VISALIA JUNIOR COLLEGE

Junior College Bulletin 1938 - 1939

Published by
BOARD OF TRUSTEES

Visalia Union High School and Junior College
District
VISALIA, CALIFORNIA
April, 1938

Table of Contents

	Page
Junior College Calendar for 1938-1939	4
Board of Trustees	
Officers of Administration	
Faculty	
General Information:	
Organization and Administration	
Curricula	
Student Organizatioins	
Student Activities	
Expenses	
Transportation	
Cafeteria	
Living Accommodations	
Employment	
Library	10
Loans and Scholarships	
General Regulatioins:	II
Admission	
Matriculation Deficiencies	11
Registration	
Amount of Work	
English A	
Physical Education and Health	13
Orientation	
Conduct	_
Attendance	
Leave of Absence	14
Withdrawal from Course or College	I4

· · · · · · · · · · · · · · · · · · ·	age
Units and Grade Points	14
Grades	15
Requirements for Graduation:	15
Plan One	15
Plan Two	16
University of California (Berkeley and Los	
Angeles) Requirements for a Junior Certificiate	17
Teachers' College of U. C. L. A. Requirements	
for a Junior Certificate	19
Stanford University Lower Division Requirements	20
University of Southern California Lower Division	
Requirements	21
California State College (Fresno, San Jose, Santa	
Barbara, San Diego, San Francisco, etc. (Lower D	ivi-
sion Requirements	
Description of Courses:	24
Art	24
Commerce	24
English	27
Speech Arts	28
Foreign Languages	29
Health and Physical Education	31
Home Making	32
Mathematics	32
Engineering	
Music	35
Natural Science	
Social Science	
Mechanics	39

CALENDAR 1938 - 1939

FIRST SEMESTER

September 12, 1938—January 27, 1939

September 13 Last da September 14 September 15 Placeme	y to register without penalty Class instruction begins Test in Gregg Shorthand
September 16	and Typing
October 21 Last day to	
November 11	
November 21-28	Thanksgiving Recess
December 24-January 2	Christmas Recess
January 23-January 27	Semester Examinations
January 27	

SECOND SEMESTER

Janua	1ry 30, 1939—June 2, 1939
January 25, 26, 27	Registration
January 30	Last day to register without penalty
January 30	Class instruction begins
February 3	Examination in Subject A
	Last day to drop subject without penalty
April 3-10	Easter Recess
May 13	Examination in Subject A
	Semester Examinations
May 30	Memorial Day Holiday
May 31	Commencement
June 2	End of Second Semester

BOARD OF TRUSTEES

W. R. Bailey, President

E. E. Baker, Clerk

W. A. West Loring Whitaker

Fletcher Ayres

ADMINISTRATION

DeWitt Montgomery, M. A., Superintendent L. J. Williams, M. S., Principal of Visalia Union High School and Junior College Ethel Wallace Bryant, A. B., Dean of Women

FACULTY

E. E. Bauermeister, M. S.	Physical Education
Alfred Boradori, A. B.	Mechanics
Rosalie Borgman, M. A.	German, Spanish
Brita Bowen, A. B.	English
Dorothy M. Bradner, A. B.	Commerce
Ethel Wallace Bryant, A. B.	English
Izetta Burnard, B. S.	
George S. Burris, B. M.	Music
Vera Charpentier, M. A.	French
Inez Crow	Commerce
Lyman B. Curtis, M. A.	
R. B. Curtiss, A. B.	Mechanical Drawing
Claribel DuPlan, B. M.	Music
Joseph P. Greenwood, B. S.	Science
TO 1 TO 77 1	
Edward E. Hayden	Mechanics
Morris Jerlow, B. S.	Mechanics Science
Morris Jerlow, B. S Natalie Lapike, A. B	Science Library
Morris Jerlow, B. S.	Science Library
Morris Jerlow, B. S. Natalie Lapike, A. B. Jennie Larkin, B. L. Otto Lee Lehmann, M. A.	Science Library Mathematics Social Science
Morris Jerlow, B. S. Natalie Lapike, A. B. Jennie Larkin, B. L. Otto Lee Lehmann, M. A. John R. Locke, Jr., A. B.	Science Library Mathematics Social Science Fencing
Morris Jerlow, B. S. Natalie Lapike, A. B. Jennie Larkin, B. L.	Science Library Mathematics Social Science Fencing
Morris Jerlow, B. S. Natalie Lapike, A. B. Jennie Larkin, B. L. Otto Lee Lehmann, M. A. John R. Locke, Jr., A. B.	Science Library Mathematics Social Science Fencing Physical Education

	* · · ·
Karl W. Mitchell, A. B.	Commerce
Oakley Morris, A. B.	Physical Education
Myron Moyer	Mechanics
Howard Raphael, A. B.	Mathematics
C. W. Read, M. S.	Science Science
Antonia M. Rehmke, M. A.	Physical Education
William G. Reidy, M. A.	Social Science
Dorothy G. Richardson	
Alice G. Rouleau, M. A.	Art
W. J. Sanders, M. A.	
I. D. Steele, A. B.	Social Science
Margaret E. Thomas, B. E.	Physical Education
Arthur Timothy, M. A.	Public Speaking
Gertrude Webb, B. S	Homemaking
Paul W. Wilhelmsen, A B	Physical Education
L. J. Williams, M. S.	Orientation

General Information

The Visalia Junior College was organized by resolution of the Board of Trustees of the Visalia Union High School District in November, 1925, and regular class instruction began September 20, 1926. This action reflected a popular conviction that higher education should be made a part of the public school system of the community, inasmuch as a trained mind has become essential to success in the complex situations of modern life.

As the junior college has grown from year to year in enrollment, new courses have been added and new buildings and equipment provided. It was the thought of the trustees at the time of organization that a junior college should not limit its influence to a single community, but should, as rapidly as possible, extend its service to all students who may be able to attend. In pursuance of this policy, transportation facilities have been extended to neighboring high schools in Tulare and Kings counties with the purpose of offering to the graduates of all high schools within the region that can be served daily the opportunity of higher education.

In all its many activities the junior college seeks to attain four principal objectives: (1) To develop responsible citizenship, (2) to train for more abundant and capable living, (3) to prepare students in certain fields to enter gainful employment and (4) to fit students for more advanced study in colleges and universities.

CURRICULA OFFERED

Junior college students may be classified into two large groups: those students who are planning to continue their education in four-year colleges or universities and those students who expect to enter some occupation either before or after graduation from the junior college. Hence, the curricula are designed to meet the needs of the students in both groups.

To aid the student in selecting a curriculum best suited to his major interests, his needs, and his capacities, the junior college during registration week provides guidance through the offices of the Principal and the Dean of Women.

A Junior Certificate is an official statement issued by certain four-year colleges and universities to a student who has completed the regular freshman and sophomore courses of such college or university. Students eligible to enter such an institution as freshmen should be able to complete a junior college course in two years, which covers lower division requirements and gives them junior standing. In most instances such students may transfer to a university at the end of any semester provided their scholarship average for all work undertaken has been of "C" grade or higher.

Terminal courses, numbered from 50 to 100 are offered for students who plan to complete only a two-year program of work. Transfer credit is not guaranteed for such courses. The purpose of these is two fold: (1) cultural courses designed for students who wish to complete a general education in the junior college and to assume immediately their place as active citizens of the community, (2) semi-professional or vocational courses designed for students who wish to enter the business and industrial world after finishing their junior college studies.

STUDENT ORGANIZATIONS

The Associated Students of Visalia Junior College is the official student organization. On payment of the registration fee of five dollars each semester, the student receives a student body card which entitles him to participate in the activities sponsored by the organization. The Associated Students sponsor all activities which concern the student body as a whole, including athletics, forensics, publications, social affairs, and assembly programs. Students may not only participate in the activities of the college but may attend all home league games and contests and all social affairs given by the Associated Students. All students receive the college newspaper, The Campus, throughout the year.

The business of the Associated Students is carried on by a cabinet, the members of which are elected by the students.

A number of organizations offer opportunity to the

students to associate with groups encouraging special interests and organized extra-curricular activity. These are: the Associated Women Students, Associated Men Students, Women's Athletic Association, Students' Christian Association, Leitermen's Club, Majority Club, College Commercial Club, Tartarettes, International Relations Club, Beta Phi Gamma (honorary journalistic fraternity), and Phi Rho Pi (honorary forensic fraternity).

STUDENT ACTIVITIES

Student activities of the Visalia Junior College include student government, organized athletics, forensics, dramatics, publications, music, social affairs, and club meetings. Every student is urged to affiliate himself with at least one student activity.

Athletics: Visalia Junior College is a member of the Central California Junior College Association and has representatives and teams for each athletic activity sponsored by that association. In addition, it sponsors some minor sports.

Forensics: Membership in the Central California Junior College Association determines the basic schedule for activities in debate, oratory, and extemporaneous speaking.

Dramatics: The annual production of one full-length play or group of one-act plays constitutes the student-body activity in dramatics. Other dramatic activities are sponsored by the dramatic class.

Publications: The junior college sponsors a weekly newspaper, The Campus, and an annual, The Tartar.

Social Affairs: There are a number of annual studentbody social affairs under the direction of the social committee. These consist of dances, parties, and picnics.

EXPENSES

No tuition is charged by Visalia Junior College. The student, however, is required to pay a registration fee of five dollars each semester. No part of this is returnable after two weeks of attendance. There are no laboratory, gymnasium, library, or shop fees. A deposit of one dollar is required for a locker.

Text books and stationery will amount to fifteen to twenty dollars a year since the college does not provide them.

TRANSPORTATION

Bus lines transport students, free of charge, from practically all outlying sections of the Visalia Union High School District, and from Dinuba, Orosi, Exeter, Woodlake, Tulare, Hanford, Lemoore, Corcoran, Lemon Cove and Ash Mountain.

CAFETERIA

A cafeteria is maintained on the campus for the use of the students where lunches may be obtained at a minimum cost.

LIVING ACCOMMODATIONS

A list of available living quarters for students who are away from home, is on file in the office of the Dean of Women. Students are required to have such living accommodations approved by the Dean before they make final arrangements. Living in apartments is not encouraged by the college.

EMPLOYMENT

An attempt is made to provide students who need it with part-time employment. Women or men students wishing to work for room and board in private families should communicate with the Dean of Women.

The college administration cooperates with the National Youth Administration in providing part-time employment for worthy students.

LIBRARY

The main library serves jointly the high school and junior college. The number of bound volumes is approximately 7500. Seventy newspapers and periodicals are regularly received.

Fines for books kept overtime are five cents a day. All books must be returned and all fines paid before semester term records will be officially recognized.

In addition to the main library a reference room and study hall is provided for the junior college.

The cooperation of the Tulare County Library and the Visalia City Library with the junior college and its faculty increases greatly the resources available to students.

LOANS AND SCHOLARSHIPS

Small temporary loans are available for junior college students. Applications should be made directly to the Dean of Women.

A faculty committee encourages students of unusual academic ability who desire to apply for scholarships to four-year colleges and universities and assists them in making such applications.

GENERAL REGULATIONS

Admission:

Graduates of any high school may be admitted to Visalia Junior College, and such other persons over eighteen years of age as may be recommended for admission by the Principal.

Applicants for admission are requested to arrange in advance to have transcripts of their high school records sent directly to the junior college for evaluation.

Students from institutions of collegiate rank may be admitted with advanced standing upon the presentation of transcripts from such institutions subject to the approval of the administration of Visalia Junior College.

Matriculation Deficiencies:

In the case of an applicant not eligible for clear admission to a standard college or university at the time of his entrance to junior college, deficiencies in both subject and grade requirements for clear admission may be removed as follows:

(1) By passing appropriate examinations of the College Entrance Examination Board (given throughout the country during the last week of June) or (2) By completing in the junior college with a college grade of "A," "B," "C" a college course in the group or groups of subjects in which the deficiencies lie.

No college credit will be granted for such courses when they are used to remove subject deficiencies; but full college credit will be granted for such courses when they are used to remove grade deficiencies.

The rate of exchange is one high school unit for each three junior college units. Junior college subjects that may be used to remove deficiencies are:

Group (a) Economics, history, geography, political science;

Group (b) Any English course of three units;

Group (c) Any standard college mathematics;

Group (d) Any laboratory science which has at least two units of laboratory work exclusive of the lectures;

Group (e) Any foreign language;

Group (f) Any standard college mathematics, any foreign language, or chemistry or physics.

Registration:

Four days at the beginning of each semester are set aside for registration. Students are urged to register on these stated days, for late registration retards the progress not only of the student himself but of every class in which he may be admitted. A fee of \$1.00 is charged for late registration.

Only under extraordinary circumstances will registration be permitted after the end of the second week of class work.

Amount of Work:

The normal requirement for a junior college schedule comprises sixteen units of work including physical education. No student will be granted credit in excess of eighteen units a semester, except in the case of a student of proved ability who needs nineteen units to complete required work for graduation.

ENGLISH A REQUIREMENT

An English A, so-called Subject A, examination is given in January, May, and September of each year. This examination is designed to test the student's ability to write English without gross errors in spelling, grammar, diction, sentence structure, and punctuation.

All entrants in Visalia Junior College, except those who have credit for a course equivalent to English A taken in an institution of collegiate grade, are required at the time of their first registration, to take the English A examination.

Students who intend to enter in the autumn semester may take the examination in English A in the preceding May.

PHYSICAL EDUCATION AND HEALTH REQUIREMENTS

All regular students and all special students carrying over eight units of work are required to enroll in the regularly prescribed courses in physical education and health for four semesters.

ORIENTATION REQUIREMENTS

All such students are likewise required to enroll in the course in Orientation each semester for four semesters.

CONDUCT

Students are expected to set and observe among themselves a proper standard of conduct. Failure to show such respect for order, morality, and personal honor as is expected of good citizens may be sufficient cause for removal from the junior college.

ATTENDANCE

Regularity of attendance is fundamental to satisfactory progress in college. All absences from class or laboratory will be recorded by the instructor as "unexcused" unless the student concerned presents to the instructor a re-instatement permit which he has received from the Principal or Dean.

The financial support of the junior college is based upon the average daily attendance of the students. Every student, therefore, should be concerned with regularity of attendance, not only because he can work more effectively, but also because his attendance assures the financial support which enables the institution to provide better facilities for all students.

LEAVE OF ABSENCE

Students finding it necessary to be absent for one week or more are instructed to file with the Principal or the Dean of Women a Leave of Absence request stating the reasons for the absence. Favorable action upon the request will insure an opportunity to make up the classes missed without loss of credit. No leave of absence will, however, relieve the student from the necessity of completing all the work of each course to the satisfaction of the instructor.

Absences to represent the school will be officially excused if students present to their instructors, in advance, requests for such absence filled out on the proper forms and signed by the Principal or the Dean.

WITHDRAWALS FROM COURSE OR COLLEGE

Students desiring to withdraw from a course or from college should complete and file the proper request with the Principal or the Dean. Requests filed before the end of the sixth week of the semester will enable the student to withdraw without prejudice to his standing. During the second six weeks of any semester a student may be permitted to drop a course without prejudice, only under such circumstances as are considered by the Administration to be beyond the student's control. Otherwise, the dropping of the course during this interval shall be regarded as a failure of the course.

During the final six weeks of any semester, the dropping of a course shall result in a record of failure.

UNITS AND GRADE POINTS

All junior college work is measured in terms of both quantity and quality. The measure of quantity is the unit and the measure of quality is the grade point. For purposes of graduation or transfer to other collegiate institutions, it is necessary to obtain a certain number of grade points. In general the requirements are one grade point for every unit of college work undertaken.

Grade points will be awarded as follows: Grade A, three points per unit; B, two; C, one; D, none; F, minus one. Students are not permitted to raise the passing grade of D, C, or B to a higher grade by later work.

GRADES

A, B, C, and D are passing grades, corresponding to excellent, good, average, and barely passed; and F, failure. An incomplete (inc.) grade will be given only with the special approval of the Principal or Dean. This approval will be given only in cases of illness or other circumstances beyond the student's control and will indicate that the student is entitled to all grade points earned upon satisfactory completion of assignments within the first six weeks of continued attendance.

It is understood that instructors' grades, when handed in, are final and not subject to change by reason of a revision of judgment on the part of instructor.

REQUIREMENTS FOR GRADUATION

INTRODUCTION

Students preparing for graduation from Visalia Junior College should follow one of the two plans outlined below. The title of Associate of Arts is conferred upon graduates of Visalia Junior College who complete either plan as indicated. Plan One is designed for students who do not intend to continue formal collegiate instruction beyond the junior college, while Plan Two is designed for students who desire later to be transferred with junior standing to a four-year college or university.

PLAN ONE

The title of Associate of Arts is conferred under Plan One on all students who shall have completed satisfactorily ("C"

average) a two-year junior college curriculum of 64 semester units including:

- 1. Two units in physical education
- 2. Two units in hygiene.
- Two units in the Constitution of the United States, including the study of American institutions and ideals.
- 4. Two units in orientation.
- 5. Any six units of English or Public Speaking or any combination. Students majoring in Commerce are required to complete four courses in English (9 to 12 units).
- A major consisting of at least 20 units in a specified field of study.

The requirement of "twenty semester units in a specified field of study" may be met by the completion of twenty units of work in any of the following fields:

GROUP I. Liberal Arts

GROUP II. Social Science

GROUP III. Natural Science and Mathematics

GROUP IV. Art and Music

GROUP V. Pre-nursing course

GROUP VI. Mechanics.

GROUP VII. Commerce

PLAN TWO

The title of Associate of Arts is conferred under Plan Two on all students who expect to continue, or who may continue in upper division work in a standard four-year college or university, who shall have completed satisfactorily ("C" average) a two-year junior college curriculum of 64 semester units, including:

- 1. Two units in physical education.
- 2. Two units in hygiene.
- Two units in the Constitution of the United States, including a study of American institutions and ideals.

4. Two units in orientation.

5. Six units in English.

 The completion of the lower division requirements of the University of California or of any other approved college or university where upper division work will be continued.

Courses completed in high school may be accepted as partial or complete fulfillment of certain departmental requirements as to subject matter, provided that such work shall not reduce the amount of work (64 units) required for the diploma, and shall be limited to those subjects accepted by the particular college.

In order to assist the student to plan his course, the lower division requirements for certain colleges have been set down. It is highly desirable that the student decide on his major subject as early as possible, so that the required lower division preparation for the major can be met. Such requirements in each department of the college or university are set forth in the college catalogue which may be easily obtained by writing to the Registrar of the institution in which the student is interested.

UNIVERSITY OF CALIFORNIA

Berkeley and Los Angeles

REQUIREMENTS FOR A JUNIOR CERTIFICATE

Three principal kinds of requirements must be met in order for a student to attain full junior standing at the University of California or other institution maintaining equivalent standards to which he may expect to transfer. These are:

- 1. The removal of all matriculation (entrance) deficiencies.
- 2. The completion of the specific requirements for the Junior Certificate or junior standing in the proposed senior college.
- 3. The completion of the lower division pre-requisites for the upper division major and minors. These vary according to the majors and minors selected and also according to the institution in which the student expects to enroll. All students ex-

pecting to transfer to some other college or university should consult the catalogue of such institution regarding specific requirements for upper division standing. It is highly desirable that every student decide upon a major as early as possible after entering the junior college. The junior standing requirements of some of California's colleges and universities are here presented.

UNIVERSITY OF CALIFORNIA AT BERKELEY AND AT LOS ANGELES

Junior Certificate in Letters and Science

The Junior Certificate will be granted on the completion of not less than 60 units of college work with a "C" average, and the fulfillment of the following general and specific requirements:

- A. General University Requirements
 Subject A
 Physical Education and Hygiene or Military Science,
 four units
- B. Foreign Language At least fifteen units in not more than two languages. Each year of high school work in a foreign language will be counted in satisfaction of three units of this requirement.
- C. Mathematics
 Elementary algebra and plane geometry. If these subjects have not been completed in high school, or if they were completed with a grade of "D", they must be taken in the junior college without college credit.
- D. Natural Science
 At least twelve units chosen from the following list:
 High School Physics*, 3 units (1 high school credit)
 High School Chemistry*, 3 units (1 high school credit)

Bacteriology 1*
Botany 1a*-1b*
Chemistry 1a*-1b*
Geology 1a, 1b, 2
Physics 1a-1b*

Physiology 1b* Zoology 1a*, 1b*

The student must include among the courses taken in satisfaction of the requirement in natural science at least one course in laboratory science. Such courses are marked with an asterisk. Courses with but one unit of laboratory science are not accepted in fulfillment of this requirement.

- E. Additional. A year-course (of at least six units) in each of three of the following groups:
 - 1. English, Public Speaking
 - 2. Foreign Language in addition to the requirement B quoted above. This may be satisfied in whole or in part in the high school, provided the language be Latin. Two years of high school Latin are accepted as equivalent to a year course.
 - 3. Mathematics
 Any six units from the following courses:
 Mathematics c, 8, 3a-3b
 - 4. Social Sciences: History 4a-4b, 8a-8b, Economics 1a-1b, Political Science 1a-1b, Psychology 1a-1b, Geography 1b
 - 5. Philosophy 5a-5b

JUNIOR CERTIFICATE TEACHERS' COLLEGE OF U. C. L. A.

These requirements are the same as for the Junior Certificate in Letters and Science except that 6 units of English 1a-1b or Public Speaking 1a-1b and 6 units of Psychology 1a-1b must be chosen as two of the year courses prescribed in the group E requirement, and that the other year-course to satisfy the Group E requirement may be chosen from the following list: Economics 1a-1b, Geography 1-2, History 4a-4b, or 8a-8b, Political Science 1a-1b, Philosophy 5a-5b, or Mathematics 1c, 8, 3a-3b.

This student must also meet the specific lower division requirements for his upper division major. Some examples follow:

General Elementary Education and Kindergarten Primary Education

Art 22, 30; Biology 1, 12; Geography 1a-1b; Mathematics 19; Music 60a-60b; Psychology 1a-1b.

Junior High School Education

Lower division prerequisites for two upper division minors in subjects taught in junior or senior high schools.

Special Credentials

Art: Art 1; Art 2a-2b; Art 4a-4b; Art 8a-8b; Art 9, 12, 32a.

Commerce: Economics 1a-1b and 14a-14b; Political Science; Geography; History; Commerce 16, 17, 18a-18b.

Home Economics: Home Economics 1a-1b, 2, 11a-11b, 43a; Art 2a; Chemistry 2a-2b; Psychology 1; Economics 1a.

Physical Education: Chemistry 1a or Zoology 1a; Physiology 1; Biology 1; Anatomy.

STANFORD UNIVERSITY LOWER DIVISION REQUIREMENTS

The object of the lower division is to introduce the student to fundamental fields of human interest, and to this end it requires the completion of certain studies during the first two years. This work is divided into three groups. Every student is required to take at least fifteen units in each group during the first two years. The work should be distributed so that not less than six units will be completed in each group each year. The requirements are as follows:

Group 1. Arts and Letters (English, foreign language, music, and art.)

- (a) The completion in the lower division of the second quarter of a second year reading course in a foreign language, or of a more advanced course;
- (b) Subject A in case the examination in Subject A is not passed:
- (c) Six units of English composition usually during the second year.

(d) Electives to make up the required total of fifteen units of Arts and Letters.

Group II. Natural science, mathematics, psychology, logic.

- (a) Nine units of biological science; or nine units of physics, chemistry, or physical sciences during the first year. (The units in each case must include laboratory).
 - 1. Biological science for those who have completed a high school year of physics or chemistry only.
 - Physics, chemistry, or physical sciences for those who have completed a high school year of biological science only.
- (b) Electives to make up the total of fifteen units in this group.

Group III. Social sciences (history, political science, economics, philosophy).

- (a) During the first year twelve units of History of Western Civilization.
- (b) During the second year nine units of history, political science, economics, or philosophy, or any combination of these.

Students will also be expected to take such lower division courses in anticipation of their upper division major as are required or desirable.

"Students transferring from other institutions with advanced standing will be relieved of such of the requirements of the lower division as, in the judgment of the committee on Lower Division Administration, they have substantially completed elsewhere."

UNIVERSITY OF SOUTHERN CALIFORNIA LOWER DIVISION REQUIREMENTS

The lower division curriculum as offered in the College of Letters, Arts and Sciences at the University of Southern California includes the following:

- A. Examination in English composition (Subject A). English 1a-1b, 6 units.
- B. Foreign Language
 Fifteen units in not more than two languages. Each
 year of a foreign language in high school will be accepted in fulfillment of three units of this requirement.
- C. Natural Sciences

 A minimum of eleven units including at least one laboratory course. Chemistry and physics in the third or fourth year of high school will be accepted in the fulfillment of three units of this requirement.
- D. Social Science
 Six units of history, economics, political science or sociology.
- E. Philosophy or psychology, six units.
- F. Orientation, 1 unit.
- G. Physical Education and Health, 4 units.
- H. Mathematics
 High school elementary algebra and plane geometry.

I. Electives to bring total to 64 units.

"The junior college student planning to enter the University of Southern California is advised to include among his electives the lower division courses recommended by the department of his proposed major. The requirements of major departments may be found under department headings in the Bulletin of the College of Letters, Arts, and Sciences. A student planning to enter a professional school at the University of Southern California should be guided by the requirements announced in the bulletin of the school of his choice."

CALIFORNIA STATE COLLEGE LOWER DIVISION REQUIREMENTS

(Fresno, San Jose, Santa Barbara, San Diego, San Francisco, etc.)

There are a few slight variations in the lower division requirements in various state colleges. Students should consult

the catalogues of the particular college they intend to enter. Substantially, the lower division requirements in general elementary, kindergarten-primary, and junior high education are as follows:

- A. General Requirements
 Subject A.
 Physical Education and Hygiene, 4 units.
 United States Constitution, 2 units.
- B. Foreign Language, 10 units

 Two years of one foreign language taken in high school will satisfy this requirement if completed with a recommended grade.
- Mathematics
 Elementary algebra and plane geometry. If not completed in the high school, these courses must be taken in junior college without college credit.
- D. English, 6-12 units
 English 1a-1b, Public Speaking 21, and three units
 from other fields of English or Speech Arts. If English is used as a minor, English 5a-5b is required.
- E. Natural Science, 14 college units
 A laboratory science must be included. Courses recommended in fulfillment of this requirement are Zoology 1a-1b, Biology 1a-1b, Physiology 1, or any combination of these; Geology 1a-1b, high school Chemistry or Physics.
- F. Social Science, 14 units History 4a-4b, 8a-8b, 6-12 units; Political Science 1a-1b; Geography 1b, 3 units; Psychology 1a-1b.
- G. Music (including appreciation) and Art, 2 to 4 units each.
- H. Orientation, 1 unit.
- I. Electives in Minors, 8-14 units

 For general elementary and kindergarten-primary
 grades, it is recommended that one minor be in a general subject and one in a special subject.

J. Electives to bring total to 64 units.

Note: For the special secondary teaching credential in art, commerce, home economics, mechanic arts, music, and physical education, students should consult the specific curricula requirements of the University of California at Los Angeles or the state college to which the student intends to transfer.

Description of Courses

ART

ART 6a-ART STRUCTURE (2)

Principles and elements of art and their application. Study of various media and their uses.

ART 6b—COLOR AND DESIGN (2)

Systems of color and their application. Decorative arrangement in line, form, and color.

ART 7a-Freehand Drawing (1 or 2)

Freehand and perspective drawing.

ART 7b—FIGURE DRAWING (2)

Drawing from models, human, animal, etc.

ART 19—ART APPRECIATION (2) Either Semester

A course designed to develop the student's capacity to enjoy his surroundings by making him conscious of the beauty he sees daily in his home, his school, his community, and in the works of master craftsmen and artists.

ART 53a-53b—COMPOSITION (2-2)

Composition in various media. Emphasis on costume illustration, stage, poster, story illustration, etc. to suit each group.

ART 56a-56b—CRAFTS (2-2)

Leather, paper, dyeing, plasters, silk screen printing, etc.

COMMERCE

COMMERCE 50^a-50b — ELEMENTARY SHORTHAND (5-5)

Beginning course in the principles of shorthand. The Gregg system is used. Students with recommended credit

("B" grade) for one year of high school shorthand may enter the section in shorthand 50b. Others who have had one year of high school shorthand may register for shorthand 50a for two units of credit.

COMMERCE 51a-51b—INTERMEDIATE SHORTHAND

Continuation of 50a-50b. Definite speed and accuracy in reading and transcribing emphasized—advanced dictation.

Prerequisite: Shorthand 50a-50b.

__COMMERCE 53a-53b—ELEMENTARY TYPING (2-2)

An elementary course covering the fundamentals of typing. Stress is placed upon correct positions, accuracy, and technique. Simple business forms, business letters, and social forms are included in the work. A minimum of speed and accuracy required for credit.

COMMERCE 54a-54b—INTERMEDIATE TYPING (2-2)

Open to all students who have had one year of typing and who meet the minimum speed and accuracy requirement. Intensive practice in touch typewriting, frequent drills to develop correct technique, business letters, legal documents, speed tests. A minimum of speed and accuracy required for credit.

COMMERCE 60a-60b—BUSINESS ENGLISH (3-3)

Advanced course in business correspondence, dealing with central principles underlying effective business letters and providing liberal practice in applying these principles. Study of business reports, graphs, adjustments, sales letters, letters of application, and allied fields. Designed to prepare students for secretarial and stenographic positions. Required of all commerce majors.

Prerequisite: Passing grade in Subject A.

COMMERCE 61—SALESMANSHIP (3)

This course develops the principles of selling, and considers the economic aspects of merchandising.

COMMERCE 62a-62b—BUSINESS LAW (3-3)

An analysis of contract relationships, together with the duties and obligations the individual assumes in such relationships.

Sales, agency, public carriers, master and servant, insurance, negotiable instruments, statute of frauds, sale of real estate, etc., are discussed.

COMMERCE 63a-63b—ELEMENTARY ACCOUNTING (3-3)

A course in fundamental principles of bookkeeping and accounting. The work develops a practical introduction to accounting procedure with a minimum amount of theory. The functions of the work sheet, various statements, journals, adjusting and closing entries, are analyzed.

COMMERCE 64a-64b—ADVANCED ACCOUNTING (3-3)

A continuation of 63a-63b. Theory of accounting technique is further developed and the functions of the accountant and auditor are discussed.

Prerequisite: Accounting 63a-63b or an equivalent.

OMMERCE 69—OFFICE MACHINES (2)— Either Semester

A course of instruction in the operation of the following machines with emphasis on touch method: Marchant, Monroe Calculator, Burroughs Calculator, Burroughs Posting Machine, Remington Rand, Sunstrand, Gelatine Duplicator, Mimeograph, Memeoscope, and Dictaphone.

Students planning to specialize in operation of a calculating machine will be given an opportunity to do intensive work on that machine.

Prerequisite: Typing.

COMMERCE 69a-69b—BUSINESS PRINCIPLES (3-3)

A comprehensive study of economic theory applied to modern business practice. The first semester provides a substantial background in such phases of economics as wealth, property, capital, labor, production, banking, and investments in relation to business. The second semester covers a survey of business organization, marketing, insurance, credit relations, and contracts.

COMMERCE 70a-70b-OFFICE PROCEDURES (5-5)

Advanced dictation and transcription, vocabulary building. Special drills for improvement of typing. Advanced work in tabulation, billing, and legal forms. Secretarial training including filing, use of duplication machines, and a brief course in machine calculation. The course will acquaint students with real office stituations. Practical experience in office work will be required of each student. Students who complete the course satisfactorily will be recommended for office positions.

Prerequisites: Satisfactory score in Placement Test in

Gregg Shorthand and Typing.

ENGLISH

ENGLISH A (3)—Either Semester

A constructive, as well as a corrective course, in the fundamentals of English, including drill in logical analysis, in writing, and in note-taking, and those other allied skills, the partial mastery of which will enable the student to pursue his college career with some degree of satisfaction and credit, Such grammar and mechanics will be stressed as are essential for effective written expression.

ENGLISH 1a (3)

A course designed to give the student training in correct and effective written expression through analytical reading and the writing of themes. Organization of material, clarity of expression, and sincerity of style are stressed.

Prerequisite: Passing grade in Subject A.

ÆNGLISH 1b (3)

A course designed to introduce the student to the various forms of literature. The objective is to increase his appreciation of literary values through a critical study of a group of selected essays, plays, short stories, poems, a biography, and a novel.

Prerequisite: English 1A.

ENGLISH 5a-5b— (3-3)

A survey course in English Literature from the Anglo-Saxon Period to the present time, stressing literary backgrounds, literary movements, and literary masterpieces, with illustrative readings from the literary masters, both for inspirational and informative purposes. No single period is emphasized at the expense of the others, although the Georgian Period is but sketchily traced.

Prerequisite: Passing grade in Subject A.

ENGLISH 6—THE SHORT STORY (2)

This course outlines the development of the short story from Washington Irving to the present. Contributions to the growth of the short story by the acknowledged masters of the form are considered, the major objective, however, being the reading and enjoyment of types of stories illustrative of the various periods and schools. The modern short story receives a large measure of attention.

ENGLISH 7—THE NOVEL IN ENGLISH (2)

This course in the history of the development of the English and the American novel, traces the development of the novel in chronological order from 1740 to the present time. Emphasis is laid upon the nineteenth century, the novels selected for personal reading, for reports, for class discussions, and for papers being confined to classics of that century or the early twentieth. Reading for pleasure, as well as for profit, is an objective.

ENGLISH 8—DIRECTED READING (2)

The objective of this course is to encourage recreational reading. It is designed to help students to read more rapidly and with better comprehension, to stimulate the student who has not read much to develop a taste for reading, and to develop in all a discriminating sense in the choice of books.

ENGLISH 10a-10b—JOURNALISM (2)

A study of representative newspapers, designed to supply the student with appropriate standards for the reading of the newspaper and evaluating the significance of events. Instruction and practice in news writing, head-writing, page makeup, and proof-reading. Members of the class write material for the local city daily, the Campus and the Tartar.

Prerequisite: Passing grade in Subject A.

SPEECH ARTS

PUBLIC SPEAKING 1a-1b (3-3)

Deals primarily with construction and delivery of short speeches. Each student is required to deliver a minimum of ten speeches for 1a, and fifteen speeches for 1b.

Prerequisite: Passing grade in Subject A.

PUBLIC SPEAKING 5a-5b—ARGUMENTATION AND DEBATE (3-3)

Squad practice in preparation for intercollegiate debates. Considerable practice in actual debating. Training in research, discussions, logical analysis, forcefulness and fluency of delivery. Especially good for pre-legal students.

PUBLIC SPEAKING 21 (3)—Second Semester

This course is designed particularly for those students who expect to take teacher training work at Fresno State College. Practice is given in reading and interpretation. Pronunciation, enunciation, tone quality, vocal variety, and physical control are considered.

PUBLIC SPEAKING 33—PLAY PRODUCTION (2) First Semester

The technique of acting and directing are studied. As a term project, students will do production work on plays to be presented during spring semester.

PUBLIC SPEAKING 51a-51b (3-3)

A practical course in public speaking designed for those who intend to go directly into homemaking or business upon the completion of their junior college work. Poise, self-confidence, voice, and parliamentary procedure are stressed.

FOREIGN LANGUAGES

_ERENCH 12—ELEMENTARY FRENCH (5)

For students who have had no previous French. The essentials of grammar as a basis for reading, speaking, and writing correctly the French language; reading of simple French stories; practice in conversation.

FRENCH 1b (5):

Continuation of 1a.

Prerequisite: French 1a or one year of high school French.

FRENCH 1c—INTERMEDIATE FRENCH (3)

Grammatical review and composition. Reading and interpretation of typical French writers as: Moliere, Maupassant, Daudet, Hugo.

Prerequisite: French 1a-1b or two years of high school French.

FRENCH 1d (3)

Continuation of French 1c.

Prerequisite: French 1c or three years of high school French.

LPRENCH 6a—ADVANCED SYNTAX AND COMPOSITION (2)

Conducted entirely in French.

Prerequisite: French 1a-1b or two years of high school French. May be taken concurrently with French 1c.

FRENCH 6b (2)

Continuation of French 6c.

Prerequisite: French 6a or three years of high school French. May be taken concurrently with French 1d.

GERMAN 1a—ELEMENTARY GERMAN (5)

Pronunciation; essentials of grammar; emphasis on read-

GERMAN 1b (5)

ing.

A continuation of German 1a. Conversation; drill on verbs; more extensive reading; short stories by representative authors studied.

Prerequisite: German 1a, or one year of high school German with grade "A" or "B"; or two years with "C."

GERMAN 1c—ADVANCED GERMAN \(3)

Classics, and modern literature. Collateral reading of novels and plays. Conversation; written reproduction of material studied.

Prerequisite: German 1b, or two years of high school German with grade "A" or "B."

GERMAN rd (3) Sign

Continuation of ic. More extensive reading.

Prerequisite: German 1c.

SPANISH 12-ELEMENTARY SPANISH (5)

Pronunciation; essentials of grammar; drill on verbs; emphasis on ability to read; Spanish spoken in class as much as possible.

A VISH 1b (5)

Continuation of Spanish 1a. Idioms stressed; reading material based on Spanish-American countries; conversational Spanish emphasized.

Spanish emphasized.

Prerequisite: Spanish 1a, or one year of high school
Spanish with grade of "A" or "B", or two years with grade

of "C."

SPANISH 1c-ADVANCED SPANISH (3)

Modern and classical novels and dramas studied. Spanish used in class room as much as possible. Written reproduction of material read. Collateral reading of representative authors, with consideration of previous experience in reading.

Prerequisite: Spanish 6a, or two years of high school

Spanish. May be taken concurrently with Spanish 6a.

SPANISH rd (3)

Continuation of 1c. One novel, one drama, and collection of short stories studied. Brief survey of Spanish literature. Collateral reading of Spanish-American authors.

Prerequisite: Spanish 1c, or three years of high school

Spanish.

SPANISH 6a—ADVANCED SPANISH COMPOSITION

Review of syntax; written and oral composition based on text dealing with Spanish-American countries.

Prerequisite: Spanish 1b, or two years of high school

Spanish with grade "A" or "B."

SPANISH 6b (2)

Continuation of Spanish 6a. Greater emphasis on idioms and Spanish conversaion. Original compositions; written reproduction.

Prerequisite: Spanish 6a, or three years of high school

Spanish.

HEALTH AND PHYSICAL EDUCATION

HYGIENE 1—HEALTH PROBLEMS (2)

Required of all students. Separate sections are offered for men and women with differing emphases.

A consideration of physical and mental well-being. The

effect of exercise and fatigue; proper selection of food; the avoidance of infections; mental and emotional habits; non-communicable diseases; community hygiene problems.

PHYSICAL EDUCATION FOR MEN (1/2-1/2)

Two hours of physical education activities per week; soccer, tumbling, and sports.

Required of all men students.

PHYSICAL EDUCATION FOR WOMEN (1/2-1/2)

Two hours of physical education activities per week; badminton, baseball, hockey, speedball, volleyball, tennis, and dancing.

Required of all women students.

HOMEMAKING

HOMEMAKING 33a-33b—NUTRITION AND DIETET-ICS (2-2)

A course planned to meet the laboratory nutrition requirement for nurses, including a study of normal food requirements; composition and function of foods for children and adults; the digestion and absorption of foods.

HOMEMAKING 50a-50b—PRESENT DAY LIVING (2-2)

Social and economic problems of a girl in her home and community life. Short units: Personality Development, Clothing, Consumer Education, Home Management, and Family Relationships.

MATHEMATICS

MATHEMATICS 1—INTERMEDIATE ALGEBRA (3)

Rapid review of elementary algebra; exponents; radicals; progressions; quadratic equations; logarithms; the binomial theorem.

Prerequisites: One year of high school algebra. This course is not open to students who have received credit for two years of high school algebra.

MATHEMATICS C—TRIGONOMETRY (₃)

Trigonometric functions of any angle; logarithms; solution of triangles; trigonometric equations.

Prerequisites: Plane geometry; one year of high school algebra.

MATHEMATICS 32—ANALYTIC GEOMETRY (3)

This course includes conic sections and general equations of the second degree.

Prerequisite: One year of high school algebra or mathematics 1; plane geometry; plane trigonometry.

MATHEMATICS 3b—DIFFERENTIAL CALCULUS (3)

Differentiation of algebraic and transcendental functions; maxima and minima problems, radius of curvature; special stress on parametric representation and polar coordinates.

Prerequisites: Mathematics 3a.

MATHEMATICS 4a—INTEGRAL CALCULUS (3)

The integration of algebraic and transcendental functions; the areas and volumes of plane figures in polar and Cartesian coordinates; physical applications of work, pressure, attraction, and center of gravity.

Prerequisites: Mathematics 3a-3b.

MATHEMATICS 8—COLLEGE ALGEBRA (3)

Mathematical induction; determinants; higher equations; theory of equations.

Prerequisites: Two years of algebra in the high school, or Mathematics 1.

MATHEMATICS 10 (3)

A review in the fundamentals of arithmetic, intended primarily for prospective teachers.

ENGINEERING

SURVEYING 1a-1b—ELEMENTARY SURVEYING (3-3)

Eundamental principles and practice in methods of land surveying. Primarily for engineering majors.

Prerequisite: Trigonometry and Mechanical Drawing, but may be taken concurrently.

MATHEMATICS 20—INTRODUCTION TO ENGINEER-ING MATHEMATICS (2)—Either Semester

Adjustment, operation, and theory of the slide rule; com-

putation rules; graphical methods; introduction to precision of measurements; interpolation and use of the tables; and numerical integration.

MECHANICAL DRAWING 1 — ELEMENTARY ME-CHANICAL DRAWING (3)

A course covering the fundamentals of mechanical drawing. It is designed to give a thorough knowledge of theory, training in accuracy and technique, and to lay a solid foundation for advanced work.

MECHANICAL ENGINEERING 6—MACHINE DRAW-ING (3)

A required course in engineering. It will give the student a knowledge of the fundamental elements of machine construction, practice in conventional representation of machine parts and training in making accurate drawings of machine details.

Prerequisite: Elementary Mechanical Drawing.

**RCHITECTURE 1—ARCHITECTURAL DRAWING (3)

A course including the making of a complete set of plans for a house. The student will get a knowledge of the different types of architecture, the ability to list materials and figure costs, and also an understanding of good design.

Prerequisite: Elementary Mechanical Drawing.

CIVIL ENGINEERING 2—ENGINEERING DRAWING (3)

A required course in engineering. Lettering, orthographic projection, preparation of working drawings, technical sketches, and graphical representation of engineering test data.

Prerequisite: Mechanical or geometrical drawing.

MECHANICAL ENGINEERING 2—DESCRIPTIVE GE-OMETRY (3)

A required course in engineering. A theory and drafting course covering an introduction to engineering graphics. The student will gain a knowledge of fundamental propositions that will help him to solve engineering problems.

Prerequisite: Civil Engineering 2.

EVIL ENGINEERING 22a-22b—STRUCTURAL DRAFT-ING AND BUILDING CONSTRUCTION (3-3)

In Structural Drafting, an engineer's design for a steel mill building is used. The framework, including the trusses, is designed and drawn in detail.

Building Construction is a theory course which describes types of construction, materials used, and the methods for estimating and keeping costs.

Prerequisite: Machine Drawing and Architectural Drawing.

MUSIC

MUSIC 1a-1b—CHORUS (1)

Chorus in acappella as well as accompanied music—solos, trios, sextettes, and quartettes.

₩USIC 9a-9b---PUBLIC SCHOOL MUSIC (3-3)

Includes sight-singing, melodic and rhythmic dictation, methods of teaching rote, observation, study and reading songs.

Lower division requirement for general elementary certificate.

MUSIC 50a-50b—ELEMENTARY ORCHESTRA (1-1)

A course for beginners in all instruments.

MUSIC 512-51b—ADVANCED ORCHESTRA (1-1)

Accepted students have opportunity for advanced instruction with the concert orchestra.

MUSIC 52a-52b—ELEMENTARY BAND (1-1)

A course for beginners in all instruments excepting strings.

MUSIC 53a-53b—ADVANCED BAND (1-1)

Accepted students have opportunity for advanced instruction with the concert band.

NATURAL SCIENCE

ANATOMY 1a (3)

Considers the body first as an integrated whole. After this the organ systems are studied in succession with enough histology added to make the study of gross structures more meaningful. Designed to meet the requirements for prenursing courses and as a cultural course in human biology. Prerequisites: None. High school biology and chemistry are recommended.

BACTERIOLOGY 1a—GENERAL BACTERIOLOGY (5)

A study of the micro-organisms especially in relation to health, sanitation, pathology, and the care of the sick. Stresses their biological significance, morphology, physico-chemical properties, and methods of sterilization, media preparation, culture, inoculation, and identification.

Prerequisites: High school chemistry and a biological science of college grade.

BIOLOGY 1a-1b (5-5)

Treats of biological processes, principles, and laws as observed in plants, animals, and man. Environmental relations and economic importance of specific organism are considered throughout. Genetics, including introductory cytology, variations, heredity and eugenics are given prominence.

Prerequisite: None. High school chemistry or high school physics recommended though not required.

CHÉMISTRY 12-16—GENERAL CHEMISTRY (5-5)

A thorough course intended for those whose future work lies in the professional fields needing chemistry as a background.

Prerequisite: None. High school chemistry or high school physics recommended though not required.

CHEMISTRY 60 (5)

Briefer course than 1a, with less emphasis on theory and the mathematical phases. Considerable time is spent on the actual chemical work required of a nurse.

Prerequisite: None. High school chemistry recommended.

GEOLOGY 1a-PHYSICAL GEOLOGY (4)

Study of dynamical geology. Laboratory study of rock and mineral specimens; topographical and geologic maps; supplemental field trips.

Prerequisite: None. Chemistry recommended.

GEOLOGY 1b—HISTORICAL GEOLOGY (3)

Study of origin of the earth and other members of our planetary system from the beginning of geologic time to the

present day; evolution of plant and animal life as shown by index fossils; field trips.

Prerequisite: Geology 1a; biology recommended.

PHYSICS 1a-1b—GENERAL PHYSICS (3-3)

Fundamental treatment of the general principles of physics, including mechanics, heat, hydraulics, hydrostatics, and properties of matter.

Prerequisite: High school physics or high school chemistry recommended. Trigonometry recommended but may be taken concurrently.

PHYSIOLOGY 1b (4)

A survey of the body structures with special emphasis on the functioning of these structures. Prominence is given to the neuro-muscular, sensory, metabolic, and excretory functions. Designed to satisfy the requirements for prenursing courses and as a cultural course in human biology.

Prerequisite: Anatomy 1a.

ZOOLOGY 12-1b—GENERAL ZOOLOGY (5-5)

Treats of the basic principles of animal biology with special emphasis on morphology, taxonomy, ecology, physiology, with introductory embryology, heredity and theories of evolution. Special emphasis is placed on comparative anatomy and microzoology. Statisfies pre-professional and general university requirements.

Prerequisites: None. High school biology and chemistry are recommended.

SOCIAL SCIENCE

POLITICAL SCIENCE 1a-1b — COMPARATIVE GOV-ERNMENTS (3-3)

This is the 1a-1b course given at the University of California (the only undergraduate political science course) and is a prerequisite for advanced courses in political science. A study of the major governments of the world, elementary principles of political science, and the forces behind political processes.

A. (First Semester) The governments and parties of



Great Britain and the British Commonwealth of nations; of France and her dependencies.

B. (Second Semester) The governments of Switzer land, Italy, Germany, Russia, and Japan.

POLIFICAL SCIENCE 5a (2)

A study of the Constitution of the United States of America. With this background American institutions and ideals are stressed.

ECONOMICS 1a-1b (3-3)

This course includes a study of the consumption, production, distribution, and exchange of goods. Taxation and reform are considered at some length.

GEOGRAPHY 1b—REGIONAL GEOGRAPHY (3)

A review of geography. Attention is given to maps, stressing the political boundaries and the physical aspects.

GEOGRAPHY 5a—ECONOMIC GEOGRAPHY (3)

A course in the economic, physical, and commercial aspects of world geography.

HISTORY 8a-8b—HISTORY OF THE AMERICAS (3-3)

A general survey of the history of North and South America. Background of discovery, exploration and colonization, independence movements, and national development. First semester devoted to Latin-America, second semester United States, Canada, and international relationships.

__HISTORY 4a-4b—HISTORY OF WESTERN EUROPE . (3-3)

This is a broad survey course of western civilization. An introduction to the study of history, giving a general perspective of social, economic, and cultural factors which explain our present day civilization. First semester to 1800; second semester to the present. A required course for history majors.

PHILOSOPHY 5a-5b (3-3)

A course in the history of philosophy, chronologically considered, placing in the foreground the major philosophers of each period and school, so as to interpret the major philosophic

systems and to trace the development of philosophic thought from the early Greek period to the Scientific Era. Evolution and modern tendencies in philosophy receive initial attention and acquaintanceship toward the close of the second semester.

GENERAL PSYCHOLOGY 1a-1b (3-3)

Treats of the total activities of the individual. Special emphasis is placed on individual development, intelligence, learning, habit formation, perception, imagination, thinking, and the factors of personality. 1b considers especially the different psychological systems, elaborate glimpses of psychology in several fields plus an introduction to the psychology of abnormal people.

MECHANICS

MECHANICS 51a-51b—AUTOMOTIVE MECHANICS (3-3)

Instruction in the theory, operation, and repair of the auto-automobile, including routine work as in commercial shops.

MECHANICS 52a-52b—APPLIED ELECTRICITY (3-3)

A foundation course. The student is familiarized with the use of the tools and materials, and in the handling of circuits and apparatus. Each student constructs devices that successfully operate.

MECHANICS 53a—CARPENTRY (3)

A course dealing with the building materials, details of construction, estimating, carpentry tools, and simple building repair.

MECHANICS 53b—MILL CABINET WORK (3)

A course in advanced use of woodworking machinery, its care and repair, and the study of millwork for building construction.

MECHANICS 54a-54b—MECHANICAL TRADES (Credit By Individual Arrangement.)

Theory and practice in the use of tools, cutting of materi-

als, making layouts and working drawings, blueprint reading, and operating special job machines, including the estimating and study of materials.

Pre-trade apprenticeship training in: oxy-acetylene welding and brazing, soldering and tinning, sheetmetal work, ornamental iron work, engine lathe work and wood turning, and carpentry.

MECHANICS 55a-55b—BUILDING TRADES (Credit By Individual Arrangement.)

Approved students may enroll in the building trades cooperative course in which instruction will be given in carpentry, wiring, plastering, painting, and plumbing. Each qualified student may specialize in developing skill in any one trade under local master artisans on the job.