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THE
JUNIOR COLLEGE DIVISION
OF THE CALIFORNIA
POLYTECHNIC



1931-1932
San Luis Obispo, California



Bulletin No. 2

The Junior College Division of The California Polytechnic

Administered through the State Department of Education

Hon. Vierling Kersey, Director of Education

Sam H. Cohn, Deputy Director of Education



The California Polytechnic is established by the State of California to give free instruction to boys and young men. The Junior College Division specializes in terminal courses of a semi-professional nature in agriculture, mechanics, engineering and printing.

MARCH 1, 1931

SAN LUIS OBISPO, CALIFORNIA

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SCHOOL CALENDAR

1931-32

FIRST SEMESTER

Wednesday, Sept. 2—Dormitories and Dining Hall open.

Thursday and Friday, Sept. 3-4—Registration of students not enrolled 1930-31.

Saturday, Sept. 5, 9 a. m. to 5 p. m.—Physical examination and enrollment for new students, Crandall Gymnasium.

9 a. m. or 4 p. m.—Subject A examination, Room 112, J. C. Building.

2 p. m.—Special assembly for new students, Room 13, Administration Building.

9 a. m. to 5 p. m.—Registration of students previously enrolled.

Monday, Sept. 7—Regular class-work begins.

Wednesday, Sept. 9—Admission Day, holiday.

Thursday, Sept. 17—Mental and educational tests for new students.

Saturday, Oct. 24—Homecoming.

Wednesday, Nov. 11—Armistice Day. Battalion and Band in parade.

Nov. 25-30—Thanksgiving recess, Wednesday noon to Sunday night.

Dec. 18-27—Christmas vacation.

Monday, Dec. 28—Class-work begins.

Friday, Jan. 1—New Year's Day, holiday.

Friday, Jan. 15—End of first semester.

SECOND SEMESTER

Friday, Jan. 15—Registration of new students.

Monday, Jan. 18—Class-work begins.

March 18-27—Spring vacation.

Monday, May 2—Annual School Festival.

Wednesday, May 25—Commencement.

Friday, May 27—School closes.

THE JUNIOR COLLEGE DIVISION OF THE CALIFORNIA POLYTECHNIC

HISTORY

The Junior College Division of The California Polytechnic was organized in 1927. Its establishment was due not to the desire of the institution to keep step with other institutions that were making a similar expansion, nor primarily, to meet the needs of the graduates of its own four-year division, but chiefly to meet the very evident requirements of high school graduates who were coming to the school in increasing numbers. Most of these students came because of a desire to obtain training to fit them for remunerative employment in occupations of mechanical or engineering nature. They wished to obtain more technical knowledge and skill than could be provided in even the vocational high schools yet did not desire the highly theoretical training of university education. Many of these students had already completed the related subjects offered in the existing four-year course such as science and mathematics, and while they gained skill from the vocational work, their course suffered from the lack of academic subjects of college grade. Such subjects would have permitted of more advanced work along vocational lines and given them a broader foundation for future growth.

Mr. William John Cooper, who was then State Director of Education, on April 14, 1927, authorized the establishment of the Junior College Division of The California Polytechnic. He not only understood existing conditions, but was also impressed by the need of a junior college which would specialize in vocational education and offer to high school graduates of the State a free training for the semi-professional occupations. No public junior college was making this its chief purpose; few of them had the necessary equipment for anything more than elementary work of vocational nature. The California Polytechnic had not only excellent shops and laboratories, but it had also the proper atmosphere for the development of such an institution and already possessed a corps of teachers who were devoted to the principles and practices of vocational education.

Since its beginning, the Junior College Division has been growing steadily and its aims have been broadening. These aims can be learned more in detail from a study of the individual courses offered.

LOCATION AND HOUSING

The California Polytechnic is located on low foothills, one mile from the town of San Luis Obispo. This town is situated on the Southern Pacific Railway almost exactly halfway between Los Angeles and San Francisco, and about eight miles from the ocean.

The Junior College Division shares some of the buildings with the students of the four year division, but its students have their own dormitory and dining room and primary use of a classroom building known as the Junior College Building. The shops and mechanical drawing rooms are shared with students of the four year division, but all class work is separate, no four year students being admitted to the junior college classes.

SUPPORT

The California Polytechnic is supported directly by the State of California in the same way as are the teachers' colleges. It is under similar control and management. For the last biennium the State appropriations were \$140,000 for permanent improvements and \$312,395 for support. The dormitories and cafeteria are financed by money received from the students. The committee in charge is under State supervision and a regular audit of all funds is required.

EQUIPMENT

The school library contains approximately 6,000 volumes and 11,000 catalogued pamphlets and bulletins. About fifty magazines are received regularly. The chemistry and physics laboratories and drafting rooms contain the usual standard equipment. The wood shop, machine shop, forge and welding shop have adequate equipment for the preliminary training of students who wish to specialize in mechanics. The aeronautics laboratory has its own special wood and metal working equipment including welding outfits and a nibbler. It has also air-craft motors of rotary, vertical and vee types ranging from 80 to 450 h. p.; propeller balancing stands and test stands; and equipment for the study of ship design, ship construction and rigging. Three ships have been built in this shop including one which won the silver trophy and the first premium award at the State Fair in Sacramento. Considerable repair work has also been done on damaged planes. The electrical laboratory, 40x110 feet, contains motor generating sets, all types of direct and alternating current equipment, a fifteen panel switchboard, and several large wall rheostats. The power plant is also used as a secondary laboratory. The mechanics laboratory is in the power plant

and is equipped with two 100 h. p. Sterling boilers with a 75 h. p. steam-electric generating unit, a 50 h. p. gas engine belted to an electric generator, and a 120 h. p. Diesel electric generating unit.

GENERAL INFORMATION

Living Arrangements. Men whose homes are not in San Luis Obispo are required to live in dormitories on the campus or, if the dormitories are filled, in approved homes. Application for a room should be made early in the summer and must be accompanied by a deposit of \$10.00. \$7.50 a month is charged for room rent and \$27.00 a month for board in the school cafeteria. Students living in the dormitories furnish their own bedding for the single beds provided; also towels and soap and, if they wish them, drapes and rugs. Sheets, pillowcases and towels are laundered free of charge. In addition to the \$10.00 room deposit, \$30.00 for board deposit is required at registration. Board and room rent are payable in advance.

General School Expenses. Except during leisure hours or while in the shops or the fields, all students are required to wear a uniform, the cost of which is about \$25.00. The gymnasium suit costs \$5.00. The towel fee is \$2.50. The only other fee required is the student affairs fee of \$7.50 a year, but a breakage deposit of \$5.00 is also required. Students who take mechanical drawing or machine shop will need equipment or tools which cost about \$15.00 and \$12.00 respectively. Textbooks and school supplies are purchased by the student. Upon registering a student should have from \$130 to \$160, depending on the subjects taken. The total cost of a year at school, apart from spending money, ranges from about \$400 to \$450.

Although there are some opportunities for a boy who wishes to earn his own expenses, it is not wise for him to enter school unless he has at least \$250.

Student Organizations. A number of campus clubs are active at the Polytechnic, most of them centering around some major activity:—mechanics, electricity, aeronautics, the building trades, agriculture, journalism, athletics, and dramatics. The Poly-Y Club is also active. The school band is comprised of about sixty members. It is conducted as a complete military unit. The glee club also has its own separate organization. Student publications include the Polygram, a bi-weekly paper; El Rodeo, the year book; and the Parakeet, the literary annual of the school.

ACADEMIC INFORMATION

Admission Conditions and Requirements

The Junior College Division of The California Polytechnic admits high school graduates only. Young men over eighteen but not high school graduates may take special courses in the four year division. Such courses are eminently practical and require less theoretical work than do the Junior College courses.

While the prerequisites for each course are stated in detail under the heading for that course, high school students who wish to transfer later to The California Polytechnic as students in Mechanics or Engineering are advised to include in their high school program four years of regular high school mathematics, physics, and if possible, chemistry, mechanical drawing, and elementary work in both wood and metal shops. A high school graduate may be admitted without these requirements, but he is capable of better work if he possesses them, and his graduation may be delayed if he lacks those which are prerequisites to his course.

Because of the fact that each course offered is designed to impart to its students skill in some definite occupation, the courses are closely prescribed and few electives are allowed. Should a student already have completed a subject equivalent in content to one required in his course, he may be excused from repeating the subject but is required with the guidance of his counselor to select from the subjects offered under electives, a substitute equivalent in unit value to the one from which he is excused. Students who have carried strong courses in mathematics and science in high school may in many cases be able in this way to obtain a much broader education than the mere elements of the course would provide, and thus in turn procure a better foundation for future growth.

The aim of each course is listed under the appropriate heading, and as the courses vary somewhat in difficulty, the ability of each student should determine to some measure at least the course in which he is to enroll. Aeronautics and electricity demand a higher degree of ability in mathematics and physics than do the other courses.

Entrance Tests

When he registers in the Junior College Division each student is given three tests: a mental ability test, a high school

content examination, and an examination in English composition, commonly known as an examination in "Subject A." These tests have no bearing on admission. While the result of the first two examinations cannot be used without references to the personal characteristics of each student and his previous opportunities, yet they are of value for guidance purposes. The purpose of the examinations in English composition is to determine whether or not the entering student possesses the ability to write English clear in meaning, and free from gross errors. Should he fail to pass it he is required to take a one semester course in English composition without credit. The passing of the examination or the course is one of the conditions for graduation from any junior college course at The California Polytechnic.

Courses

The California Polytechnic offers terminal courses in aeronautics, agriculture, civil engineering, electrical engineering, mechanical drafting, and printing, and also an academic transfer course. A description of these courses appears on the following pages.

Students for Whom These Courses are Designed

It has been estimated that of the junior college students in California, sixty per cent are not adapted for the highly theoretical courses offered by the universities, and instead of taking transfer courses, would profit much more from terminal courses. To this group two other classes might be added for whom such training is eminently desirable: first, a large number of young men who terminate their schooling upon graduation from high school because they know of no institution which has the appeal of providing in two or three years time, training which will fit them to become skilled mechanics or practical engineers; second, a number of students who are now entering the university but who are not well adapted for university work. This lack of fitness does not necessarily come from lack of mental ability. In the engineering course it frequently comes from a preference for work of a practical nature and dislike for the more purely theoretical aspects of engineering. For students of all three types, the Junior College Division of The California Polytechnic is designed.

Character of the Student Body

As a glance at the last pages of this bulletin will show, the students enrolled in the Junior College Division come from all parts of California. The homes represented are for the most part in the middle walks of life. Occupations of parents cover a wide range, including merchants, farmers, salesmen, doctors, home-makers, insurance-men, teachers, bankers, druggists, and many others. The average age of the entering students in 1930-31 was nineteen years and three and a half months but the range was from sixteen to twenty-three and much older students frequently enter.

Most of the students have selected their courses before they matriculate and come with a definite purpose in mind. In the mental tests given in the autumn of 1930 to all new students, the median or average grade was slightly higher than that of the eleven thousand junior college students in California who were tested in the autumn of 1929 in the California Junior College Mental Educational Survey. In the scholarship or achievement tests the median score for the group was much higher, occurring in the upper third of the range of scores made in the State test just referred to. This seems to indicate that while these students possess at least the average mental ability of the other junior college students in the state, they are on the whole more than ordinarily serious in their attitude to their work and have applied themselves to their studies in high school with greater diligence. The fact that this seriousness of purpose continues during the junior college course is evidenced by the satisfactory records which those students who have completed their courses are making, whether working individually, for small companies, for large corporations, or pursuing advanced work in technical institutions or the universities.

Time Required for Completion of Courses

The chief purpose of the Junior College Division of The California Polytechnic is to train young men for situations and for profitable employment. Naturally, the attaining of this objective will depend upon the character, the ability and the previous training of the student rather than on any fixed number of units. The courses are so planned, however, that a young man with ability equal to the average in California junior colleges and possessing the pre-requisites for the course in which he enrolls as stated in this catalogue should be able to complete his course in two years. Unfortunately, many students have not known their educa-

tional objectives early enough in their high school course to select their subjects wisely and come badly prepared in mathematics, science and elementary shop work. It will naturally take them a longer time to secure adequate training. Such students may require three years for graduation.

Periods

The class period at The California Polytechnic is forty minutes in length, exclusive of the time required for changing classes. The number of periods a week assigned to a subject is larger, however, than in institutions which have fifty minute periods, so that the total number of semester hours equals, and in many cases exceeds, the usual allotment. The classes in mathematics, for instance, instead of being held for fifty minutes three times a week are held for forty minutes daily. This not only makes for a more flexible program, but insures frequent contact between the teacher and student. This has been found particularly advantageous for students who have just completed high school.

Recognition of Credit

A student who transfers to The California Polytechnic from a reputable high school or from another junior college or a four-year college, will, as a general thing, receive credit for work completed in so far as that work applies to the prerequisites or the requirements of the course in which he is enrolled. Courses in mathematics or science will receive full credit. Should a weakness in one of these subjects later manifest itself to such a degree as to handicap him in his work, it may be necessary to repeat that section of the work in which he is weak. Students who wish credit in mechanical drawing should bring their plates with them. In shop work there is such great diversity in standards in the different high schools that it may be necessary to ask the student to perform a test assignment in the shop in which he desires credit. If that assignment is satisfactorily performed, he will be awarded full credit.

AGRICULTURE

The California Polytechnic is well suited for giving training in agriculture, particularly in animal husbandry. It owns about 1400 acres of land including rich bottom land, rolling land where the soil is not so rich, yet satisfactory for the growth of most field crops, and hillsides suitable only for grazing purposes. The State

has provided buildings suitable for agricultural use. Cattle, horses, sheep, swine and poultry in adequate numbers and of the best breeds obtainable provide unusual opportunity for the student of animal husbandry. The agriculture department of the school has won for itself a most enviable reputation at the State Fair, the South San Francisco Baby Beef Show and the Los Angeles Christmas Livestock Show. Students have excellent opportunities both for specialization and for training in general farming. By the Project Method of instruction each student is able to specialize in whatever type of agricultural work he is most interested and by so doing to obtain a fair share of the profits of his own industry.

The course offered is as follows:

FIRST YEAR					
<i>First Semester</i>			<i>Second Semester</i>		
SUBJECT	Periods		SUBJECT	Periods	
(Subject A, exam. or course)	Cl. Lab.			Cl. Lab.	
English I-A	5		English I-B	5	
Chemistry I-A, or Zoology			Chemistry I-B, or Zoology		
I-A, or Physics I-A.....	5	6	I-B, or Physics I-B.....	5	6
Types and Market Classes			Types and Market Classes		
of Livestock	3	4	of Livestock	3	4
Poultry Production	3	4	Poultry Production	3	4
Agric. Engineering	2	4	Agric. Engineering	2	4
Physical Education		5	Physical Education		5
SECOND YEAR					
<i>First Semester</i>			<i>Second Semester</i>		
Economics I-A	5		Economics I-B	5	
Animal Nutrition	5		Animal Nutrition	5	
Breeds and Breeding.....	5		Farm Structures.....	2	6
General Electricity or elec....	3	4	General Electricity or elec....	3	4
Dairying or Soils & Crops..	3	4	Dairying or Soils & Crops....	3	4
Elem. Surveying	1	4	Elem. Surveying	1	4
Physical Education		5	Physical Education		5

Farm accounts and farm management are studied in connection with agricultural projects which are carried throughout the course.

ENGINEERING-MECHANICS COURSES

A tabulation appears below showing the requirements of each of the engineering-mechanics courses. The subjects taken in these courses are rather closely prescribed. It is therefore possible to state the number of periods a week assigned to each subject. As students understand such a description more easily, the requirements are stated in terms of periods rather than units.

AERONAUTICS COURSE

The junior college course in aeronautics at The California Polytechnic has two aims—first, to provide every student with an opportunity to obtain technical and practical knowledge necessary for passing the Government examination for either the airplane mechanics license or the airplane-engine mechanics license, or both. Second, to provide a practical and technical foundation in aeronautics so that every graduate can be advanced to a position in the airplane industry superior to that of an ordinary mechanic. The classwork in aeronautics deals with the study of the theory needed in later work. The shop work consists of the overhauling of airplane engines of the different types and in the construction and repair of airplanes.

Prerequisites

Mathematics, 4 units. (We advise two units of algebra, one of plane geometry and one-half each of solid geometry and trigonometry.)

High School Physics, 1 unit.

Mechanical Drawing, 1 unit.

Wood Shop, $\frac{1}{2}$ unit.

Forge, $\frac{1}{2}$ unit.

Welding, 1 unit.

Machine Shop, 1 unit.

High school chemistry strongly advised but not required.

If the matriculant has not completed this work in high school he may obtain it at The California Polytechnic. Such work, however, must be taken in addition to that required in the course of study.

COURSE OF STUDY

FIRST YEAR

<i>First Semester</i>			<i>Second Semester</i>		
SUBJECT	Periods		SUBJECT	Periods	
	Cl. Lab.			Cl. Lab.	
Subject A (ex. or course)	No credit		Engines 2	5	8
Engines 1.....	5	8	Ship Construction 2.....	5	8
Ship construction 1.....	8		College physics I-B.....	5	4
College physics I-A.....	5	4	Strength of materials	5	
Strength of materials.....	5		Aero drafting I.....		6
Aero drafting I.....	4		Physical education		5
Physical education	5		Assembly		1
Assembly	1				

SECOND YEAR

<i>First Semester</i>			<i>Second Semester</i>		
SUBJECT	Periods		SUBJECT	Periods	
	Cl. Lab.			Cl. Lab.	
Aero dynamics	5		Airplane rigging	2	
Stress Analysis	2	7	Stress analysis	3	7
Analytic geometry	5		Differential calculus	5	
Engines 3	3		Engines 4	3	
Engines or construc. shop....	10		Meteorology and navig'n.....	4	
Aero drafting II.....	6		Engines or construc. shop....	10	
Physical education	5		Aero drafting II.....	4	
Assembly	1		Physical education	5	
			Assembly	1	

CIVIL ENGINEERING

The purpose of the Junior College course in Civil Engineering is to train the student to do plane surveying, land subdividing, leveling, etc. With the foundation of mathematics and drawing provided, he should be able, after some practical experience, to take a position as instrument man for almost any type of surveying.

Prerequisites

Mathematics, 3 units.* High school physics, 1 unit.
 Mechanical drawing, 1 unit.

COURSE OF STUDY

FIRST YEAR

<i>First Semester</i>			<i>Second Semester</i>		
SUBJECT	Periods		SUBJECT	Periods	
	Cl. Lab.			Cl. Lab.	
Subject A (ex. or course) No credit			Math. (algebra II or solid geometry).....	5	
Math. (alg. II or trig.).....	5		Physics I-B	3	5
Physics I-A	3	5	Elementary surveying	4	
Elementary surveying	4		Elem. field surveying.....	4	
Elem. field surveying.....	4		Surveying drawing	8	
Surveying drawing	8		Hydraulics	4	
Physical education	5		Physical education	5	
Assembly	1		Assembly	1	

SECOND YEAR

<i>First Semester</i>			<i>Second Semester</i>		
SUBJECT	Periods		SUBJECT	Periods	
	Cl. Lab.			Cl. Lab.	
Advanced surveying	4		Advanced surveying	4	
Advanced field surveying.....	8		Advanced field surveying.....	8	
College physics I-C.....	3	5	College physics I-D.....	3	5
Strength of materials.....	5		Strength of materials.....	5	
Surveying drafting	8		Surveying drafting	8	
Physical education	5		Physical education	5	
Assembly	1		Assembly	1	

*Algebra 1 unit, geometry 1 unit, and either algebra II 1 unit or trigonometry and solid geometry $\frac{1}{2}$ unit each.

ELECTRICAL ENGINEERING

The aim of the course in Electrical Engineering is to prepare young men to become intermediate executives in the many electrical industries.

Prerequisites

Mathematics, 3 units required, including algebra, geometry, and either algebra II or trigonometry and solid geometry. 4 units advised. (If 4 units are taken in high school, analytic geometry and differential calculus will be taken the first year and integral calculus the second. Integral calculus is particularly valuable to students who wish to transfer to a large electrical corporation for further training.)

High school physics, 1 unit.

High school chemistry, 1 unit.

Mechanical drawing, 1 unit.

COURSE OF STUDY

FIRST YEAR

<i>First Semester</i>			<i>Second Semester</i>		
SUBJECT	Periods		SUBJECT	Periods	
	Cl. Lab.	No credit		Cl. Lab.	
Subject A (ex. or course)			College physics I-B.....	3	5
College physics I-A.....	3	5	Math.(alg. II or solid geom.)	5	
Math. (alg. II or trig.).....	5		Gas and steam engines.....	4	4
Gas and steam engines.....	4	4	Elec. engineering I, direct		
Elec. engineering I, direct			currents	5	8
currents	5	8	Elem electrical drafting.....		4
Elem electrical drafting.....	4		Physical education		5
Physical education	5		Assembly		1
Assembly	1				

SECOND YEAR

<i>First Semester</i>			<i>Second Semester</i>		
College physics I-C, or			College physics I-D, or		
Surveying I-A.....	3	5	Surveying I-B.....	3	5
Analytic geometry	5		Differential calculus	5	
Elec. engineering II.....	5	12	Elec. engineering II.....	5	12
Alternating currents.			Alternating currents.		
Adv. electrical drafting.....	4		Adv. electrical drafting.....		4
Physical education	5		Physical education		5
Assembly	1		Assembly		1

Some modification of this course to meet the needs of individual students may be made on the advice of the counselor.

A two-year elective course in armature winding and motor repair is offered to those who wish to specialize in these subjects, the periods to be arranged.

MECHANICAL DRAFTING

On the completion of this course the student is prepared to take a position in the drafting room of some industrial concern. He has acquired not only the technical skill, but also the theoretical knowledge of drafting and design necessary to enable him to advance in his profession. He has also laid a sound foundation in drawing and related subjects for further advanced study in the engineering field.

Prerequisites

Mathematics 4 units.	Mechanical drawing, 1 unit.
High school physics, 1 unit.	Wood shop, 1 unit.

COURSE OF STUDY

FIRST YEAR			
<i>First Semester</i>		<i>Second Semester</i>	
SUBJECT	Periods Cl. Lab.	SUBJECT	Periods Cl. Lab.
Subject A (ex. or course) No credit		Differential calculus or elective of equal value on advice of counselor.....	5
Analytic geometry	5	College physics I-B.....	3 5
Algebra II, or trigonometry..	5	Strength of materials.....	5
College physics I-A.....	3 5	Machine shop	2 6
Strength of materials.....	5	Engineering drawing	12
Forge	8	Physical education	5
Engineering drawing	12	Assembly	1
Physical education	5		
Assembly	1		

SECOND YEAR			
<i>First Semester</i>		<i>Second Semester</i>	
SUBJECT	Periods Cl. Lab.	SUBJECT	Periods Cl. Lab.
Descriptive geometry.....	2 8	Elective	5
College physics I-C.....	3 5	College physics I-D.....	3 5
Machine design	2 8	Machine design	2 12
Machine shop	2 6	Machine shop	2 6
Physical education	5	Physical education	5
Assembly	1	Assembly	1

MECHANICAL ENGINEERING

The aim of the junior college course in Mechanical Engineering is to give the student training in mechanics and shop practice so that he will be a valuable man in the manufacturing plant. The foundation provided should be sufficient to enable him to work up to the position of department or shop foreman in whatever industry he may select.

Prerequisites

Mathematics, 3 units.*

High school physics or high school chemistry, 1 unit.

Forge, ½ unit.

Acetylene welding, ½ unit.

Machine shop, 1 unit.

Mechanical drafting, 1 unit.

COURSE OF STUDY

FIRST YEAR

<i>First Semester</i>			<i>Second Semester</i>		
SUBJECT	Periods		SUBJECT	Periods	
	Cl.	Lab.		Cl.	Lab.
Subject A (ex. or course) No credit			Chemistry or physics.....	4	4
Chemistry or physics (see prerequisites)	4	4	Math.(alg. II or solid geom.)	5	
Math. (alg. II or trig.).....	5		Strength of materials.....	5	
Strength of materials.....	5		Engineering drawing		8
Engineering drawing		8	Machine shop	2	8
Machine shop	2	8	Physical education		5
Physical education		5	Assembly		1
Assembly		1			

SECOND YEAR

<i>First Semester</i>			<i>Second Semester</i>		
General electricity	3	4	General electricity	3	4
Machine design	2	8	Machine design	2	8
Gas and steam engines.....	4	4	Gas and steam engines.....	4	4
Machine shop	2	8	Machine shop	2	8
Physical education		5	Physical education		5
Assembly		1	Assembly		1

*Algebra 1 unit, geometry 1 unit, and either algebra II 1 unit or trigonometry and solid geometry ½ unit each.

ACADEMIC COURSE

Young men who enter the school with the idea of taking practical courses sometimes manifest aptitudes for theoretical work so great as to make university training more desirable. The chief purpose of the academic course is to enable such students to transfer to the university with as little loss of time as possible. As the program outlined for each student depends on his previous education, the institution to which he wishes to transfer, and the course which he intends to pursue there, no detailed outline is advisable. A program for each student is arranged to meet his individual needs. The subjects offered in the academic course are listed under Group A on page 18.

PRINTING

The Printing Department offers both two and three year courses, the length of time depending on the objective to be obtained. In two years a student is able to master the fundamentals of hand composition and cylinder and platen presswork. In the third year he can add a comprehensive course in linotype composition. Graduates of this course have readily found employment in print shops.

COURSE OF STUDY

<i>First Year</i>		<i>Second Year</i>	
SUBJECT	Periods Cl. Lab.	SUBJECT	Periods Cl. Lab.
Journalism	5	Social science	5
Science: chemistry, physics, or zoology	5 6	Printing	32
Printing	20	Physical education	5
Physical education	5	<i>Third Year</i>	
		Elective	5
		Linotype work	35

AUTO MECHANICS

No work of college type is offered in auto shop. Should a high school graduate, however, wish to take work in this subject, a course may be arranged to suit his needs from the "Electives" listed on the next page, and the courses in auto shop offered to students of the Four Year Division.

PHYSICAL EDUCATION

Physical education is required of all students, unless a student has such a severe physical handicap as to render it dangerous or impossible. Satisfactory completion of the four semesters' work is required for graduation. It includes general gymnastics, class athletics and military drill. After a student has completed registration for Physical Education he may be transferred to athletic squads upon the recommendation of the coach in charge of a recognized sport. He must, however, return to the class in physical education at the close of the season in order to obtain credit.

ELECTIVES

Most of the following subjects are required in one or more of the courses offered. They may, however, be taken as electives in other courses if the proper prerequisites have been obtained.

A—Usual college subjects.
Subject A (no credit but required for graduation)

English 1 A-B.....	3 units each sem.
French A-B	5 units each sem.
French C-D	3 units each sem.
Spanish I-II-III (given only as high school w'k).....	3 units each sem.
Trigonometry C.....	2 units
Spherical trigonometry.....	1 unit
College Algebra A.....	3 units
Analytic Geometry 3-A.....	3 units
Diff. Calculus 3-B.....	3 units
Int. Calculus 4 A-B.....	3 units each sem.
Descriptive Geom.....	3 units
General Chemistry 1 A-B.....	5 units each sem.
General Physics 1 A-B.....	3 units each sem.
General Physics 1 C-D.....	3 units each sem.
Zoology 1 A-1 B.....	3 units each sem.
History of Western Europe 4 A-B.....	3 units each sem.
History of England 5 A-B.....	3 units each sem.
Political Science and Govt. 1 A-B.....	3 units each sem.
Principles of Economics 1 A-B.....	3 units each sem.
Arch. Drawing I.....	2 units
Mech. Drawing II.....	3 units
Civil Engineering 1 A-B.....	3 units each sem.
Phys. Ed. (required).....	1 unit a sem.

B—Most of these subjects are not offered in other junior colleges.

	Cl.	Lab.
Aero Drafting I.....	6	
Aero Drafting II.....	4	
Aerodynamics 1 sem.....	5	
Aero Engines I.....	5	8
Aero Engines II.....	5	8
Airplane Rigging, 1 sem.....	2	
Meteorology and Nav.....	4	
Ship Construction I.....	8	
Ship Construction II.....	10	
Stress Analysis	3	7
Elem. Electrical Drafting.....	4	
Adv. Electrical Drafting.....	8	
Elem. Mechanical Drawing.....	8	
Adv. Mechanical Drawing.....	12	
Machine Design.....	2	12
Machine Shop (each year).....	2	6
Electrical Engineering I.....	5	8
Electrical Engineering II.....	5	12
General Electricity.....	3	4
Armature Winding and Motor Repair	2	12
Gas and Steam Engines.....	3	4
Strength of Materials.....	5	
Civil Engineering 1 A-B.....	4	4
Civil Engineering II.....	4	4
Elem. Surveying	1	4
Surveying Drafting.....	8	
Journalism	5	
Dramatics	2	
Vocal Music.....	4	
Band	5	
Orchestra	5	
Agric. Engineering	2	4
Types and Market Classes of Livestock	3	4
Poultry Production	3	4
Animal Nutrition	5	
Breeds and Breeding.....	5	
Dairying	3	4
Soils and Crops.....	3	4
Farm Structures	2	6

Students Enrolled in the Junior College Division of The California Polytechnic, 1930-31

<i>Student's Name</i>	<i>Home Town</i>	<i>Student's Name</i>	<i>Home Town</i>
Aubrey, Arlo	Strathmore	Hanson, Edwin	Escondido
Balcomb, Ernest W.	Palo Alto	Hartzler, Elmer	Lindsay
Bangham, Eber	Susanville	Hayes, Francis	Vina
Barbee, Clayte B.	Fontana	Hazlehurst, Gordon	Escalon
Barker, Lee	San Francisco	Hellwig, Clifford	Lodi
Bates, Clifford	Valley Center	Hogue, Ray	San Luis Obispo
Beutler, Milford	Upland	Hollis, Loren	Corning
Bissell, Hugh	Fresno	Houston, Robert	Cleveland, O.
Blinn, Ralph	San Luis Obispo	Hovde, Erwin	Escondido
Bowman, Lloyd	Patterson	Hughes, Joseph	San Luis Obispo
Brink, Paul	Westwood	Ingham, Richard	San Joaquin
Brokaw, George	Los Gatos	Isola, Edward	San Luis Obispo
Bubar, Fred	San Luis Obispo	Jackson, Richard	Santa Barbara
Bulpitt, Lewis	Bishop	Johnson, Dudley ..	San Luis Obispo
Burnham, Milton	Waco, Tex.	Johnson, Harlan	Orland
Casner, Bernard	Fillmore	Jordan, Floyd	Bakersfield
Chambers, Joel Delbert	Holtville	Jozovich, Micky	Cupertino
Cheney, William	Santa Ana	Judson, William	Pebble Beach
Clifton, Gerold	Altaville	Kenney, Elmore	Fresno
Condray, Orville	Kingsburg	Kilmer, Winfield	Hanford
Costello, John	Martinez	Koch, Reinhold	Clovis
Crandall, Edwin	Oceanside	Kreps, Roy	San Luis Obispo
Culbertson, Ralph	Escondido	Lawn, Arthur	Hollister
Cunningham, Estes	Clovis	Leach, Richard	Bozeman, Mont.
Davis, Joel	Coalinga	Loomis, Harry..	Minneapolis, Minn.
Dawson, William	Visalia	Loper, Eugene	San Luis Obispo
Day, Lloyd	San Miguel	Lynch, Edward	San Francisco
Day, Lowell	San Miguel	McLaughlin, Artyn ..	Chicago, Ills.
Delidio, Ernest	San Luis Obispo	McPheeters, Perry..	Mountain View
Del Pero, Adolph	Yuba City	Malfa, Tony	Susanville
Diener, William	Wasco	Matley, Alan	Santa Cruz
Dinsmore, Gilbert	Stockton	Mendenhall, Fred	Escondido
Donnell, James K.	Oceanside	Mettler, Orvin George	Shafter
Edmiston, Ted	Clovis	Miles, Theodore B..	Yerington, Nev.
Eibe, Howard	Healdsburg	Miller, Joe	Bishop
Farris, William	Susanville	Millett, Ralph	Earlimart
Ferretti, Luigi	Bishop	Moody, Wallace	Ripon
Foote, Loren	Glendale	Murray, Layton	San Luis Obispo
Forbes, William	Mountain View	Nack, Herman	Escondido
Forman, Edward	Pasadena	Nehrbass, George	Susanville
Frederiksen, W	San Luis Obispo	Olmstead, Burriess	Del Monte
Fremlin, Guy	Fillmore	Olson, Vincent	Burlingame
Fujita, T. Warren	Watsonville	Palacios, A.	Navajoa, Mexico
Gilliland, Harold	Ventura	Patterson, Eugene	Corning
Gratch, Sam	San Francisco	Perry, Landis	Escondido
Gregory, Eli	Laton	Phillips, Boyce	Barstow
Hansen, Merlin	Standish	Pierce, Charles	Pozo

<i>Student's Name</i>	<i>Home Town</i>	<i>Student's Name</i>	<i>Home Town</i>
Pinard, Earl	San Jose	Sullivan, Lee	Wasco
Preble, Clyde	Corning	Tom, Joy	Santa Monica
Rambo, Gilbert	Wasco	Turrentine, Wilfred	Escondido
Reichenthal, Robert	Los Angeles	Vandam, Allan	Oceano
Rood, Robert	Omaha, Neb.	Van Voorhis, William	Berkeley
Rose, Bruce	Porterville	Vejby, Fred	Hayward
Rose, Richard	Porterville	Vinsonhaler, Ray	Orland
Rowland, Sattley	Doyle	Wallace, Louis	Venice
Sagaser, William Dan	Coalinga	Warring, Cecil	Piru
Sawday, Charles	Witch Creek	Way, Kenneth	Santa Rosa
Scribner, Paul	Coalinga	Webber, Joseph	Santa Ana
Sergi, Santo	Susanville	Weir, Louis	San Luis Obispo
Seymour, Ronald	Hinkley	Wing, Howard	Visalia
Simmons, Harry	San Luis Obispo	Wolf, Alois	Paso Robles
Smith, Carl	Paso Robles	Woods, Al	San Luis Obispo
Smith, Harley	Fairoaks	Wright, Herbert	Merced
Stancliff, Paul	Merced		

Total up to January 30..... 127

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