The Junior College Division
of
The California Polytechnic

San Luis Obispo, California

1930-1931

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THE JUNIOR COLLEGE DIVISION
OF
THE CALIFORNIA POLYTECHNIC

Administered through the State Department of Education

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SCHOOL CALENDAR 1930-31

FIRST SEMESTER

Dormitories and Dining Hall open Wednesday, Sept. 3.
Registration:
Students not enrolled 1929-30—
Registration, Thursday, Friday, Sept. 4, 5.
Physical Education enrollment and examination, Saturday, Sept. 6.
Special Assembly, Saturday, Sept. 6, 11 a. m., Crandall Gymnasium.
English Tests, Tuesday, Sept. 9, 2:30 p. m., Library.
Guidance Tests, Saturday, Sept. 27, Library.
Students previously enrolled—
Registration Saturday, Sept. 6.
Regular classwork begins Monday, Sept. 8.
Homecoming, Saturday, Oct. 18.
Armistice Day, Tuesday, Nov. 11, Battalion and Band in Parade.
Thanksgiving Recess, Wed. noon to Sunday evening, Nov. 26-31.
Christmas Vacation, Dec. 19 to Jan. 4.
Classwork begins Monday, Jan. 5.
End of semester, Friday, Jan. 23.

SECOND SEMESTER

Registration of new students, Friday, Jan. 24.
Classwork begins Monday, Jan. 26.
Spring Vacation, March 27-April 5.
Annual School Festival, Friday, May 1.
Decoration Day, Thursday, May 31
Commencement, Wednesday, June 3.
School closes Friday, June 5.

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Junior College Division of The California Polytechnic

HISTORY

The Junior College Division of The California Polytechnic has been in operation since September, 1927. It was organized to meet existing needs. For several years high school graduates had been coming to the school in increasing numbers to specialize in vocational subjects such as electricity, aeronautics, drafting and surveying. Many of these students had 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 a building known as the Junior College Building is used primarily by them. 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 5,500 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 last year 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 Diesel engine connected to an electric genrator of 120 h. p.

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. While the school administration does everything in its power to help the student secure work, it is not able to guarantee employment.

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 eighty 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

COURSES

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, however, 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 heading for that course, 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 registering 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 two first 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 the student fail to pass it he is required to take a one semester course in English Composition without credit. The passing of the examination or of the course is one of the conditions for graduation from any junior college course at The California Polytechnic.

Students for Whom These Courses are Designed

As has been already stated, the chief purpose of the Junior College Division at The California Polytechnic is not university preparatory. Students whose primary purpose is to prepare for advanced work at the university have ample opportunity for so doing in the other junior colleges of the state or in four year colleges. There is great need, however, for a junior college offering terminal courses vocational in type. It has been estimated that of the junior college students in California, about thirteen thousand in number, 60 per cent or approximately 7,800 are not adapted for the highly technical 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.

Transfer Courses

Just as young men whose genius is pre-eminently practical sometimes find themselves out of place in universities and transfer to The California Polytechnic, so students in the Junior College Division occasionally manifest an apitude for theoretical work so great as to make it advisable for them to transfer to the university. From the list of electives on page 16, such students may, with the guidance of the university adviser, select courses which will permit them to transfer to a university immediately.

GENERAL PREREQUISITES

Before a student can obtain the greatest benefit from a junior college course he must have a definite background of fundamental subjects. These subjects may be divided into two classes. First, practical mechanics sufficient to provide the skill necessary for the work precribed; second, a knowledge of mathematics and science sufficient to enable him to cope successfully with the technical problems involved in that work. These prerequisites vary with the different courses and may be found listed under the specific headings.

If not all of these prerequisites have been completed, the student should upon entrance complete them as speedily as possible. Time not needed for such work may be devoted to junior college subjects for which he is prepared. As the junior college course proper is a two year course, those who have not completed the prerequisites will require a longer time for the course, the time depending on the individual and on the amount of work to be covered.

Students who have had little mathematics or science in high school, may require three years for graduation. In some of the courses, particularly aeronautics and mechanical engineering, a much larger amount of work is required than can be obtained in many high schools, and the matriculant from such schools must expect to spend a longer time in training than would the one who entered with a strong background of shop work.

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 the 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 State Department of Education does not consider it the function of this institution to offer agricultural work of college type. A number of high school graduates, however, who have had their training in agriculture in high schools which provide little practical work or who have been unable to obtain any agricultural education at all, come to The California Polytechnic to obtain the very practical training which is offered to students of the four year course. With its farm of twelve hundred acres, its fine horses, cattle, sheep, swine, and poultry, its orchards and gardens, it furnishes 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 obtain a fair share of the profits of his own industry. Students who decide to enroll in this course select part of their work from the subjects listed on page 16 under the heading, "Electives."

The following courses in agriculture are offered: General agriculture, farm arithmetic, animal husbandry, farm science and accounts, dairy husbandry, floriculture, vegetable gardening, feeds and feeding, farm management, and farm mechanics.

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.

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.

AERONAUTICS COURSE

The Junior College course in aeronautics at The California Polytechnic has two aims: first, to provide every student with training sufficient to allow him to obtain either or both of two airplane licenses: the airplane-engine mechanic's license and the airplane mechanic's license; second, to provide a technical foundation in aeronautics so that each graduate can advance to a position in the airplane industry superior to that of the ordinary mechanic.

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, ½ unit.

Forge, ½ unit.

Welding, ½ unit.

Machine Shop, 1½ units.

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

First Semester	Periods		*Second Semester*	Periods	
SUBJECT	Cl.	Lab.	SUBJECT	Cl.	Lab.
Subject A (ex. or course)	No credit		Engines 2	5	8
Engines 1	5	8	Ship Construction 2		8
Ship construction 1		8	Differential calculus	5	
Analytic geometry	5		Strength of materials	5	
Strength of materials	5		Aero drafting I		6
Aero drafting II		4	Physical education		5
Physical education		5	Assembly		1
Assembly		1			

SECOND YEAR

First Semester	Periods		*Second Semester*	Periods	
SUBJECT	Cl.	Lab.	SUBJECT	Cl.	Lab.
Aero dynamics	5		Aero dynamics	5	
Stress analysis	5		Stress Analysis	5	
College physics I-A	3	4	College physics I-B	3	4
Engines 2	3		Engines 2	3	
Meteorology and navig'n	4		Meteorology and navig'n	4	
Engines or construc. shop		10	Engines or construc. shop		10
Aero drafting I		6	Aero drafting II		4
Physical education		5	Physical education		5
Assembly		1	Assembly		1

ARCHITECTURAL DRAFTING

The junior college course in Architectural drafting is designed to train not only those students who desire to become draftsmen, but also those who hope eventually to become general foremen, superintendents of construction, or contractors. The aim of the course is to emphasize the practical rather than the theoretical phase of drafting training.

On 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

Mechanical drawing, 1 unit. Mathematics 4 units.
High school physics, 1 unit. Wood shop, 1 unit.
High school chemistry advised but not required.

COURSE OF STUDY

FIRST YEAR

First Semester

SUBJECT	Periods Cl.	Lab.
Subject A (ex. or course)	No credit	
College physics I-A	3	5
Analytic geometry	5	
Strength of materials	5	
Elem. architectural drawing	2	10
Elementary surveying	4	4
Physical education		5
Assembly		1

Second Semester

SUBJECT	Periods Cl.	Lab.
College physics I-B	3	5
Differential calculus	5	
Strength of materials	5	
Elem. architectural drawing	2	10
Elementary surveying	4	4
Physical education		5
Assembly		1

SECOND YEAR

First Semester

SUBJECT	Periods Cl.	Lab.
College physics I-C	3	5
Descriptive geometry	2	8
General electricity	3	4
Advanced archit'l drawing	2	8
Physical education		5
Assembly		1

Second Semester

SUBJECT	Periods Cl.	Lab.
College physics I-D	3	5
Elective	5	
General electricity	3	4
Advanced archit'l drawing	2	12
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.

COURSE OF STUDY

FIRST YEAR

First Semester

SUBJECT	Periods Cl.	Lab.
Subject A (ex. or course)	No credit	
Math. (alg. II or trig.)	5	
Physics I-A	3	5
Elementary surveying	4	
Elem. field surveying		4
Mechanical drawing		8
Physical education		5
Assembly		1

Second Semester

SUBJECT	Periods Cl.	Lab.
Math. (algebra II or solid geometry)	5	
Physics I-B	3	5
Elementary surveying	4	
Elem. field surveying		4
Mechanical drawing		8
Hydraulics	4	
Physical education		5
Assembly		1

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

SECOND YEAR

First Semester

SUBJECT	Periods Cl.	Lab.
Advanced surveying	4	
Advanced field surveying		8
College physics I-C	3	5
Strength of materials	5	
Surveying drafting		8
Physical education		5
Assembly		1

Second Semester

SUBJECT	Periods Cl.	Lab.
Advanced surveying	4	
Advanced field surveying		8
College physics I-D	3	5
Strength of materials	5	
Surveying drafting		8
Physical education		5
Assembly		1

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

First Semester

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

Second Semester

SUBJECT	Periods Cl.	Lab.
College physics I-B	3	5
Math. (alg. II or solid geom.)	5	
Gas and steam engines	4	4
Elec. engineering I, direct currents	5	8
Elem electrical drafting		4
Physical education		5
Assembly		1

ERRATA.—The second paragraph under architectural drafting, page 11, refers to mechanical drafting and should appear under this heading. College physics I-B should be added for the second semester of the first year in the mechanical drawing course.

SUBJECT	Cl.	Lab.
College physics I-C	3	5
Analytic geometry	5	
Elec. engineering II	5	12
Alternating currents.		
Adv. electrical drafting		4
Physical education		5
Assembly		1

SUBJECT	Cl.	Lab.
College physics I-D	3	5
Differential calculus	5	
Elec. engineering II	5	12
Alternating currents.		
Adv. electrical drafting		4
Physical education		5
Assembly		1

MECHANICAL DRAFTING

Prerequisites

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

COURSE OF STUDY

FIRST YEAR

First Semester

SUBJECT	Periods Cl.	Lab.
Subject A (ex. or course)	No credit	
Analytic geometry	5	
Algebra II, or trigonometry	5	
College physics I-A	3	5
Strength of materials	5	
Forge		8
Mechanical drawing		12
Physical education		5
Assembly		1

Second Semester

SUBJECT	Periods Cl.	Lab.
Differential calculus	5	
Strength of materials	5	
Machine shop	2	6
Mechanical drawing		12
Physical education		5
Assembly		1

SECOND YEAR

First Semester

SUBJECT	Periods Cl.	Lab.
Descriptive geometry	2	8
College physics I-C	3	5
Machine design	2	8
Machine shop	2	6
Physical education		5
Assembly		1

Second Semester

SUBJECT	Periods Cl.	Lab.
Elective	5	
College physics I-D	3	5
Machine design	2	12
Machine shop	2	6
Physical education		5
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.

COURSE OF STUDY

FIRST YEAR

First Semester

SUBJECT	Periods Cl.	Lab.
Subject A (ex. or course)	No credit	
Chemistry or physics (see prerequisites)	4	4
Math. (alg. II or trig.)	5	
Strength of materials	5	
Mechanical drawing		8
Machine shop	2	8
Physical education		5
Assembly		1

Second Semester

SUBJECT	Periods Cl.	Lab.
Chemistry or physics	4	4
Math. (alg. II or solid geom.)	5	
Strength of materials	5	
Mechanical drawing		8
Machine shop	2	8
Physical education		5
Assembly		1

SECOND YEAR

First Semester

SUBJECT	Periods Cl.	Lab.
General electricity	3	4
Machine design	2	8
Gas and steam engines	4	4
Machine shop	2	8
Physical education		5
Assembly		1

Second Semester

SUBJECT	Periods Cl.	Lab.
General electricity	3	4
Machine design	2	8
Gas and steam engines	4	4
Machine shop	2	8
Physical education		5
Assembly		1

PRINTING

No work of college type is offered in the Print Shop. A number of high school graduates, however, enroll in the course in printing and are able to master the fundamentals of hand composition and platen presswork in a two years' course. If they return for a third year, they will receive a comprehensive course in linotype composition. Their time is largely devoted to work in the Print Shop, although subjects may be chosen from the electives listed on page 16. The course in journalism is especially recommended for Print Shop students.

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

AUTO SHOP

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 this page, and the courses in auto shop offered to students of the Four Year Division.

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
French A-B.....5 units each
French C-D.....3 units each
Spanish I-II-III (given only as high school w'k.)....3 units each
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
Integ. Calculus 4 A-B..3 units each
Descriptive Geom.....3 units
Gen. Chemistry 1 A-B..5 units each
General Physics 1 A-B..3 units each
General Physics 1 C-D..3 units each
History of Western Europe 4 A-B.....3 units each
History of Eng. 5 A-B....3 units each
Political Science and Government 1 A-B....3 units each
Principles of Economics 1 A-B.....3 units each
Arch. Drawing I.....2 units
Mech. Drawing II.....3 units
Plane Surveying 1 A-B..3 units each
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	5	....
Aero Engines I	5	8
Aero Engines II	5	8
Meteorology and Nav.	4	....
Ship Construction I		8
Ship Construction II		10
Stress Analysis	5	....
Elem. Architectural Draw.	2	10
Adv. Architectural Draw.	2	12
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
Gas and Steam Engines	3	4
General Electricity	3	4
Strength of Materials	5	....
Elementary Surveying	4	4
Surveying Drafting		8
Advanced Surveying	4	8
Journalism	5	....
Dramatics	2	....
Vocal Music		4
Band		5
Orchestra		4