eating areas on at least a weekly basis. Inspections of the dormitories and other campus areas are made as indicated. The student is encouraged to seek care as soon as he becomes ill. We feel the Student Health Service has the same understanding and interest as the family physician in the student.

Kellogg-Voorhis Campus

The Kellogg-Voorhis campus student health program operates under the same philosophy as that for the San Luis Obispo campus. Because, however, of the limited facilities and lack of a staff physician the professional services provided are somewhat different. Contract medical services with the Magan Medical Clinic, Covina, provide students at this campus with medical and certain surgical care including admission medical examinations, health counseling, emergency care and first aid for sick and injured persons and outpatient care to the level of that expected of the average family physician. The Clinic assumes medical direction of the health program and performs campus public health services, including regular inspection of food preparation and eating areas.

A doctor visits the Kellogg Health Center daily, Monday through Friday, for sick call, and clinic services are available to the K-V students twenty-four hours daily. In addition to the State-paid services of a medical officer available at the Clinic, the campus health center provides a college nurse who directs the environmental sanitation program as well as other duties and services for the students' welfare. Students pay a nominal fee for the Clinic services.

Financial Aids

With each year of rising educational costs, the financial problems of students become more acute. The College recognizes this situation and has both scholarships and loans available. In addition, campus and community employment is correlated with the loan and scholarship program.

San Luis Obispo Campus

Scholarships available to Cal Poly students were provided by 60 donors. The number of scholarships available were 118. The average amount of the scholarship grant is approximately \$300.

During the year new scholarships were added as follows:

California PTA Elementary Education Scholarship	\$400
California Landscape Contractors Scholarship	100
Hugh H. Logan Scholarship for a senior student majoring in Air Conditioning	500

Loans continued to be an important factor in financial assistance. These loans are either for short term of 90 days with small amounts up to \$50.00 or long term educational loans up to \$200.00. There are no interest charges on current loans. Loans which are delinquent pay interest of 1 per cent a month on the unpaid balance for short term, and 6 percent per year on long term. A loan fund of \$38,130 is available and is heavily used by students. A new loan fund was added this year:

The Edgar E. Bilodeau Loan Fund	\$500
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In addition the Home Economics Division of the California State Grange has provided a fund of about \$1600 to be used to assist women students who are in need of financial help in order to continue their studies.

Kellogg-Voorhis Campus

While Kellogg-Voorhis students usually enjoy the same eligibility for Cal Poly scholarships as students at San Luis Obispo campus, some scholarships are designated for use at a specific campus. During this year, 20 scholarships worth \$6,725 were granted for use of incoming students at this campus and 18 scholarships worth \$3,800 were made available to advanced students.

Scholarships

Entering Students			Advanced Students		
Description	Number	Value	Description	Number	Value
Alhambra Exch.					
Club	1 @ \$250	\$ 250	Johnny Allen	1 @ \$600	\$ 600
Calif. Nursery-			Bandini	1 @ \$100	100
men	1 @ \$100	100	Calif. Ferti-		
Carl R. Gray	1 @ \$100	100	lizer Assoc.	2 @ \$100	200
McManus (Pearl)	1 @ \$500	500	C.L.C.A.	5 @ \$100	500
Standard Oil	2 @ \$300	600	Chet Pencille	1 @ \$200	200
Sunkist Mgrs.	4 @ \$150	600	Chuck's Nursery	1 @ \$100	100
U.S. Industries	1 @ \$500	500	Lemon Mens Club	1 @ \$100	100
Warrior Head	1 @ \$ 75	75	Rosedale Nursury	1 @ \$100	100
Wrasse	8 @ \$500	4,000	Sunkist	1 @ \$150	150
TOTAL		\$6,725	Vitren	1 @ \$100	100
			Worthington	1 @ \$650	650
			Wrasse	2 @ \$500	1,000
			TOTAL		3,800

Loan Funds have been in operation for several years at this campus and in the past year a total of 815 loans were made to students to meet emergency situations.

Placement Office

This year's number of students contacted on campus by prospective employers again was higher than the previous year. The monthly average (October through March) shows 706 students contacted on campus, 38 campus recruitment visits by employers and 24 employers for whom interview schedules were arranged. These figures compare favorably with last year's figures which were 533, 24, 20.5 respectively.

Student part-time employment information obtained from the Placement Record Card for the Fall Quarter of this year showed that 1,002 students had jobs on or off campus.

The Placement Office compiles and maintains a placement folder for each student completing the Teacher-Training program. A summary of teacher placement activity compared with the total figures for previous years follows:

	<u>Actual 1956-57</u>	<u>Actual 1957-58</u>	<u>Estimate 1958-59</u>
Teachers and teacher candidates using services of the Placement Office	91	112	141
Number of confidential folders mailed to school officials	168	278	390

This office also provides service for summer job listings and participates in an annual employment follow-up program to appraise success of placement as evaluated by employer and employee.

A summary of interviewing activities of employing organizations visiting the Cal Poly campus during the regular recruiting period compared to three prior years follows:

	<u>Actual 1955-56</u>	<u>Actual 1956-57</u>	<u>Actual 1957-58</u>	<u>Estimate 1958-59</u>
No. of students contacted through regular interview schedules	1913	3526	4513	4800
No. of campus recruitment visits by employing organizations	211	243	213	270
No. of employing organizations for whom interview schedules were made	108	170	147	155
No. of employer organizations' representatives who conducted interviews	215	413	309	381

Survey of Starting Engineering Salaries - 1958 Graduates

<u>Degree</u>	<u>Cal Poly</u>	<u>Northrop Study</u>
Aeronautical	\$479	\$498
Air Conditioning	484	
Civil		471
Electrical	481	489
Electronics	510	
Mechanical	482	479
Metallurgical		488
Industrial	487	
Physics		487
Mathematics	493	479

Kellogg-Voorhis Campus

Although the Placement Office on the Kellogg-Voorhis campus is staffed only on a part-time basis it attempts to fill the same need as does the San Luis Obispo Office.

Placement of all graduating seniors in appropriate positions was accomplished through agricultural departmental contacts and the coordinating efforts of the Placement Officer. In nearly every case the graduate had a selection of several career opportunities.

Part-time placement of students in campus or off-campus jobs continued to be an important part of the Placement Office work. A survey indicated that more than 75 per cent of the current student body does some part-time work during the school year to help earn college expenses.

With the progression of the first class of engineering students into the senior class next year the Placement Office has been working closely with the Engineering Division to develop industrial contacts that will lead to employment opportunities. The outlook for employment in engineering fields is good.

The Placement Office has also been working closely with the Business and Engineering divisions on the development of a cooperative work-study arrangement with business and industrial concerns. The first such program was established during this year.

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INSTRUCTION

OBJECTIVES & PHILOSOPHY

NEW CURRICULA

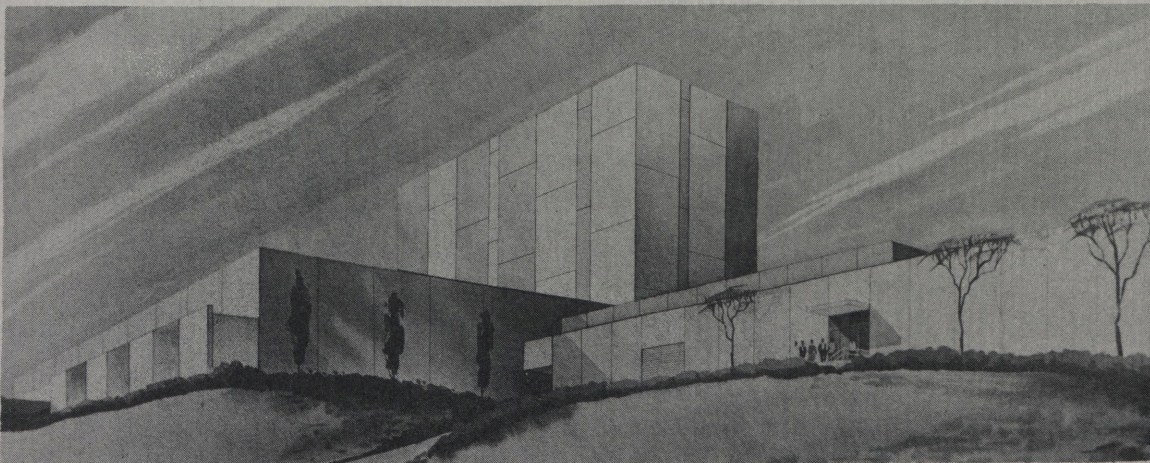
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THE DIVISIONS:

...AGRICULTURE

...ENGINEERING

ARTS & SCIENCE



Little Theater And Music Building--San Luis Obispo

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OBJECTIVES AND PHILOSOPHY

"The conclusion is inescapable that here is an institution with a sense of direction based upon an awareness and pride in its history, an effective staffing for determining the salient facts with respect to its present status, and sound planning together with high morale for projection into the future." . . . October, 1958, Report of the Higher Commission of the Northwest Association of Secondary and Higher Schools.

The objectives and philosophy of California State Polytechnic College are clearly stated in the final report of the reviewing committee of the Northwest Association of Secondary and Higher Schools, one of six regional accrediting associations in the United States which visited the College October 8-11, 1958. The committee consisted of nine members of college and university faculties in Washington, Utah, Nevada, Idaho, California and Oregon directed by Dean T. S. Kerr, executive coordinator of the Higher Commission of the association. The committee's report recommending five-year extension of the College's accreditation was approved subsequently at the annual meeting of the Northwest Association.

The report included the following statements:

"The Northwest Association holds as a basic premise of institutional evaluation that each institution is to be evaluated with respect to its own objectives. It therefore becomes crucial at the outset to determine whether institutional objectives are stated and whether these objectives, in fact, operate to give direction to the programs of the institution. Both the materials of the self-evaluation report and an examination of the programs in operation gave ample evidence to support an unqualified affirmative answer to the question of objectives at California State Polytechnic College.

"The committee found California State Polytechnic College to be an institution with objectives clearly formulated and operating in the lives of administration, faculty, and students to produce a program both worthy and distinctive."

"General Objectives of the College" (excerpted from statements submitted to the committee by the College)

"The primary function of instruction at the California State Polytechnic College is to impart to students those techniques and sciences necessary to perform successfully the occupations in which they will be employed. To balance this concentration on offerings designed primarily for occupational competence, the curricula must, therefore, also emphasize general education subjects which help the student to understand the world in which he lives, assist him to express himself, help him to live harmoniously with other people, and to assume his appropriate citizenship and community leadership responsibilities...."

"Educational Philosophy" (excerpted from statements submitted to the committee by the College)

"California State Polytechnic College has a unique educational philosophy sometimes described as the 'upside-down educational program.' This plan is characterized by the grouping of as many job-preparatory courses in the first two years as possible. While general education courses are included in the first and second year, this area of preparation is extended throughout the four years of the college program. The net result is that a student who completes the four-year course leading to a degree will have covered substantially the same material as that covered in a similar major in a typical agricultural and mechanics arts 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. He also acquires a realization of need for 'theory' courses. This system enables a student to better earn a living, using the knowledge and skills he has acquired at whatever point he may complete his formal education."

NEW CURRICULA

San Luis Obispo

Only two changes were made in the curricular offerings in the Fall Quarter, 1958-59. The first of these was the addition of the senior year courses in Home Economics and the second was the addition of the freshman and sophomore courses in Technical Arts. Enrollment in Home Economics increased from 64 in 1957-58 to 82 in 1958-59. The initial enrollment in the Technical Arts major was 28.

In the Fall Quarter, 1959-60, two new majors will be added:

Food Processing - This curriculum is designed to prepare students for employment in the various phases of the food processing industry and related areas. Instruction in the field qualifies students for placement in the production phases, both field or plant, and the operating phases of the industry. This curriculum does not prepare students for the specialized field of food technology or research. It specifically provides for training that will enable the graduate to accomplish doing and management jobs connected with the field and plant operations of the food processing industry.

Skills achieved in the production aspects of the processing business are coordinated with theory study in science, humanity, and business courses. Two options are to be offered. The Production Management option emphasizes preparation for the production and management aspects of the industry. The Processing Equipment option includes a concentration of related engineering and equipment skills applicable to the industry. Only the freshman and sophomore courses in this major will be offered in 1959-60.

Metallurgical Engineering - This curriculum prepares students for employment as metallurgical engineers. Students who graduate will be employed by private industry and government agencies to deal with problems of design and manufacture of metals and alloys, corrosion protection, non-destructive testing, application of codes and specifications, weldability of metals and alloys, and application of metals to specific needs and requirements. Typical position titles are metallurgist, materials engineer, welding engineer, nondestructive test engineer, and inspection and quality control specialist. Only freshman and sophomore major courses will be offered in 1959-60.

Kellogg-Voorhis

In the case of the six majors introduced in 1957-58, additional years of the programs were offered in 1958-59. Each of these showed enrollment increases as given in the following table. The number of years of each program offered this year are shown in parenthesis.

		<u>Enrollment</u>		<u>% Increase</u>
		1957-58	1958-59	
Aeronautical Engineering	(3)	23	42	83
Electronic Engineering	(3)	115	233	103
Industrial Engineering	(3)	26	41	58
Mechanical Engineering	(3)	52	116	123
Biological Sciences	(4)	20	25	24
Physical Education	(3)	19	57	200

Enrollments in new majors introduced in 1958 are:

Accounting	(3)	12
Business Administration	(3)	66
English	(2)	10
Marketing and Sales	(3)	4
Mathematics	(3)	19
Physical Sciences	(3)	14
Social Sciences	(3)	21

Permanized
PLOVER BOND
RAG CONTENT
U S A

L I B R A R Y

"The things that make a library are.....books and people,
simultaneously present."

- William H. Carlson

San Luis Obispo Campus

During the past year one of the most trying, and at the same time, most satisfying tasks for the library staff has been the planning of the Library Annex which will more than double the size of the library, both for books and for people. While the library is a service function of the college administered by the Arts and Sciences Division its pre-eminent duty is instructional. Every operation of the library, the Technical Services of acquisition and cataloging as well as the Public Services for Circulation and Reference, is aimed at assisting and instructing library patrons in the art of proper use of library materials. The new annex has been planned to bring books and people together with the best possible conditions for carrying out this instructional function.

Circulation has increased 19.5 per cent over last year with a total circulation of 99,694. Use of materials within the building is estimated as constituting some fifty per cent of the total library service load. Library holdings have shown an increase of slightly over 6,000 cataloged volumes to a total of 71,000 volumes. Crowded conditions, especially in reading rooms and technical service work areas, hamper efficiency of operation, and extreme difficulty in finding suitable candidates has been met in filling vacancies among the professional staff. In spite of these factors the staff of twelve professional librarians and eight clerks has carried on the extensive library program with a minimum of reduction of service.

Kellogg-Voorhis Campus

Library services during 1958-59 were centered on the Kellogg Campus, but with a reserve book service on the Voorhis campus. To the major collections, 3,900 pieces in the forms of books, microfilm, bound periodicals, and phonograph records were added during the year, bringing the total to 14,500 bound volumes, 605 reels of microfilm, and 150 phonograph records.

A major undertaking during the year was the reclassification of the cataloged collection from the Dewey Decimal Classification to the Library of Congress Classification. The project was 75 per cent completed. It was undertaken to serve better the technical aspects of the instructional program and because the Library of Congress Classification lends itself to major subject groupings for student convenience.

AGRICULTURAL DIVISION

San Luis Obispo

Demand for graduates of the Agricultural Division continued to be good during 1958-59. A tendency for more graduates to be employed in related agricultural activities rather than in production was noted. The growth of demands for agriculture trained graduates in these related fields is an important stimulus to the maintenance of high employment levels for graduates. These related positions can be found not only in the processing, sales and servicing of agricultural products and of products used by agriculture, but also extend to management, agricultural engineering, mechanized agriculture, and soil management.

Work of the division continued to stress the two cardinal instructional methods at Cal Poly of learning by doing and earning while learning through emphasis on the project system. Progress was made during the year not only toward increasing the number of students engaged in project work but toward improvement in the type of projects in which they are engaged.

The international aspects of the agricultural division which have been growing steadily in recent years found men from 37 other nations enrolled in the division this year. The total of 105 foreign students accounted for more than half of the entire enrollment of students from other countries at the college. Some of these students came to Cal Poly entirely on their own initiative; others are financed here by their home governments, and still a third group studies here under auspices of the International Cooperation Administration--Cal Poly being one of two institutions in addition to the land grant colleges to be included in the ICA program.

Students of the division continued the splendid record which they have made in recent years in competitive activities, carrying off the lion's share of honors in livestock, dairy cattle, and dairy products judging, as well as winning many blue ribbons with their livestock entries.

Detailed planning of the use of the new agricultural classroom building which will be available with the opening of the fall quarter in September, 1959, has been an important part of the division's activities this year. Inasmuch as the division's activities have been widely scattered and many of them housed in temporary quarters, it is expected that the use of the new building will contribute greatly to more efficient operation of the division.

Highlights of the year in the departments of the division follow:

Agricultural Engineering. With increased emphasis being placed on the conservation and distribution of water in California, an increasing number of students are following the soil and water option offered in the agricultural engineering curriculum. Upon graduation, many of these men are employed by such agencies as the State Department of Water Resources, U. S. Soil Conservation Service, U.S. Bureau of Reclamation, Corps of U.S. Army Engineers, local water and irrigation districts, and manufacturers of irrigation equipment. An increasing number of agricultural engineering graduates also are finding employment as design engineers or doing research and development work with the major manufacturers of farm machinery.

Many agricultural engineering undergraduates have been placed in training positions during the summer months as engineering aides or trainees with both the farm equipment industry and soil and water activities. This summer placement program is particularly valuable for the student, the employer and the college, and is being

promoted and extended as rapidly as possible.

The year saw two important anniversaries for the agricultural engineering department. Twenty years ago (1939) the first group of students were graduated with a three-year technical certificate in agricultural mechanics. Ten years ago (1949) the first graduate received his B.S. degree in agricultural engineering. The dual anniversary was celebrated with a banquet at Poly Royal time.

The Agricultural Engineering Department continues to draw a large percentage of the foreign trainees brought to this country by the International Cooperation Administration for training in agricultural mechanization. Special courses have been tailored to meet the training objectives of these participants and the college is reimbursed for this program.

The Animal Husbandry Department's student project program won notable championships during the fall season starting with the Grand Champion fat lamb award at the State Fair. Next came the winning of the championship with a Suffolk wether for the first time in the history of the show at the Grand National. A Southdown produced by the Cal Poly project program also sold for \$10 a pound at the Grand National. At Los Angeles' Great Western Show, the Cal Poly project system scored again with a championship taken by a thickset Southdown crossbred. Project cattle topped the college division at the Los Angeles County Fair and Poly students also had the champion carcass steer. At the Cow Palace Fall Show, Cal Poly entries swept the carlot division with the championship being won on a load of Angus (this being the first load of Angus Poly has shown in a long time), and a reserve championship being won on a Hereford load. A Poly project steer was also named champion Angus of the show of individual steers.

The Livestock Judging Team won championships at the Cow Palace, San Francisco; Golden Spike at Ogden, Utah; and National Western at Denver, Colorado. This year, coeds were members of all three championship teams.

A four pen addition has been completed on the lamb feeding shed to permit further expansion in the project feeding program and increased student participation. The department has also acquired grazing rights at Camp San Luis Obispo and purchased a top quality group of Hereford heifers for the nucleus of a commercial cow-calf program which will serve the dual purpose of an invaluable training aid and a source of feeder calves for the project phase of the undergraduate program.

The Field, Fruit, and Truck Crops Department not only has its students gaining experience through maintaining the orchards, vineyards and demonstration plots, but has them participating more actively in the project program. The average return to students participating in productive projects this year was nearly \$100 per month. New types of projects this year included the growing of garlic and field trials with new highbred sorghums.

Dairy Husbandry and Manufacturing student judging teams made excellent showings again this year. The dairy cattle team placed second at the Western Regional Contest at the Cow Palace, with Tom Nunes achieving the highest score ever made by an individual in this contest. Nunes also took first place in the National Brown Swiss bell ringer picture judging contest. The dairy products judging team won first place in the Western Regional contest for the fourth consecutive year. The products judging

team also placed first in ice cream and sixth in the entire contest at the National contest in Chicago.

Dairy cattle exhibited in the Great Western dairy show and at the Grand National in San Francisco made splendid showings, including a junior champion female and many first and second places. As a result of these showings, the department won the reserve all American best three females and honorable mention get of sire in the rating sponsored by the American Guernsey Cattle Club.

The productive breeders award was won by the Holstein herd for the ninth consecutive year.

The Farm Management Department developed a two-year curriculum in response to the needs of students who desire a technical certificate program. Enrollment in Farm Management continued to increase, moving up to 100 students this year as compared with 60 in the preceding year. In view of the increased enrollment, an additional staff member was added, bringing the total staff to five.

The Ornamental Horticulture Department expanded its facilities during the year through projects carried out by its students. A cloth house was constructed and utilized for the production of cut flowers and an additional acre was planted to trees and shrubs. A course in flower judging was offered for the first time during the winter quarter.

With 26 students participating in horticulture projects, the sales of student grown nursery and flower crops totaled more than \$5000. The value of plant materials produced by students for planting on the campus was more than \$3000.

The Soil Science Department found not only a continuing demand for its graduates but a steady increase in salary rating, with the result that the average starting wage for the 1958 graduates was more than \$450 per month. These graduates found employment in soil and water conservation, technical sales of agricultural chemicals, water resources, and miscellaneous activities.

The Poultry Department completed 36 student projects during the year including egg production, pullet replacement and meat bird production. The department is maintaining a flock of some 4000 laying and breeding hens. Student laboratory classes completed construction of a 16 x 36 foot brooder house during the year.

Kellogg-Voorhis Campus

Enrollment in Agriculture on the Kellogg-Voorhis Campus continued to grow despite nationwide trends to the contrary. The increase in regular students in 1958, compared with the year before, was about 8 per cent. The popularity of the major in Landscape Architecture and a continuing high degree of interest in Animal Husbandry were major factors in the increase.

Even though crop and animal production requires fewer farm operators, due to technological progress, the technical services and the service-and-supply agencies need many more trained men, a fact not sufficiently recognized by high school students and their counselors. Thus, Agriculture in its broader and more modern concept continues to offer outstanding career opportunities, and the K-V curriculum has been developed accordingly.

During the year, the new animal and poultry units were placed in operation, and modern packing house machinery for citrus fruits and vegetables was installed in the Crops unit. Also, substantial additions to the Ornamental Horticulture facilities were completed, along with a Wool laboratory and an Apiculture building. Contracts for the new Agricultural Engineering building and a feed mill were due to be let in the spring.

Student projects and judging team activities continued to augment the instructional program. Moreover, the division played host to numerous professional groups which met on the K-V campus, such as the Pest Control Industries, California Agriculture Teachers Association, Future Farmers of America Field Day, Association of Park Executives, Lemon Men's Club, Sunkist Packing House Managers, California Association of Nurserymen, Agricultural Extension Service, Southern California Arabian Breeders, Shade Tree Conference, State Department of Agriculture Poultry & Dairy Inspection, Southern California Garden Clubs.

Departmental developments were as follows:

Animal Husbandry.— The new facilities for swine, sheep, and beef have contributed markedly to the instructional program. Student projects continue to supply practical experience in handling and management. One new staff member, a nutritionist, joined the department during the year.

Agricultural Management and Sales is becoming more important each year in that it combines education in business along with agricultural production. In enrollment, it was the third-largest in the division. Next year its name will be changed to "Agricultural Business Management." One new instructor was added this year and the first graduates from the department will receive diplomas in June. Poultry production and processing fall within this major and new facilities were occupied during the year.

Fruit Production. Planting new orchards to replace those removed for construction, and the rehabilitation of old plots were continued during the year. In conjunction with the Crops Department, the new facilities for packing fruit were placed in operation, featuring a citrus processing and packing unit which functions in the same manner as a commercial packing house, though on a smaller scale. An outstanding avocado nursery project featured student activities in this department. The staff maintained an active relations program with high schools in the areas of important subtropical fruit production.

General Crops shared the new packing facilities with the Fruit Department; specifically, one wing devoted to a modern vegetable and melon unit, plus cold-room for storage. The department established new animal pastures for the college livestock, conducted range fertilizer trials and planted varietal plots for instructional purposes. Most of the land under lease from the Pacific State Hospital is farmed by this department, and gratifying progress in rehabilitation has been made. These lands also supported excellent student vegetable projects.

Landscape Architecture enjoys the largest enrollment in the division and promises to grow rapidly with the increasing population and interest in community parks and residential development. Demand for graduates is strong. One new staff member was added during the year, and additional temporary facilities are planned.

Ornamental Horticulture. Five new glass houses were completed during the year to handle ever-expanding instructional needs. This department has actively maintained its contacts with industry, particularly in the ornamental nursery field, and has entertained many groups on the campus. A new specialty option is planned within the department - landscaping contracting.

Services and Inspection is also expanding and is occupying the new apiculture facility. The development of course and laboratory materials in the field of economic pests continues to receive attention, and the head of the department is currently on sabbatical leave, collecting, preserving, and photographing specimens of disease and pest damaged fruits and vegetables.

Soil Science is primarily a service department for other majors, wherein students receive basic instruction in soils. However, students specializing in this field may take their first two years at Kellogg-Voorhis and complete their work at San Luis Obispo. A new trial and demonstration area has been established, and a new advanced course in Soil Management was developed during the year.

ENGINEERING DIVISION

The broad aim of the Engineering Division is to educate engineering graduates who are able to become productive engineering employees upon graduation and who have a sound background in science and the arts for future professional and social growth. The practical purpose of the instruction is to teach basic fundamentals in engineering with the supporting sciences and mathematics, and to apply those fundamentals to areas of engineering which include planning, construction, operation, manufacturing, sales and maintenance.

The strongest points of the engineering program at Cal Poly are its practicality, its high quality, its correlation with current industrial practice, and the strong student motivation it supplies. These features were recognized and noted in the report of the accreditation committee of the Northwest Association for Secondary and Higher Schools as follows:

"The quality and standards of student accomplishments are satisfactory in all instances and excellent in many. It is obvious that standards of accomplishment are maintained. There is specific evidence of student motivation.

"There is definite evidence that the content of courses is up-to-date and that constant evaluation and revision are practical.

"The project teaching procedures of the senior year appear to be producing excellent results and should be continued. There is evidence of initiative and creativity."

Staffing

One of the most important elements in any educational program is a hard-working, technically competent teaching staff. The report of the accreditation committee of the Northwest Association for Secondary and Higher Schools which visited the campus in October stated:

"The staff is energetic, devoted to their work and appear to be more satisfied in their work than is generally the case with academic people."

"Staff attitude toward the objectives of the institution and the operation of the departments is excellent. Staff morale is high. Pride exists in individual and total accomplishments."

The maintenance of an adequate and capable engineering staff of proper balance in formal education, teaching experience and industrial experience remains a vital problem of this Division. Staff recruitment is very difficult in many areas because academic salaries are not competitive with industrial offerings for competent, experienced engineering personnel. Despite recruiting difficulties, 14 new staff members were appointed to the Division this year, and brought an average of eight and a half years of related industrial experience in addition to nearly five years teaching experience.

In addition to the normally heavy teaching load and responsibilities in the development of the school, staff members have been active in professional societies such as Society of Automotive Engineers, Scarab Honorary Architectural Fraternity, Institute of Radio Engineers, American Society for Engineering Education, American

Society of Mechanical Engineers, American Institute of Architects, American Rocket Society, Institute of Aeronautical Sciences, American Welding Society, and the Society for Experimental Stress Analysis. Many staff members hold positions as officers and members of national and regional committees of professional societies.

Students

The 2000 full-time engineering students enrolled at the San Luis Obispo campus of Cal Poly constitute the largest undergraduate enrollment in a single field of study in the State colleges and is indicative of the success of the learn-by-doing approach to engineering education. This enrollment, at a campus which is remote from population centers, also bears testimony on the state-wide nature of the service that Cal Poly performs for California.

Enrollment in the Engineering Division dropped from 2289 for Fall Quarter, 1957, to 2060 for Fall, 1958, reflecting a nation-wide drop in undergraduate engineering enrollments. The drop in enrollment was at least partially caused by the development of engineering programs at several other state colleges, particularly at the Kellogg-Voorhis campus of Cal Poly. Academic aptitude of entering students, as demonstrated by the College testing program, rose this year, continuing a six-year trend.

Graduates

The occupationally oriented graduates of Cal Poly continued to lure recruiting teams to the campus from many of the largest concerns in private industry and various government agencies. The graduates of the class of 1958 were hired by Westinghouse, General Electric, RCA, Aerojet-General, Shell Oil, many aircraft manufacturers, leading electronic companies and Naval research and development agencies, as well as excellent smaller companies in many engineering fields.

The size of the Cal Poly graduating class in engineering continues to increase. The college's contribution to the annual national supply of engineering graduates is now approximately one per cent of the total. The annual number of engineering degrees granted in recent years is as follows:

1952-3	-	131	1956-7	-	229
1953-4	-	110	1957-8	-	340
1954-5	-	122	1958-9	-	420 (est.)
1955-6	-	143			

Although preparation for graduate study is not a principal objective of the Engineering Division, those graduates who wish to seek advanced degrees are well prepared to do so. Graduates of Cal Poly's Engineering Division have been accepted for graduate study at MIT, Cal Tech, Stanford, San Jose State, Harvard, Southern California, Illinois, Purdue, Case Institute, Oregon State and Kansas.

Scholarships, Gifts

Scholarship grants and gifts to the College by industrial firms and professional societies are an indication of confidence in the Cal Poly engineering program. This year scholarships were awarded by the following:

American Society of Tool Engineers
 American Welding Society
 General Electric Educational and Charity Fund

Hewlett-Packard Alumni Fund
 Link-Belt Company
 Printing Industries Association
 Solar Aircraft Company
 Standard Oil Company of California
 U. S. Industries, Inc.
 U. S. Motors
 West Coast Electronics

The following gifts were made to assist instruction in the Engineering Division:

Color TV receivers, Motorola, Inc.
 Model "RE" gasfluxer, Gasflux Company
 Aircomatic machine, Air Reduction Pacific Company
 Refrigerant compressors, General Electric Company
 Home air conditioning equipment, Reem Manufacturing Company
 Transistor curve tracer, Tektronix, Inc.
 Surface plate, Westinghouse Electronic Company
 Electrical testing instruments, Westinghouse Electric Company
 Metallograph, Continental-Emsco Company
 Metallograph specimen polishing equipment, Continental-Emsco Company

Activities

Much of the co-curricular activity of the students in the Engineering Division is devoted to professional societies; over 1000 engineering students are members of nine recognized professional organizations. The Cal Poly chapters of these societies were active in such activities as preparing exhibits for conventions and expositions, competing in student paper contests, attending technical meetings with senior chapters, and sponsoring campus technical activities. In addition, students from the Architectural Engineering Department conducted community planning projects for Pismo Beach, Santa Maria and Cambria, designed a YMCA camp for San Luis Obispo, and made a study of county fairs for the Western Fairs Association.

Student Projects

The growth of the individual student depends upon several elements in this kind of instructional program - development of good work habits, ability to carry responsibility, incentive for initiative and an opportunity to put training to practical use.* "Learning by doing" was provided in the many instructional student projects, especially the Senior Project required of all fourth year students.

Student projects completed this year included the following, as an illustration of the type and scope of work undertaken by students:

Design and Construction of a High Vacuum Pumping System
 A Study of the Variables of Investment Casting
 Design of a Sound Cancellation Device for Utility Transformer Noise
 Construction of a Compression Ring Structure
 Tension Structure Design

*This Division provided opportunities to "earn while learning" with College Foundation activities, notably in the Printing and Electronics Engineering Departments and through extensive use of student labor in support of instructional activities.

Plastic Structure Design and Testing
 Design and Construction of a Light-Beam Seismograph
 Construction of a Supersonic Wind Tunnel
 Construction and Testing of a Solar Furnace
 Monopropellant Rocket Engine Test
 Compressed Air Turbine Fabrication and Test
 Salt-velocity Flow Rate Meter Construction
 Automotive Driveshaft Torque Meter Design
 Design of a Single-place Glider
 Investigation of Forced Convection Heat Transfer in a
 Liquid Rocket Thrust Chamber
 Design of a Frequency Modulated Cordless Microphone
 Construction of an X-Band Magnetron Pulsar
 Design of an X-Band Spectrum Analyzer
 Testing an X-Band Tunable Microwave Filter
 Fabrication of a Prototype Model of a Complex Waveform Synthesizer

Kellogg-Voorhis Campus

If one word were used to characterize the Engineering Division during this period it would be growth. In 1957-58 a handful of staff members offered a partial freshman program. A year later the staff more than quadrupled. Sophomore and junior programs were added, and the Engineering Division moved into four new buildings, thus expanding to accommodate nearly 500 engineering majors after only one year of preliminary operation.

Cal Poly's reputation, an opportunity to start on the ground floor, and other factors permitted the recruitment of an unusually competent staff, educated at 31 colleges and universities, including many of the country's leading engineering schools. They have had prior teaching experience at 14 of these institutions, and in addition, average 11 years of industrial experience in more than a score of major industries. A number are continuing their special studies to improve their effectiveness as teachers or to keep themselves up to date professionally.

The engineering student body is of unusually fine caliber. Judged by SCAT (School and College Ability Entrance Test) it stood well into the upper quarter of the national average for entering college students. The median entering freshman was at about the 80th percentile of national norms.

Nearly a dozen engineering societies and clubs have been organized. These clubs have brought many outstanding engineers to the campus to address club and division meetings. Professional engineering societies such as the I.R.E. have held meetings on the campus, as have various other conference groups.

The Division is making special efforts to meet the expanding needs of California industries, many of which have already expressed keen interest in the first graduates to be turned out in the next year or two. These young men are being trained to make outstanding contributions to industry, the defense program, and to their home communities.

Aeronautical Engineering, as have the other departments, has been busily engaged in developing a smooth instructional machine. It has also designed an engine disassembly stand for aircraft engines and has completed fabrication of two out of the

five stands needed. The subsonic wind tunnel has been in operation since last October and is being calibrated for maximum efficiency. The structures lab has benefited from the arrival of the 60,000-pound universal tester which was installed some months after the year started and which was used extensively thereafter.

Electronics Engineering. The staff increased from the original two members to six during the year and within three weeks after moving into the new facility was in full operation. A total of 268 students enrolled of whom approximately 30 per cent were returnees from the previous year. This comprised by far the largest department in the Engineering Division. An unusually large number of the students are employees of local industry. Several are on full-time on second or third shifts and have reduced their class loads accordingly. By presenting an industry-oriented curriculum, and the facilities to implement it, Cal Poly hopes to make a distinctive contribution to the California electronics industry, and the department will no doubt expand rapidly in the years ahead.

Industrial Engineering expanded its offerings into the junior year, and in the coming year when senior work is given, should graduate its first class. In enrollment, this is one of the smaller engineering departments, but unusual interest in its prospective graduates has been shown by the important defense and basic industries of the area.

Mechanical Engineering. Equipment continued to be delivered and installed during the year, and by fall of 1959 should be completed. At that time senior-year mechanical engineering work will be offered.

The Machine Shop and Welding departments began operations in September with five staff members, two in Welding and three in Machine Shop. The spaces assigned to Machine Shop had been equipped with the principal tools during the summer, so a major effort during the year was directed toward completing procurement of accessory equipment. By the winter quarter all shops were functioning smoothly.

A production laboratory featuring production-type machine tools and manufacturing equipment and also general purpose tools will start operation next year, and will be operated jointly by the Industrial Engineering and Machine Shop departments. The Welding Department will operate seven heliarc welding stations to permit operations of special importance to aircraft and missile fabrication, along with such equipment as the automatic welder, metal forming equipment, a 100 KVA spot welder and flame cutting apparatus.

PERMANENT
FLOWER BOND

NO CONTENT

U.S.A.

ARTS AND SCIENCES

San Luis Obispo

The Arts and Sciences Division consists of eleven instructional and two service departments. Its main function is to provide the related sciences and general education courses required in all major curricula offered by the College.

The Arts and Sciences Division has continued to grow very rapidly in terms of major enrollment and services provided. The enrollment in major departments in the division totaled 881 at the beginning of the Fall Quarter, 1958-59. This exceeded the original predictions by about 80 majors. Every department equaled or exceeded the estimates previously established. Continued growth in major departments is anticipated.

A request was approved by the State Board of Education to prepare a formal application for a curriculum in Business. The establishment of this curriculum will help to round out the offerings of the Arts and Sciences Division. This department, when established, will contribute courses for the major in the department as well as contributing to the general and special education of students in other majors in the College.

There is a constant study to determine which of our courses need to be revised in the light of changing conditions. Departments have groups working regularly to study what changes are needed to carry out adequately our function as a service division.

Departmental highlights of the year follow:

Agricultural Journalism. The year's activities have brought to more than 100 the journalistic field teams composed of students from the department which have served the state's various fairs, conventions, industry conferences and community events. The growing number of women students is evident in the department's enrollment. The coeds engage in the same journalistic activities as do the men---working on campus publications, on field teams, and as journalistic interns in publication work. Journalism students placed again this year in the contests held by the California Intercollegiate Press Association, winning three first places, a second and a third in photography and writing events.

Biological Sciences. During the spring quarter 1958, two summer terms, the fall quarter of 1958, and the winter quarter of 1959, students enrolled in 70 Biological Science courses total 2992. Four courses were added to the program: Sanitary and Industrial Bacteriology, Sanitary Inspection and Control, Public Health Microbiology and Micology.

Education. The new Instructional Materials program of the college has, in the past year, resulted in the publication and distribution of brochures, charts, manuals, newsletters, production guide lines, project record books, source units, and both high contrast black and white and full-color film strips. Most of the materials were for use in high school programs of agriculture.

To better prepare teachers to meet the demands placed on them today the department has:

1. Established committees charged with recommending improvements in the

areas of continuing education, curriculum and instruction, publications, and student welfare. Revision and improvement during the past has come in the areas of Agricultural Education, Elementary Education, Family Relations, Industrial Psychology, and Art.

2. Improved academic advisement procedures and the co-curricular programs of the two student clubs in the department.
3. Conducted a one-half-day workshop dealing with student teaching for 180 supervising teachers, administrators from student teaching centers, and college staff.
4. Cooperated with the college Social Science Department in conducting a ten-day state-sponsored social studies workshop.
5. Cooperated with the California School Boards Association in conducting a one-day conference dealing with school problems.
6. Cooperated with Physical Science and the Biological Science departments of the college in conducting the third annual Central Coast Science Fair for elementary and secondary school pupils.

See map on following page for listing of other services performed by the department.

English and Speech. This department, whose function is that of a service department in the college, taught composition and literature courses to an estimated 5192 students during the school year; 1797 in the fall quarter, 1895 in the winter quarter, and an estimated 1600 in the spring quarter.

As a result of Dr. David Grant's survey of employers in business and industry hiring more than a million and a half employees, steps are being taken to strengthen the offerings in the department, especially in the field of composition. Employers were almost unanimous in asking that college students be even more skillful in gathering, analyzing, and reporting factual information. They requested that college graduates be able to speak and write more clearly and forcefully. Almost all employers who now have Cal Poly graduates in their companies reported that they had language skills equal to or better than those of other colleges and universities.

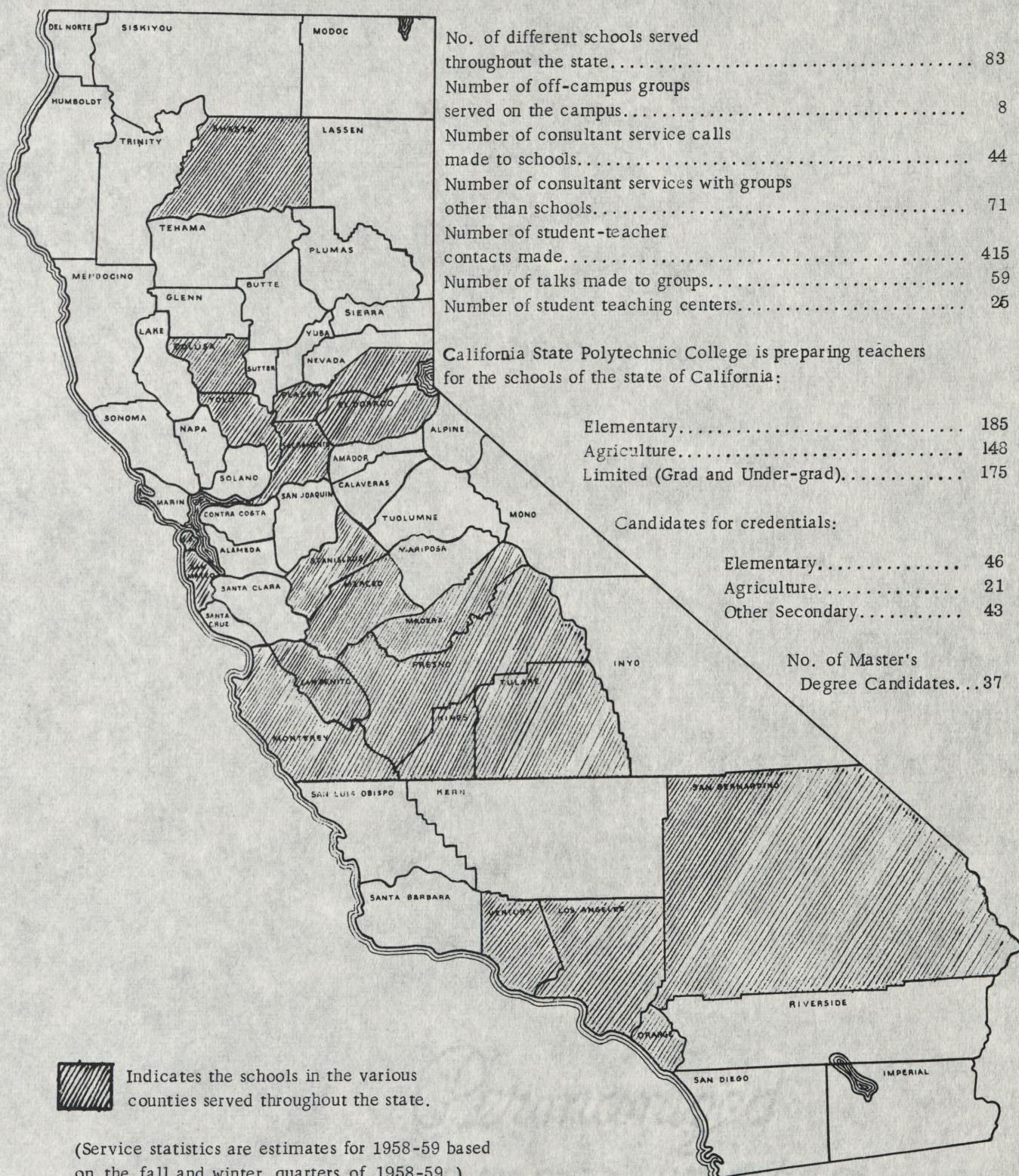
Home Economics. The first eight Homemaking Student Teachers did their student teaching for 10 weeks during the winter quarter. Two were in Lompoc, four in Santa Maria, and two in Arroyo Grande on a full-time basis. All of the cooperating teachers had taken a course on campus in Supervision during the fall quarter in preparation for these students. A Manual for Homemaking Student Teachers and Cooperating Schools was developed during the course and used during the winter quarter.

The Home Economics-Mathematics Building is under construction and has been promised for occupancy in September. Equipment for the building is being selected. The Home Management House is to be completed at the same time.

Mathematics. The demand for mathematics has resulted in an increased interest in upper level courses such as advanced calculus, vector analysis, complex variable, number theory, and numerical analysis. In the computer field the demand for courses has increased the department's offerings in this area, and prompted one of its

STATE-WIDE ACTIVITIES OF THE EDUCATION DEPARTMENT

The Education Department provides state-wide consultant services for schools in keeping with the objective of the college to serve the people of California on a state-wide basis.



faculty to publish a textbook (Mathematics and Logic for Digital Devices, James T. Culbertson). This book which was developed for Cal Poly's courses now has been adopted by more than 30 colleges and universities in the United States and Canada.

Military Science and Tactics. The department had a total enrollment of 206 this year, 146 of these students being in the basic program given during the first two years. The students represented all three divisions of the college, 98 being from engineering, 62 from the agricultural division, and 46 from the arts and sciences division.

In the basic officers' courses which students who receive commissions as second lieutenants in the U. S. Army reserve are required to complete, the academic standing of the college graduates has been slightly above average, ranging from some in the top 5 per cent of the class to one academic failure.

Approximately 40 per cent of the distinguished military student applicants from all colleges are selected by the Department of the Army for Regular Army commissions. In view of that fact, the college has reason to be proud that only one of its distinguished military student applicants has failed to receive Regular Army commission.

Music. Over 160 performances were presented this year by the college's 10 musical organizations. These appearances included not only those before the student body, faculty, campus groups, civic organizations and county groups, but also tours into different parts of the state by the men's glee club, Collegians, band, and women's glee club.

Physical Education. The year saw a new high in the number of physical education majors, as well as in the number of students who participated in the intra-mural sports program administered by the Physical Education Department.

Physical Sciences. With the shortage of men and women in industry, education and government having training in the physical sciences continuing to increase, the physical science department is attempting to do its bit to alleviate that shortage by giving better training to more students. Specifically, the department provided better training during the past year in the field of elementary science by adding two new courses: "Chemistry for Elementary Teachers" and "Physics for Elementary Teachers". Training in more advanced physics so necessary for engineers and physicists will be made possible with an addition to the Science Building which is planned for the near future.

The number of graduates at the June, 1959, commencement is expected to be the largest the department has ever had, with 16 of them having a concentration in physics, six a concentration in agricultural chemistry, and one a concentration in chemistry.

Social Sciences. Probably the most significant activity in the Department of Social Sciences this year was that which had to do with the re-examination of curriculum and the development of some tentative curriculum options. The study has not yet been completed, but it is expected that the department will be able to submit specific proposals before the end of the current academic year. These changes would involve options in (1) secondary social studies teaching; (2) government employment; and (3) social welfare.

It might be noted that the Department is serving an increasing proportion of the students in the college. Whereas in 1956-57 some 37 per cent of the total college population was served in courses in this department, during the year 1958-59 it is serving 49 per cent of the total college enrollment.

Technical Arts. This, Cal Poly's newest instructional department, started with the fall quarter 1958. At the end of its first year it has 60 majors in Technical Arts. Graduates in the Sales and Service option offered by the department will be ready in June, 1960, and the first Industrial Arts majors will be graduated in June, 1961.

Audio-Visual. This college-wide service department administered through the Arts and Sciences Division made gains in service efficiency this year by use of sub-pools of A-V equipment in the major campus instructional areas, giving instructors immediate access to and use of it for their teaching. In addition to the high utilization of sub-pools, the Audio-Visual Service Office booked and circulated 5,943 units in the first half of this year.

From September through January, the Audio Visual Production Program completed 78 productions of instructional materials for the College staff and seven teaching aid projects for distribution to High School Vocational Agriculture programs in the state. An additional 51 productions are in process.

KELLOGG VOORHIS CAMPUS

During 1958-59 the Arts and Sciences Division continued its major programs in Biological Sciences and Physical Education, which were initiated the previous year. In addition, the departments of Mathematics, Physical Sciences and Social Sciences offered the first three years of their major curricula and enrolled a total of 39 students in fall, increasing to 58 in the winter quarter. The English Department offered the first two years of its major bringing the total for six major departments to 132 in fall and 163 in winter. Also in the Arts and Sciences Division major work was offered in the first three years of Accounting, Business Administration, and Marketing and Sales with an additional total enrollment of 61 in the fall quarter, increasing to 86 in the winter quarter. The Business Classroom Building was completed and placed into use at the beginning of winter quarter, providing much needed laboratory space for accounting and typing classes, which, for the first time, were in facilities designed specifically for their use. Eventually, this building will be equipped for specialized laboratories in all phases of the business program.

The Audio-Visual Department which is administered as a service department of the Arts and Sciences Division continues to grow with the campus and has two functions, the principal one being service to instruction. Production of graphic, photographic, and audio aids not available through commercial sources is its main contribution. It is also a distribution center for commercially prepared aids. Catalogues and files of commercial and local production are maintained in the center. Assistance is given to instructors in the selection and production of audio-visual materials.

A secondary but important operation of the department is that of facilitating communication among students and staff. Information regarding administrative procedures and co-curricular activities is disseminated through the use of such audio-visual equipment as P.A. systems, the audio distribution center, and graphic aids.

CALIFORNIA STATE POLYTECHNIC COLLEGE

